



REGULAR CITY COUNCIL MEETING

6:30 PM – COUNCIL CHAMBERS – CITY HALL

JUNE 15, 2021

AGENDA

ALL CITIZENS DESIRING TO ADDRESS THE PORT ORANGE CITY COUNCIL DURING CITIZEN PARTICIPATION SHOULD COMPLETE A SPECIAL APPLICATION FORM WHICH IS LOCATED ON THE STANDS OUTSIDE THE COUNCIL CHAMBERS. AFTER COMPLETING THE FORM, PRESENT IT TO THE CITY CLERK.

A. OPENING

1. Invocation by Pastor Austin Trammell of Salty Church of New Smyrna Beach
2. Pledge of Allegiance
3. Roll Call

B. SPECIAL AWARDS, REPORTS, RECOGNITION AND PROCLAMATIONS

4. FY2020 Audit Discussion with James Moore & Co

C. CONSENT AGENDA

5. Public Comments on Consent Agenda Items Only
6. Agenda Approval
7. Approval of Minutes
 - a. June 1, 2021 - Regular City Council Meeting
8. Bid Awards and Contract Items
 - a. Waiver of Formal Bidding Procedures and Approval to Renew Environmental Legal Liability and Tank Storage Insurance with Aspen Specialty Insurance Company
 - b. Award of RFSQ 20-03 to Schenkel and Shultz for the Public Utilities Field Operations Facility Architectural Services Master Contract and approval of Task Authorization No. 1 in the amount of \$350,000.00
 - c. Award of ITB 21-09 Herbert and Nova Master Lift Station Rehabilitation to US Water Services Corporation
 - d. Approval of Change Order 3 to Collaborative Lean-On Services Agreement

- e. Approval of Change Order No 1 to the Agreement with SanPik, Inc. for ITB 19-17 Virginia Monroe Drainage Improvement Project for time extension only.
- f. Approval of Task Authorization No. 9 to Traffic Engineering Data Solutions, Inc. (TEDS) for the design of the SUNTrail St. Johns River-to-Sea Loop trail
- g. Approval of Task Authorization No. 12 to Kimley-Horn for Phase 2 of the ADA Transition Plan
- 9. Resolution No. 21-26 - Authorizing the City to join as a participant in the MOU and Formal Agreements implementing a Unified Plan regarding the Opioid Litigation
- 10. Approval of Major Special Event Request for Port Orange Family YMCA Aunt Catfish Triathlon sponsored by Halifax Health

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

E. COUNCIL COMMENTS

- 11. Comments/Concerns from Council Members

F. BOARD APPOINTMENTS, INTERVIEWS, REPORTS

- 12. Citizen Advisory Committee for TPO
- 13. Volusia Growth Management Commission Member Appointment

G. PUBLIC HEARING

- 14. Second Reading - Ordinance No. 2021-14 - Dental Amalgam
- 15. First Reading - Ordinance No. 2021-15 - Land Development Code (LDC) Clean-up Amendment 2021-2/Chapters 3, 13, 16 and 17 (Case No. 21-25000003)
- 16. First Reading – Ordinance No. 2021-16 – Rezoning/3704 Nova Rd. (Case No. 21-60000001)

H. ADDITIONAL ITEMS

- 17. City Attorney
 - a. City Attorney Annual Evaluation
- 18. City Manager

I. COUNCIL COMMITTEE REPORTS

- 19. City Council Committee Reports
 - a. First Step Shelter
 - b. Port Orange/South Daytona Chamber of Commerce
 - c. Roundtable of Elected Officials

J. 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.



CITY COUNCIL AGENDA ITEM

REQUESTED COUNCIL MEETING DATE 6/15/2021

Consent item: No

SUBJECT: (B4) FY2020 Audit Discussion with James Moore & Co

DEPARTMENT: Finance

GOAL: 5 - Fiscal Sustainability

RECOMMENDED MOTION: No motion required.

SUMMARY: The City's audit firm, James Moore & Co., will discuss the status of the City's Comprehensive Annual Financial Report and Audit for the fiscal year ended September 30, 2020.

Project No.: N/A

Funding Account No.: 0

Presenter: Scott Neils

ATTACHMENTS:

Scott Neils	Created/Initiated - 6/1/2021
Scott Neils	Approved - 6/1/2021
Wayne Clark	Approved - 6/3/2021
Robin Fenwick	Final Approval - 6/3/2021

REGULAR CITY COUNCIL MEETING MINUTES
COUNCIL CHAMBERS – CITY HALL
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA
JUNE 1, 2021

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 Pastor Calvin Gittner of Port Orange Presbyterian Church

Pledge of Allegiance

Roll Call	Present:	Council Member Jonathan Foley Council Member Chase Tramont Council Member Scott Stiltner Vice Mayor Drew Bastian Mayor Donald Burnette
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	Also Present:	City Manager Wayne Clark City Attorney Matthew Jones City Clerk Robin Fenwick
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SPECIAL AWARDS, REPORTS, RECOGNITION AND PROCLAMATIONS

4. Proclamation for Jim Purdy

Mayor Don Burnette presented Jim Purdy with a proclamation and thanked him for his service to Volusia County. Council congratulated Mr. Purdy on his retirement.

CONSENT AGENDA

5. Public Comments on Consent Agenda Items Only

There were none.

6. Agenda Approval

Council had no changes to the agenda as presented.

Motion to approve was made by Vice Mayor Drew Bastian and Seconded by Council Member Jonathan Foley. Motion carried unanimously by voice vote.

7. Approval of Minutes

- a. May 18, 2021 - Regular City Council Meeting
- b. May 25, 2021 - City Council Workshop

8. Bid Awards and Contract Items

a. Approval of Task Authorization No. 33 (CA4619) to Mead & Hunt for Design, Permitting, & Bidding Assistance for North Commonwealth Water Main Improvements

b. Approval of Task Authorization No 32 to Mead and Hunt, Inc. for the design of the Water Reclamation Facility (WRF) generator replacement and Electrical Upgrades

c. Approval of Task Authorization No. 1 under Piggyback Contract CA7538 to Zev Cohen and Associates for Site and Construction Inspection Services for the REC

d. Approval of Task Authorization No. 2 under Piggyback Contract CA7538 to Zev Cohen and Associates for Site and Subdivision Construction Inspection Services

9. Resolution No. 21-20 - Appropriating Funds for the Design of the SUNTrail/St. Johns River to Sea Loop Trail

10. Approval of Minor Special Event - Showtime Sparkler Sale at 4020 Nova Road

11. Approval to Submit Application for the Federal Fiscal Year 2021 United States Department of Justice Patrick Leahy Bulletproof Vest Partnership (BVP)

12. Ratification of Approval of American Rescue Plan Act (ARPA) Agreement

Motion to approve was made by Council Member Chase Tramont and Seconded by Council Member Scott Stiltner. Motion carried unanimously by roll call vote.

CITIZEN PARTICIPATION (Non-Agenda – 20 minutes)

There were none.

COUNCIL COMMENTS

13. Comments/Concerns from Council Members

Council Member Chase Tramont thanked Staff for their work with the VFW on the Memorial Day ceremony.

BOARD APPOINTMENTS, INTERVIEWS, REPORTS

14. Environmental Advisory Board Appointments (x3)

Applicants in attendance (Kat Atwood, Daniel Pompei, and Melissa Frantz) introduced themselves.

Motion to nominate Phil Klema to a three-year term was made by Vice

Mayor Drew Bastian and Seconded by Council Member Jonathan Foley. Motion carried unanimously by voice vote.

Motion to nominate Daniel Pompei to fill the unexpired term through 2023 was made by Vice Mayor Drew Bastian and Seconded by Council Member Chase Tramont.

Motion to nominate Kat Atwood to fill the unexpired term through 2023 was made by Council member Scott Stiltner and Seconded by Council Member Jonathan Foley.

Votes were taken by written ballot as follows:

Council Member Jonathan Foley – Daniel Pompei
Council Member Chase Tramont – Daniel Pompei
Council Member Scott Stiltner – Kat Atwood
Vice Mayor Drew Bastian – Daniel Pompei
Mayor Don Burnette – Kat Atwood

Motion to nominate Daniel Pompei carried 3-2 by roll call vote.

Motion to appoint Kat Atwood to fill the unexpired term through 2022 was made by Council Member Jonathan Foley and Seconded by Vice Mayor Drew Bastian. Motion carried unanimously by voice vote.

15. Golf Advisory Board Report

Lance Green, Chairman, provided Council with an update from their recent meeting.

PUBLIC HEARING

16. Second Reading - Ordinance No. 2021-10 - Fire and Rescue Pension Fund Sections 54-77 and 54-104

Mayor Don Burnette read Ordinance No. 2021-10.

ORDINANCE 2021-10

AN ORDINANCE OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA, AMENDING CHAPTER 54, ARTICLE IV, FIRE AND RESCUE PENSION FUND, BY AMENDING SECTION 54-77, DEFINITIONS; AMENDING SECTION 54-104, BENEFITS AND CONTRIBUTION FOR MEMBERS HIRED ON OR AFTER DECEMBER 4, 2012; PROVIDING FOR REPEAL OF CONFLICTING ORDINANCES; PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE.

Motion to adopt Ordinance No. 2021-10 was made by Vice Mayor Drew Bastian and Seconded by Council Member Chase Tramont. Motion carried unanimously by roll call vote.

REGULAR AGENDA

17. First Reading - Ordinance No. 2021-14 - Dental Amalgam

Mayor Don Burnette read Ordinance No. 2021-14.

ORDINANCE NO. 2021-14

AN ORDINANCE OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA AMENDING CHAPTER 74, ARTICLE I OF THE CODE OF ORDINANCES TO ESTABLISH A NEW SECTION 74-83 RELATED TO REQUIREMENTS FOR DENTAL FACILITIES THAT REMOVE OR PLACE AMALGAM FILLINGS; PROVIDING FOR DEFINITIONS; ESTABLISHING REPORTING AND WASTE MANAGEMENT PRACTICES FOR AMALGAM; PROVIDING FOR APPLICABILITY AND EXEMPTIONS; PROVIDING FOR REPEAL OF CONFLICTING ORDINANCES; PROVIDING FOR CODIFICATION; PROVIDING FOR SEVERABILITY AND PROVIDING AN EFFECTIVE DATE.

Motion to approve Ordinance No. 2021-14 was made by Vice Mayor Drew Bastian and Seconded by Council Member Jonathan Foley.

Lynn Stevens, Public Works/Utilities Director, provided details of the ordinance change.

Motion carried unanimously by roll call vote.

18. City Attorney

Matthew Jones, City Attorney, will be scheduling one-on-one meetings with Council to discuss his evaluation.

19. City Manager

Wayne Clark, City Manager, gave details of the 4th of July celebration.

COUNCIL COMMITTEE REPORTS

20. City Council Committee Reports

a. River to Sea TPO - Council Member Scott Stiltner provided details from their recent meeting.

b. General Employees' Pension Plan - Council Member Scott Stiltner provided details from their recent meeting.

c. Fire Pension Board - Council Member Jonathan Foley provided details from their recent meeting.

d. Police Pension Board - Vice Mayor Drew Bastian provided details from their recent meeting.

ADJOURNMENT - 7:16 p.m.

Mayor Donald O. Burnette

Attest:

Robin Fenwick, MMC
City Clerk



CITY COUNCIL AGENDA ITEM

REQUESTED COUNCIL MEETING DATE 6/15/2021

Consent item: Yes

SUBJECT: (C8a) Waiver of Formal Bidding Procedures and Approval to Renew Environmental Legal Liability and Tank Storage Insurance with Aspen Specialty Insurance Company

DEPARTMENT: Administrative Services

GOAL: 5 - Fiscal Sustainability

RECOMMENDED MOTION: Move to waive formal bidding procedures and to authorize the Mayor to renew the Environmental Legal Liability and Storage Tank insurance with Aspen Specialty Insurance Company for the term 06.21.2021 to 06.21.2022 and to sign all necessary documents.

SUMMARY: Environmental Legal Liability and Storage Tank Insurance is a specialty insurance offered by a limited number of carriers. Staff has worked with Brown & Brown Insurance to survey the market to ensure Aspen Specialty Insurance has remained market competitive. Brown & Brown marketed these coverages extensively by UCPM Environmental Insurance, a wholesaler who specializes in pollution liability. There are a number of markets that either will not write in Florida or will not write public entities. Aspen's pricing is 5% higher than the current expiring policy, primarily because tanks are a year older, another year of retroactive coverage being honored, insurance pricing is rising, company fees are up, and there are no competitive options. The City has maintained coverage through Aspen Specialty Insurance Company since 2014. Aspen has an A.M. Best Financial "A" rating for stability. The insurance covers 40 above ground storage tanks and 5 underground storage tanks located at 31 locations throughout the City and includes coverage for those acts certified to be acts of terrorism under the Federal Terrorism Insurance Act. These tanks must be inspected on an annual basis and the policy has historically been renewed in the month of June. Pursuant to Section 2-267 of the City Code of Ordinances, the requirements for formal bidding may be waived for insurance coverage expenditures as provided in the insurance fund. A breakdown of policy premiums (which include terrorism coverage premiums) is as follows:

<u>Policy</u>	<u>Expiring Premium</u>	<u>Proposed Premium</u>
Storage Tank Liability	\$5,765.00	\$6,048.00
Site Pollution Liability	\$20,078.00	\$21,108.00
Total	\$25,843.00	\$27,156.00

Premiums

Staff recommends that City Council waive formal bidding procedures as it is within current and approved guidelines, and Brown & Brown has served as the insurance broker on this plan to survey the market to ensure a competitive rate. Staff recommends authorizing the Mayor to contract with Aspen Specialty Insurance for one-year policies for Environmental Legal Liability, Tank Insurance Liability, and terrorism coverage at the rates set forth in the preceding paragraph and to sign all necessary documents. The signed applications and issued policies create a binding contract.

Project No.: N/A

Funding Account No.: 504

Presenter: Heather Carrizales

ATTACHMENTS:

1.	2021-2022 Environmental Liability Proposal	2021-2022 Environmental Liability Proposal.pdf
2.	Schedule for Site	Schedule for Site.PDF
3.	Storage Tank Schedule	Storage Tank Schedule.PDF

Grace Stewart
Heather Carrizales
Lupe Reyna-Coffin
Scott Neils
Matthew Jones
Jamie Miller
Wayne Clark
Robin Fenwick

Created/Initiated - 5/19/2021
Approved - 5/20/2021
Approved - 5/26/2021
Approved - 5/27/2021
Approved - 6/2/2021
Approved - 6/2/2021
Approved - 6/3/2021
Final Approval - 6/4/2021

CITY OF PORT ORANGE

ENVIRONMENTAL LEGAL LIABILITY COVERAGE - SITE COVERAGE

AND

STORAGE TANK LIABILITY

Effective: 06/21/2021 - 6/21/2022

Presented By:

Bobbi Barlow, CPCU
Senior Vice President

Stephen Scullian, CPCU, ARM
Vice President

Joy Glaug
Account Manager



This proposal contains only a general description of the coverage(s) and does not constitute a policy/contract. For complete policy information, including exclusions, limitations, and conditions, refer to the policy document. In the event of any differences between the policy and this summary, the policy will prevail.

Aspen Specialty Insurance Company

Environmental Legal Liability Policy – SITE coverage

Coverage Form: Claims Made Form (Same as expiring/ASPENV110 0617)

Insured Location & Retroactive Dates: See ASPENV324 0517

Summary of Coverage Provided:

The Environmental Legal Liability Policy covers bodily injury, property damage, cleanup costs, emergency response costs, business interruption and defense costs caused by pollution conditions arising from your operations. Legal expenses incurred for defense of any claim shall erode the applicable limit of liability.

A pollution incident means the discharge, emission, seepage, migration, dispersal, release or escape of any pollutant into or upon land, or any structure on land, the atmosphere or any watercourse or body of water including groundwater, providing such pollutant is not naturally present in the environment in the concentration or amounts discovered. Pollution incident also means the illicit abandonment by a third-party without the insured's consent.

Insuring Agreements:

Insuring Agreement A: First Party Protection

Cleanup costs
Emergency Response
Environmental Crisis - \$250,000 Separate limit which does not erode aggregate
Business Interruption
Insured Location
Non-Owned Site
Transportation

Insuring Agreement B: Defense, Supplementary Payments & Settlement

Limit of Liability: HIGHER LIMITS ARE AVAILABLE (*Client chooses limit*)

Per Incident Limit	\$1,000,000
Aggregate Limit of Liability	\$1,000,000
Defense	Included above

Per Incident Deductible:

Per Incident:	\$25,000
Business Interruption	Equal to all amounts incurred during the 3 days of the business interruption including the first day.

Minimum Earned Premium: 25%

Aspen Specialty Insurance Company

Environmental Legal Liability Policy – SITE coverage (continued)

Exclusions include:

Contractual liability
Criminal Fines, Penalties and Assessments
Damage to Insured's work
Divested properties
Employment Liability
Identified Underground Storage Tanks (unless scheduled)
Installed Asbestos and Lead-Based Paints
Insured's Products
Insured versus Insured
Intentional Non-Compliance
Internal Expenses
Prior Knowledge/Non-Disclosure
War
Workers Compensation and Similar Laws
Material Changes in Use
Microbial Matter/Legionella Pneumophila
Nuclear, Biological, Chemical, Radiological Terrorism
Other Insurance
Prior Claims
Storage Tank System Repair, Replace or Upgrade Exclusion
Total Terrorism Exclusion (Unless coverage is selected)

Conditions:

Defense Costs are inside the limit of insurance
100% Minimum Earned Premium – No return for cancellation

Subject to:

Signed Terrorism Election form – Insured has previously Elected TRIA
Signed Surplus Lines Acknowledgement form

Aspen Specialty Insurance Company

Storage Tank Policy:

Coverage Form: Claims Made Form (Same as Expiring/ASPENV503 0717)

Summary of Coverage Provided: The Storage Tank Policy covers bodily injury or property damage resulting from a pollution incident from a storage tank system provided the claim is first made against the insured and reported to the insurer during the policy period or the extended reporting period, if any. It covers clean-up costs and corrective action in excess of the deductible. The insurer has the right and duty to pay defense expense and to defend the insured for any claim. That duty ends when the \$1,000,000 aggregate for defense costs is exhausted by payment of defense expenses.

Insuring Agreements:

Insuring Agreement A: Storage Tank System Liability Protection
Insuring Agreement B: Defense and Settlement

Limits of Liability: HIGHER LIMITS ARE AVAILABLE (*Client chooses limit*)

Insuring Agreement A - Each Incident Limit:	\$1,000,000
Insuring Agreement A - Aggregate Limit:	\$2,000,000
Insuring Agreement B - Aggregate Defense:	\$1,000,000

Retroactive Dates & Per Incident Deductible:

See Schedule of Storage Tanks -Form ASPENV506 0717

Subject to:

Signed Terrorism Election Form
Signed Surplus Lines Acknowledgement form

Exclusions:

Contractual Liability
Fines, Penalties, Injunctive Relief
Divested Storage Tank Systems or Insured Locations
Employment Liability
Installed Asbestos and Lead
Insured versus Insured
Intentional Non-Compliance
Internal Expenses
Microbial Matter
Nuclear Hazard
Prior Knowledge
War
Vehicles
Non-Owned Disposal Sites (see Site policy)

Minimum Earned Premium: 25%

SUMMARY OF PREMIUMS AND RELATED INFORMATION

<u>Premiums as Bound</u>	<u>Expiring</u>	<u>Renewal</u>
Storage Tank Liability	\$ 5,765.00	\$ 6,048.00
Site Pollution Liability	<u>\$20,078.00</u>	<u>\$21,108.00</u>
TOTAL:	<u>\$25,843.00</u>	<u>\$27,156.00</u>

Payment Plan: Annual premium is due in full at time of binding coverage.

Premiums above **INCLUDE** Terrorism coverage.

Please refer to the individual proposed coverage parts for terms and conditions that this proposal may be subject to. This proposal is based upon the exposures to loss made known to the Agency. Any changes in these exposures (i.e., new operations, new products, additional states of hire, etc.) need to be promptly reported to us in order that proper coverage(s) may be put into place.

A.M. BEST FINANCIAL RATING

The insurance company providing coverage has the following A. M. Best* Financial rating:

* **Rating Guide:** A++ to C- = Highest to lowest rating
XV to I = Largest to smallest rating

	Line of Coverage:	Carrier:	Rating for Stability:	Rating for Assets / Surplus:
**	Environmental Liability Insurance	Aspen Specialty Insurance Co.	A	15

**** Denotes excess & surplus lines insurance company. See attached Statement Acknowledging that Coverage has been placed with a Non-Admitted Carrier. Please review and return to Brown & Brown. Brown & Brown does not have direct binding authority with this excess and surplus lines market.**

A.M. BEST FINANCIAL RATING (Continued)

A Best's Financial Strength Rating is an independent opinion of an insurer's financial strength and ability to meet its ongoing insurance policy and contract obligations. It is based on a comprehensive quantitative and qualitative evaluation of a company's balance sheet strength, operating performance and business profile.

Financial Strength Rating Guide	
<i>Secure</i>	<i>Vulnerable</i>
A++, A+ (Superior)	B, B- (Fair)
A, A- (Excellent)	C++, C+ (Marginal)
B++, B+ (Good)	C, C- (Weak)
	D (Poor)
	E (Under Regulatory Supervision)
	F (In Liquidation)
	S (Suspended)

Financial Size Category Guide	
<i>Class Adj. PHS (\$ Millions)</i>	<i>Class Adj. PHS (\$ Millions)</i>
I Less than 1	IX 250 to 500
II 1 to 2	X 500 to 750
III 2 to 5	XI 750 to 1,000
IV 5 to 10	XII 1,000 to 1,250
V 10 to 25	XIII 1,250 to 1,500
VI 25 to 50	XIV 1,500 to 2,000
VII 50 to 100	XV 2,000 or greater
VIII 100 to 250	

**NON-ADMITTED CARRIER DISCLAIMER
STATEMENT ACKNOWLEDGING THAT COVERAGE HAS
BEEN PLACED WITH A NON-ADMITTED CARRIER**

Per Florida Statute, the insured is required to sign the following E&S disclosure: The undersigned hereby agrees to place insurance coverage in the surplus lines market and understands that superior coverage may be available in the admitted market and at a lesser cost. Persons insured by surplus lines carriers are not protected by the Florida Insurance Guaranty Association with respect to any right of recovery for the obligation of an insolvent unlicensed insurer.

City of Port Orange.

Named Insured

Signature of Insured's Authorized Representative **Date**

Aspen Specialty Insurance Co.

Name of Excess and Surplus Lines Carrier

Site & Storage Tank Pollution Liability

Type of Insurance

6/21/2021 – 6/21/2022

Effective Date of Coverage

Bobbi Barlow

A013832

Producing Agent Name

License Number

Line of Coverage	Site Pollution	Tank Pollution
Premium	\$ 20,858.00	\$ 5,948.00
Filing Fee	\$ 250.00	\$ 100.00
Provider Fee		.
Terrorism Premium		.
Florida Surplus Lines Tax - 5%		.
FSLSO Service Fee - 0.1%		.
EMPA Fee		.
Total Premium	\$ 21,108.00	\$ 6,048.00

APPENDIX

RELATED INFORMATION

Compensation: In addition to the commissions or fees received by us for assistance with the placement, servicing, claims handling, or renewal of your insurance coverages, other parties, such as excess and surplus lines brokers, wholesale brokers, reinsurance intermediaries, underwriting managers and similar parties, some of which may be owned in whole or in part by Brown & Brown, Inc., may also receive compensation for their role in providing insurance products or services to you pursuant to their separate contracts with insurance or reinsurance carriers. That compensation is derived from your premium payments. Additionally, it is possible that we, or our corporate parents or affiliates, may receive contingent payments or allowances from insurers based on factors which are not client-specific, such as the performance and/or size of an overall book of business produced with an insurer. We generally do not know if such a contingent payment will be made by a particular insurer, or the amount of any such contingent payments, until the underwriting year is closed. That compensation is partially derived from your premium dollars, after being combined (or “pooled”) with the premium dollars of other insureds that have purchased similar types of coverage. We may also receive invitations to programs sponsored and paid for by insurance carriers to inform brokers regarding their products & services, including possible participation in company-sponsored events such as trips, seminars, and advisory council meetings, based on the total volume of business placed with the carrier you select. We may, on occasion, receive loans or credit from insurance companies. Additionally, in the ordinary course of our business, we may receive and retain interest on premiums you pay from the date we receive them until the date the premiums are remitted to the insurance company or intermediary. In the event we assist with placement and other details of arranging for the financing of your insurance premium, we may also receive a fee from the premium finance company.

Wholesale Broker/Managing General Agent: *UCPM Environmental Insurance*

This intermediary is not owned in whole or in part by Brown & Brown, Inc., the parent company of Brown & Brown of Florida, Inc.

Brown & Brown entities operate independently and are not required to utilize other companies owned by Brown & Brown, Inc., but routinely do so. In addition to providing access to the insurance company, the Wholesale Insurance Broker/Managing General Agent may provide additional services including, but not limited to, underwriting; loss control; risk placement; coverage review; claims coordination with the insurance company and policy issuance. Compensation paid for these services may be up to 15% of the premium you pay for coverage, and any compensation paid for those services is derived from your premium payment. The fee, if any, for the Wholesale Insurance Broker's/Managing General Agent's services above is \$0.

Questions and Information Requests: Should you have any questions, or require additional information, please contact this office at 1-800-877-2769 or, if you prefer, submit your question or request online at:

<http://www.bbinsurance.com/customerinquiry.shtml>.

Policy No.:
Effective Date: 06/21/2021
Endorsement No.: 14



THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**UNDERGROUND STORAGE TANK SCHEDULE WITH
RETROACTIVE DATE ENDORSEMENT**

It is hereby agreed that Section II. **EXCLUSIONS**, Paragraph F. **Identified Underground Storage Tanks**, does not apply to the **underground storage tanks** scheduled below on this Endorsement and located on an **insured location**, but only with respect to **pollution incidents** that first commence on or after the retroactive date shown below corresponding to the applicable **underground storage tank**:

SCHEDULE

<u>Underground Storage Tank(s) Schedule</u>	<u>Tank Size (gallons)</u>	<u>Tank Contents</u>	<u>Retroactive Date</u>
Location 1 : Public Works Facility 407 Virginia Ave Port Orange, FL 32127 Tank 1	12,000	Diesel	6/21/2003
Location 1 : Public Works Facility 407 Virginia Ave Port Orange, FL 32127 Tank 2	12,000	UG	6/21/2003
Location 3 : Wastewater Plant Unit 2 South 817 Oak Street Port Orange, FL 32127 Tank 1	4,000	Diesel	6/21/2003
Location 3 : Wastewater Plant Unit 2 South 817 Oak Street Port Orange, FL 32127 Tank 2	4,000	Diesel	6/21/2003
Location 5 : Fire Station #73 1090 City Center Circle Port Orange, FL 32129 Tank 1	2,000	Diesel	6/21/2003
Location 7 : Dorothy L. Hukill City Center Annex/Old Police Station and Fueling facility 1395 Dunlawton Ave. Port Orange, FL 32127 Tank 1	12,000	UG	6/21/2003
Location 7 : Dorothy L. Hukill City Center Annex/Old Police Station and Fueling facility 1395 Dunlawton Ave. Port Orange, FL 32127 Tank 2	2,000	Diesel	6/21/2003

Location 8 : Fire Station #75 1701 Town Center West Port Orange, FL 32129 Tank 1	1,120	Diesel	6/21/2010
Location 19 : Garnsey Water Plant 4400 Wellfield Road Port Orange, FL 32127 Tank 1	5,200	Diesel	6/21/2003
Location 21 : Police Station North 4545 Clyde Morris Blvd. Port Orange, FL 32129 Tank 1	2,500	Diesel	12/30/2010
Location 21 : Police Station North 4545 Clyde Morris Blvd. Port Orange, FL 32129 Tank 2	2,500	Diesel	12/30/2010
Location 25 : Trailwood Pump Station 5839 Trailwood Drive Port Orange, FL 32129 Tank 1	3,000	Diesel	6/21/2009
Location 26 : Fire Station #72 6027 Central Park West Port Orange, FL 32129 Tank 1	1,120	Diesel	6/21/2010
Location 28 : Fire Station #74 Fueling Facility 6701 Airport Road Port Orange, FL 32129 Tank 1	3,000	Diesel	6/21/2003
Location 31 : Ruth Street Pump Station 541 Ruth Street Port Orange, FL 32127 Tank 1	800	Diesel	6/21/2017

All other terms and conditions of this Policy remain unchanged.

Policy No.:
Effective Date: 06/21/2021
Endorsement No.: 6



THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**SCHEDULE OF STORAGE TANK SYSTEMS ENDORSEMENT
(WITH TANK SPECIFIC DEDUCTIBLE)**

It is hereby agreed that:

1. The following storage tank(s) identified in the Schedule of Storage Tank Systems and Corresponding Deductibles below are included as **Storage Tank System(s)** in **Item 8. SCHEDULE OF STORAGE TANK SYSTEMS** of the Declarations; and
2. Each **Storage Tank System** shall have a corresponding Deductible applicable to that **Storage Tank System** that will replace the Deductible listed in **Item 7.** of the Declarations Page under **INSURING AGREEMENT A., 1. Storage Tank System Liability Protection.** The corresponding Deductibles are included in the Schedule of Storage Tank Systems and Corresponding Deductibles below.

SCHEDULE OF STORAGE TANK SYSTEMS AND CORRESPONDING DEDUCTIBLES

Location Number:	1						
Site Name:	Public Works Facility						
Address:	407 Virginia Ave						
City:	Port Orange	State:	FL	Zip:	32127		

Tank #	UST/AST	Year Installed	DW/SW	Capacity (in gallons)	Contents	Deductible	Retroactive Date (if applicable)
1	UST	2005	DW	12,000	D	\$25,000	6/21/2003
2	UST	2005	DW	12,000	UG	\$25,000	6/21/2003

Location Number:	2						
Site Name:	Wastewater Treatment Plant Unit 2 South						
Address:	817 Oak Street						
City:	Port Orange	State:	FL	Zip:	32127		

Tank #	UST/AST	Year Installed	DW/SW	Capacity (in gallons)	Contents	Deductible	Retroactive Date (if applicable)
1	AST	2004	DW	4,000	D	\$25,000	6/21/2003
2	AST	2004	DW	4,000	D	\$25,000	6/21/2003

Location Number:	3						
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Site Name:	Fire Station #73						
Address:	1090 City Center Circle						
City:	Port Orange	State:	FL	Zip:	32129		
Tank #	UST/AST	Year Installed	DW/SW	Capacity (in gallons)	Contents	Deductible	Retroactive Date (if applicable)
1	AST	2015	DW	2,000	D	\$5,000	6/21/2003
Location Number:	4						
Site Name:	Dorothy L. Hukill City Center Annex						
Address:	1395 Dunlawton Ave						
City:	Port Orange	State:	FL	Zip:	32127		
Tank #	UST/AST	Year Installed	DW/SW	Capacity (in gallons)	Contents	Deductible	Retroactive Date (if applicable)
1	UST	2000	DW	12,000	UG	\$25,000	6/21/2003
2	UST	2000	DW	2,000	D	\$25,000	6/21/2003
Location Number:	5						
Site Name:	Fire Station #75						
Address:	1701 Town West Blvd.						
City:	Port Orange	State:	FL	Zip:	32129		
Tank #	UST/AST	Year Installed	DW/SW	Capacity (in gallons)	Contents	Deductible	Retroactive Date (if applicable)
1	AST	2009	DW	1,120	D	\$10,000	6/21/2010
Location Number:	6						
Site Name:	Garnsey Water Plant						
Address:	4400 Wellfield Road						
City:	Port Orange	State:	FL	Zip:	32127		
Tank #	UST/AST	Year Installed	DW/SW	Capacity (in gallons)	Contents	Deductible	Retroactive Date (if applicable)
1	AST	2001	DW	5,200	D	\$25,000	6/21/2003
Location Number:	7						
Site Name:	Police Station South						
Address:	4545 Clyde Morris Blvd.						
City:	Port Orange	State:	FL	Zip:	32129		

Tank #	UST/AST	Year Installed	DW/SW	Capacity (in gallons)	Contents	Deductible	Retroactive Date (if applicable)
1	AST	2010	DW	2,500	D	\$10,000	12/30/2010
2	AST	2010	DW	2,500	D	\$10,000	12/30/2010
Location Number:		8					
Site Name:		Trailwood Pump Station					
Address:		5839 Trailwood Drive					
City:		Port Orange	State:		FL	Zip:	32129
Tank #	UST/AST	Year Installed	DW/SW	Capacity (in gallons)	Contents	Deductible	Retroactive Date (if applicable)
1	AST	2009	DW	3,000	D	\$10,000	6/21/2009
Location Number:		9					
Site Name:		Fire Station #72					
Address:		6027 Central Park West					
City:		Port Orange	State:		FL	Zip:	32129
Tank #	UST/AST	Year Installed	DW/SW	Capacity (in gallons)	Contents	Deductible	Retroactive Date (if applicable)
1	AST	2009	DW	1,120	D	\$10,000	6/21/2010
Location Number:		10					
Site Name:		Fire Station #74 Fueling Facility					
Address:		6701 Airport Road					
City:		Port Orange	State:		FL	Zip:	32129
Tank #	UST/AST	Year Installed	DW/SW	Capacity (in gallons)	Contents	Deductible	Retroactive Date (if applicable)
1	UST	2000	DW	3,000	D	\$25,000	6/21/2003
Location Number:		11					
Site Name:		Ruth Street Pump Station					
Address:		541 Ruth Street					
City:		Port Orange	State:		FL	Zip:	32127
Tank #	UST/AST	Year Installed	DW/SW	Capacity (in gallons)	Contents	Deductible	Retroactive Date (if applicable)
1	AST	2015	DW	800	D	\$10,000	6/21/2017



CITY COUNCIL AGENDA ITEM

REQUESTED COUNCIL MEETING DATE 6/15/2021

Consent item: Yes

SUBJECT: (C8b) Award of RFSQ 20-03 to Schenkel and Shultz for the Public Utilities Field Operations Facility Architectural Services Master Contract and approval of Task Authorization No. 1 in the amount of \$350,000.00

DEPARTMENT: Public Utilities

GOAL: 2 - Infrastructure

RECOMMENDED MOTION: Move to approve award of RFSQ 20-03, Public Utilities Field Operations Facility Architectural Services to Schenkel and Shultz Inc.; execution of a Master Contract for Architectural Services with same; and execution of Task Authorization No. 1 to Schenkel and Shultz, Inc. for a fixed fee of \$350,000.00; subject to City Attorney and City Manager review and approval of final contract documents; and authorizing Mayor and City Clerk to execute all contract documents.

SUMMARY: FY20 approved budget included design of a new Field Operations facility to be built upon City owned property adjacent to the Police Department on Clyde Morris Blvd. FY21 includes construction of the facility. Purchasing received seven proposals for RFSQ 20-03, Public Utilities Field Operations Facility Architectural Services. After a committee review of the proposals, City staff created and evaluated a short list of vendor submittals and deemed Schenkel and Shultz, Inc. of Orlando as best responsive and responsible bidder.

Staff requests approval to execute a Master Contract for Architectural Services with Schenkel and Shultz, Inc. and approval to execute Task Authorization No. 1 under the Master Agreement for services related to the Public Utilities Field Operations Facility. Staff negotiated services and cost with Schenkel and Shultz, Inc. and the firm has submitted a fixed fee proposal of \$350,000.00 for the architectural services to include interior design, civil, structural, landscape, irrigation, land surveying, environmental engineering, geotechnical engineering, mechanical, electrical, plumbing, fire protection and security performed in four phases: programming, schematic design, design development and construction documents as required for the new Public Utilities Field Operations facility. Scope additionally includes investigation and evaluation of existing conditions, site and storm water design, building space needs analysis, building architectural and engineering design, permitting, preparation of bid documents and bidding assistance.

Project	Funding Account No.: <u>Fund:401 Name: Water & Sewer Op Fund Cost</u>
No.: <u>UBO011</u>	<u>Center: Water & Sewer Tag:UBO011 Program: Water Sewer</u>
<u>UBO011</u>	<u>Distribution Spend Category: Building-new construction</u>

Fund: 403 Name: Water & Sewer Op Fund Cost Center: Water &
Sewer R&R Program: W/S Distribution Spend Category: Building-new
construction

Presenter: Lynn Stevens

ATTACHMENTS:

1.	RFSQ 20-03 Master Contract for Architectural Services (1)	RFSQ 20-03 Master Contract for Architectural Services (1).pdf
2.	Schenkel & Shultz, Inc. Task Authorization No. 1	Schenkel & Shultz, Inc. Task Authorization No. 1.pdf
3.	Department Justification Memo FINAL 5 24 2021 - Schenkel Shultz (2) rev 6.1.21 jlw	Department Justification Memo FINAL 5 24 2021 - Schenkel Shultz (2) rev 6.1.21 jlw.docx
4.	RFSQ PACKAGE FINAL RFSQ-20-03-Public-Utilities-Field-Operations-Facility-Architectural-Services-FINAL-72120	RFSQ PACKAGE FINAL RFSQ-20-03-Public-Utilities-Field-Operations-Facility-Architectural-Services-FINAL-72120.pdf
5.	ADDENDUM 1 OF 2 -RFSQ-20-03-Public-Utilities-Field-Operations-Facility-Architectural-Services-8720	ADDENDUM 1 OF 2 -RFSQ-20-03-Public-Utilities-Field-Operations-Facility-Architectural-Services-8720.pdf
6.	ADDENDUM 2 OF 2 -FINAL-RFSQ-20-03-Public-Utilities-Field-Operations-Facility-Architectural-Services-81420	ADDENDUM 2 OF 2 -FINAL-RFSQ-20-03-Public-Utilities-Field-Operations-Facility-Architectural-Services-81420.pdf
7.	Proposal Port Orange Utilities Admin. Schenkel Shultz_revised 5 24 2021 RFSQ 20 03	Proposal Port Orange Utilities Admin. Schenkel Shultz_revised 5 24 2021 RFSQ 20 03.pdf

Julia Wiggins	Created/Initiated - 4/16/2021
Kynah Cockcroft	Approved - 4/16/2021
Julia Wiggins	Approved - 4/21/2021
Junos Reed	Approved - 4/21/2021
Steve Parnell	Approved - 4/21/2021
Lynn Stevens	Approved - 5/3/2021
Lupe Reyna-Coffin	Approved - 5/13/2021
Scott Neils	Approved - 5/13/2021
Matthew Jones	Approved - 5/28/2021
Wayne Clark	Approved - 6/3/2021
Robin Fenwick	Final Approval - 6/3/2021



CITY OF PORT ORANGE MASTER CONTRACT FOR ARCHITECTURAL SERVICES

This Master Contract for Architectural Services ("Contract") is entered into this ____ day of _____, 2021, 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 **SCHENKEL & SHULTZ, INC.**, a Florida corporation whose principal address is 200 East Robinson Street, Suite 300, Orlando, Florida 32801 ("Architect"). The City and Architect are collectively referred to herein as the "Parties."

1. Provision of Services

(a) The Architect hereby agrees to provide Public Utilities Field Operations Facility Architectural Services, and as further described in Request for Statement of Qualifications 20-03 ("RFSQ 20-03"). This Contract together with RFSQ 20-03, Addendum No. 1, and Addendum No. 2, 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 Architect. For convenience, Section 3, Scope of Services/Work and Requirements from RFSQ 20-03, is available in the Office of the City Clerk. Architect 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 become effective on the last date the Contract is signed by the Parties and shall continue for a period of Five (5) years ("Term").

Manner and Place: The work shall be performed in accordance with 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.

Time and Essence: Architect 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 Architect or require the City to place any orders for work or service. Authorization for performance of services by the Architect 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 Architect. 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 Architect 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. In return for the services identified above, the City agrees to compensate the Architect at the pricing set forth in Task Authorizations; and reserves the right to utilize lump sum or hourly rate compensation, in amounts not to exceed the budget appropriation for each fiscal year. The fee shall be negotiated for each project Task Authorization to this Contract. The Architect shall submit a monthly statement for professional services rendered and expenses incurred to date of statement. Statements for lump sum shall be based upon Architect's estimate of the proportion of the total services actually completed at the time of billing to the total services performed. Such estimates are to be prepared by the Architect and accompanied by such supporting data, as may be required by the Contract Administrator. 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.

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 Architect. For notice provisions, see the paragraph below entitled "Notice." The work shall be under the direction of the authorized Contract Administrator who shall have the final decision authority for all phases of the work, including general direction, review, and approval of the work. Neither the Contract Administrator's review, approval or acceptance of, nor payment for, any of the services required under this Contract shall be construed to operate as a waiver of any rights under this Contract or of any cause of action arising out of the performance of this Contract, and the Architect shall be and remain liable to the City for all costs of any kind which were incurred by the City as a result of the Architect's negligent performance of the services furnished under this Contract.

5. Responsibility of the Architect. The Architect 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 Architect under this Contract. The Architect shall without additional cost or fee to the City, correct or revise any errors or deficiencies in their performance.

6. Reuse of Documents. The City shall have unlimited rights, for the benefit of the City in all drawings, designs, specifications, notes and other architect's work produced in the performance of this Contract, or in contemplation thereof, and all as-built drawings produced after completion of 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 Architect pursuant to this Contract are instruments of service in respect to the project Task Authorization. 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 Architect for the specific purpose intended will be at City's risk. Any such verification or adaptation will entitle the Architect to further compensation at rates to be agreed upon by the City and Architect. 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 Architect.

7. Expert Witness. The Architect 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 Architects shall be negotiated at the time the Architect is called as an expert.

8. Subcontractors or Sub-Subcontractors

(a) Any subcontractors and outside associates or consultants required by the Architect 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) Architect shall save and hold the City harmless from any and all claims or actions by Architect's Subcontractors or Sub-subcontractors for payment of monies such Subcontractor or Sub-subcontractor claims to be owed by Architect 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 or Sub-subcontractors or claims of a Subcontractor or Sub-subcontractors for amounts owed by Architect to Subcontractor or Sub-subcontractor for work performed under this Contract.

(d) Architect shall be fully responsible for all negligent acts and omissions of its 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 Architect on account of specific work done in accordance with the schedule of values.

(e) The Architect 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 Architect.

9. Liens. Architect acknowledges that Architect shall not be entitled to lien the City or other public property.

10. Termination for Convenience of the City

(a) The parties agree that the City may terminate this 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.

(b) Termination, in whole or in part, shall be effected by delivery of a Notice of Termination signed by the City Manager or his designee, mailed or delivered to the Architect, and specifically setting forth the effective date of termination.

(c) Upon receipt of such Notice, the Architect shall:

- (i) cease any further deliveries or work due under this Contract, on the date, and to the extent, which may be specified in the Notice;
- (ii) place no further orders with any subcontractors except as may be necessary to perform that portion of this Contract not subject to the Notice;
- (iii) terminate all subcontracts except those made with respect to contract performance not subject to the Notice;

- (iv) settle all outstanding liabilities and claims which may arise out of such termination, with the ratification of the Finance Director of Port Orange; and
- (v) use best efforts to mitigate any damages which may be sustained by the Architect as a consequence of termination under this clause.

(d) After complying with the provisions of subparagraph (c), above, the Architect shall submit a termination claim, in no event later than six (6) months after the effective date of termination, unless one or more extensions of three (3) months each are granted by the Finance Director.

(e) The Finance Director, with the approval of the City Manager, shall pay from the using department's budget, reasonable costs of termination, including a reasonable amount for profit on supplies or services delivered or work completed. In no event shall this amount be greater than the original contract price, reduced by any payments made prior to Notice of Termination, and further reduced by the price of the supplies not delivered or the services not provided. This Contract shall be amended accordingly, and the Architect shall be paid the agreed amount.

(f) In the event that the parties cannot agree on the whole amount to be paid to the Architect by reason of termination under this clause, the Finance Director shall pay the Architect the amounts determined as follows, without duplicating any amounts which may have already been paid under the preceding paragraph of this clause:

- (i) With respect to all Contract performance prior to the effective date of Notice of Termination, the total of:
 - (1) the cost of work performed or supplies delivered;
 - (2) the cost of settling and paying any reasonable claims as provided in paragraph (c) (iv), above;
 - (3) a sum as profit on (a) determined by the Finance Director to be fair and reasonable.
- (ii) The total sum to be paid under (i) above shall not exceed the contract price, as further reduced by the contract price of work or supplies not terminated.

(g) In the event that the Architect is not satisfied with any payments which the Finance Director shall determine to be due under this clause, the Architect may appeal any claim to the City Council in accordance with Paragraph 23 of this contract concerning disputes.

11. Termination for Convenience for Subcontractors. In accordance with the termination for the convenience of the City provision of this contract, the Architect shall include similar provisions in any subcontract, and shall specifically include a requirement that subcontractors make all reasonable efforts to mitigate damages which may be suffered. Failure to include such provisions shall bar the Architect from any recovery from the City whatsoever of loss or damage sustained by a subcontractor as a consequence of termination for convenience.

12. Termination for Default. Either party may terminate this Contract, without further obligation, for the default of the other party or its agents or employees with respect to any agreement or provision contained herein. In the event of default by the Architect, 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.

13. Architect's Records. The design, permits and all other records prepared by the Architect, assembled for the City, subcontracted for the City, and any other records related to the scope of work in the possession of the Architect shall be retained by the Architect for the requisite time set forth in Florida Administrative Code Rule 1 B-24 <http://dos.myflorida.com/library-archives/records-management/>. Architect 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, Architect 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 Architect's obligations pursuant to this paragraph shall survive the termination of this Contract, and as amended from time to time.

14. Examination of Records

(a) The Architect 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 Architect involving transactions related to this Contract.

(b) The Architect 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 Architect 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.

15. Public Records Compliance. Architect 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 Architect does not transfer the records to the City.

(d) Upon completion of the Contract, Architect shall transfer to the City, at no cost, all public records in possession of the Architect 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 Architect does not comply with a public records request, the City shall deem the non-compliance a breach of this Contract, and the Architect may be subject to penalties under Section 119.0701, Florida Statutes.

ARCHITECT QUESTIONS RELATING TO ARCHITECT'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.

16. 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 Architect. Should termination be accomplished in accordance with this Section, the City shall be liable only for payments due through the date of termination.

(b) 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.

17. Insurance. Architect shall maintain insurance, as required herein, during the life of this Contract. Architect 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 Architect shall be primary and non-contributory. All insurance coverages of the Architect shall not seek contribution from any other insurance or self-insurance available to the City. For workers' compensation coverage, the Architect'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. Architect may use leased employees if the Architect 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 Architect 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. Architect 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.

Architect 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 Architect is responsible for ensuring that its subcontractors maintain the required coverage. Failure of the Architect to ensure the subcontractors maintain the required coverage, shall not relieve the Architect 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 Architect 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 Architect 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						
☒	<u>Workers' Compensation</u> The Architect 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 Architect using an employee leasing company shall complete the Leased Employee Affidavit Form Exhibit.	<table><tr><td><u>Contract Amount</u></td><td><u>Limits</u></td></tr><tr><td>Up to \$10 million</td><td>Statutory/\$500,000</td></tr><tr><td>\$10 - \$20 million</td><td>Statutory/\$1,000,000</td></tr></table> Contracts over \$20 million To Be Determined by the City.	<u>Contract Amount</u>	<u>Limits</u>	Up to \$10 million	Statutory/\$500,000	\$10 - \$20 million	Statutory/\$1,000,000	☐ 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.
<u>Contract Amount</u>	<u>Limits</u>								
Up to \$10 million	Statutory/\$500,000								
\$10 - \$20 million	Statutory/\$1,000,000								
☒	Comprehensive General Liability (including Completed Operations and Contractual Liability)	<u>Limits:</u> 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 Architect 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.	<u>Limits:</u> Auto Liability Body Injury and Property Damage: \$1,000,000 each occurrence \$1,000,000 aggregate							
Additional Insurance Requirements									
☐	Property Insurance Builders Risk. <u>Additional Coverage:</u>	<u>Limits:</u> 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	<u>Limits:</u> Coverage - \$1,000,000							
☐	Installation Floater (IT)	<u>Limits:</u> Coverage - \$ <u>To be determined.</u>							
☐	Architect Pollution Liability	<u>Limits:</u> Coverage - \$1,000,000							
☒	Errors and Omissions	<u>Limits:</u> Coverage - \$1,000,000							
☐	Umbrella Policy	<u>Limits:</u> Coverage – \$ <u>To be determined.</u>							
☐	Payment and Performance Bond Required	<u>Limits:</u> Coverage - Equal to amount of Contract.							
☐	City Manager waives Payment and Performance Bond for work under \$100,000.00.								



Unless otherwise required by law, City Manager waives Insurance for FOB goods under \$25,000.00.

18. A Contract for the purchase of supplies shall be governed by the City of Port Orange Code of Ordinances, as amended, and such supplies shall be deemed "goods," as defined therein.

19. Assignability of Contract. Neither this contract, nor any part hereof, may be assigned by the Architect to any other party without the express written approval of the City Council.

20. Modifications or Changes to this Contract

(a) Change Orders. The Department Head, with the concurrence of the City's signatory 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 the services to be performed 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 Architect's cost of, or time required for the performance of the work hereunder, Architect shall receive an equitable adjustment in accordance with subparagraph (d), which shall include all compensation to the Architect, or the City, of any kind in connection with such change, including all costs and damages related to or incidental to such change.

(c) Architect need not perform any work described in any change order unless it has received a certification from the City that there are funds budgeted and appropriated sufficient to cover the cost of such changes.

(d) No claim for changes ordered hereunder shall be considered if made after final payment in accordance with the Contract.

21. 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.

22. Liability for Loss or Damage. Architect shall be liable for any loss of, or damage to, City property caused by the negligence, recklessness, or intended wrongful misconduct of Architect, 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 Architect, his/its agents, servants and employees. Architect shall submit a full written report to the Finance Director within twenty-four (24) hours following the occurrence of such damage, loss or injury.

23. Non-discrimination. During the performance of this Contract, Architect agrees as follows:

(a) Architect 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 Architect. Architect agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-

discrimination clause. Architect agrees and fully supports and complies with the Americans with Disabilities Act of 1990.

(b) Architect shall state in all solicitations or advertisements for employees placed by or on behalf of Architect that Architect 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. Architect 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.

24. E-Verify. Architect 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 Architect 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 Architect with any subcontractor performing work under this Contract shall include the following language: "The Sub-Architect 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 Architect on or after the effective date of this Contract and thereafter during the remaining term of the Contract." The Architect 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 Architect 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.

25. Disputes. The City Manager, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to Architect, shall decide disputes with respect to this Agreement. The decision by the City Manager shall be final and binding unless, within five (5) business days from the date of delivery of the decision of the City Manager, appeal is made to the City Council in writing and delivered to the City Clerk, Robin L. Fenwick, MMC. 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.

26. 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.

27. 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.**

28. 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.

29. 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.

30. 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 and Utilities Director
1000 City Center Circle
Port Orange, Florida 32129
(386) 506-5750

Architect: Schenkel & Shultz, Inc.
Attention: Daniel C. Laggan, President
200 East Robinson Street
Suite 300
Orlando, Florida 32801
(407) 872-3322 – Telephone
(407) 872-3303 – Facsimile
jlohrum@schenkelshultz.com

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.

31. 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, Architect 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 Architect and null and void for the purposes of this Contract or Task Authorization. The signature on this Contract by the Architect 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) Architect'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 Architect 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.

32. 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.

33. 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 Architect and the City until the City signs this Agreement.

34. 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 Page Intentionally Left Blank]

SCHENKEL & SHULTZ, INC.

Witnesses:

Printed

Name: _____

Printed

Name: _____

By: _____

Daniel C. Laggan, 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: _____

STATE OF FLORIDA
COUNTY OF ORANGE

The foregoing instrument was acknowledged before me by means of ____ physical presence or ____ online notarization, this ____ day of _____, 2021, by Daniel C. Laggan, as President of Schenkel & Shultz, Inc., a Florida corporation. He is ____ personally known or ____ produced _____ as identification.

Notary Public, State of Florida

Printed, typed or stamped name, commission and expiration:

Witnesses:

CITY OF PORT ORANGE

Printed Name:_____

By: _____
Donald O. Burnette, Mayor

Printed Name:_____

Date: _____

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me by means of ____ physical presence or ____ online notarization, this ____ day of _____, 2021, 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.

Notary Public, State of Florida
Printed, typed or stamped name, commission and expiration:

Witnesses:

ATTEST:

Printed Name:_____

By: _____
Robin L. Fenwick, MMC, City Clerk

Printed Name:_____

Date: _____

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me, by means of ____ physical presence or ____ online notarization, this ____ day of _____, 2021, 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.

Notary Public, State of Florida
Printed, typed or stamped name, commission and expiration:

EXHIBIT “1”

RFSQ 20-03 Scope of Services, Addendum No. 1
and Addendum No. 2

Consisting of 9 Pages

SECTION 3 – SCOPE OF SERVICES/WORK AND REQUIREMENTS

Introduction:

The City of Port Orange Public Works & Utilities requests statements of qualifications from architectural firms for the design of a new Public Utilities Operations Facility. The facility will be located on an eight (8)-acre site which will include office space, meeting space, warehouse space, indoor and outdoor equipment storage areas. Site improvements will include stormwater collection and management along with utilities site grading and other necessary site improvements. The current site is unimproved.

Scope:

The Public Utilities Field Operations Facility scope of services shall consist of, but not be limited to, the following:

- Facility offices for employees, warehouse, and equipment storage needs
- Building(s) design
- Site design
- Permitting
- Construction phase services
- As-built preparation and certification

Qualifications/Certifications:

The preferred firm will have a current Professional Registration Certificate from the appropriate governing board. The firm must be properly registered at the time of submittal to practice their profession in the State of Florida. The preferred firm shall provide professional certifications of staff such as Licensed Architect, Professional Engineer (P.E) and other relevant professional titles/accomplishments related to the proposed project.

Evaluation Method:

The City will appoint a committee consisting of department staff to evaluate the proposals and to make recommendation to the City Council. The City will be the sole judge of its own best interests, the proposals, and the resulting contract. The City's decisions will be final. Award will be made to the proposal, which presents the best value to the City based on the entire evaluation process and all the information gathered. The City may require the short-listed firm(s) to do an oral presentation or have discussions by proposed team relative to their specific experience on similar projects. Although each member of the evaluation committee independently examines the proposals prior to the meeting, the short-listing or selection of the firm(s) is determined by the consensus of the committee.

Evaluation Criteria:

In determining a firm's qualifications, the following criteria will be considered based on qualifications, experience and project approach:

- Company profile including size, location(s), and primary area of professional focus;
- Credentials, qualifications and years' experience of the staff for both the prime and sub consultants and key personnel as presented by resumes, education, and training;
- Number of years prime and sub consultants worked together;
- Professional license, certifications, titles, resumes, and accomplishments of staff designated to this project;
- Location of office facilities and staff whom will be assigned to this project.

- Experience designated project staff has in providing similar projects;
- Overall project approach to support the needs and objectives of the project;
- Documentation that the firm can perform the contract and provide the service within budget and scheduling requirements;
- Quality, availability and adaptability of the contractual services to the particular use required;
- Sufficiency of the financial resources and ability of the firm to perform the contract or provide the services;
- Previous and existing compliance by the firm with laws and ordinance relating to contracts or services;
- The number of professional staff, education, and years' experience in public facilities design including support staff such as GIS specialists, surveyors, CADD Techs, Construction Inspectors (CEI), etc.;
- Documented projects (with at least 3 references) which demonstrate proficiency and experience in projects of a similar nature in scope and complexity to the proposed project;
- Quality of performance on previous contracts or services with similar scope

[End of Scope of Work - Remainder of this page left intentionally blank]



CITY OF PORT ORANGE

PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5740
purchdiv@port-orange.org

ADDENDUM NO. # 1

August 7, 2020

RFSQ #20-03 PUBLIC UTILITIES FIELD OPERATIONS FACILITY ARCHITECTURAL SERVICES

To All Bidders:

The following changes, clarifications and additions are hereby made part of the bidding and specifications for the above referenced project dated July 23, 2020 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. CLARIFICATIONS:

N/A

B. CHANGES TO SPECIFICATIONS:

N/A

C. QUESTIONS AND ANSWERS:

Question 1: Will the pre-proposal conference be available for virtual participation/televised?

Answer: No, there will not be a virtual attendance or call in option for the pre-proposal conference. The pre-proposal conference is non-mandatory, and all questions asked at the conference will appear on Addendum #1. We will also have the audio to the pre-proposal conference available upon request.

Question 2: Will you please clarify how location will affect the point scale under the evaluation criteria? Is location a part of "able to meet City's needs" (page 40)?

Answer: There is no specific formula for how location will affect the point scale under the evaluation criteria and no specific instruction is given to the Evaluation Committee as to how location should affect the point scale. The location of a submitting firms office(s) is primarily used for reference and is not considered a major factor in the five (5) points available under that section of the evaluation criteria.

Question 3: The RFSQ states on page 3 "one (1) original and one (1) identical digital (CD or flash drive) version in PDF format" and then on page 37 it requests "provide one (1) original, six (6) identical copies and one (1) identical digital version in PDF format on CD or USB flash/thumb drive". Can you please confirm the number of submittals that the City is requiring?

Answer: Please provide one (1) original and one (1) identical digital (CD or flash drive) version in PDF format as stated on Page 3. The requested number of submittals found on Page 37 is outdated and is no longer applicable.

Question 4: Has it been determined if the construction portion will be advertised as an ITB for a lump sum bid or an RFQ for Construction Management at Risk Services?

Answer: The subsequent solicitation will be advertised as an ITB for the construction of the Public Utilities Field Operations Facility.

Question 5: Will the Sign-In Sheet be available?

Answer: Yes, the Sign-In Sheet is available on DemandStar and the City of Port Orange website as of 8/6/2020.

Question 6: Can you please discuss the scope of the project and what is anticipated to be included?

Answer: The general scope as it is outlined in the solicitation is for Architectural Services to design, permit, and provide bidding assistance for a brand-new Field Operations Facility located on a designated property that is owned by the City of Port Orange. The zoning is appropriate so there will be no zoning issues. A decent amount of civil work will be required. The facility will be an all-inclusive facility that includes office space, storage space (enclosed and open storage), and other civil work such as a potential Vac Truck Pump-out pit connected to the sanitary system.

Question 7: What is the approximate budget of the project?

Answer: The approximate budget for Construction is \$3,000,000.00. At the end of the design, the City of Port Orange expects a full estimate of the Construction costs.

Question 8: Can you clarify which tab of Section 7 will be for the required forms?

Answer: The required forms are their own separate section of the solicitation, which is Section 9 on Page 44. They are not under any tabs for Section 7. Tab E of Section 7 is not to be confused with Section 9's *Form 9.8 – Professional References for Previous Experience*. Additionally, the selection committee does not see the required forms as that is under the purview of the Purchasing Division when opening the received proposals.

Question 9: Will "Due Diligence" (Geotechnical and Environmental) be included in this RFSQ?

Answer: Yes.

Question 10: Can you confirm which tab that you will want a proposer's project experience/project sheet to be listed?

Answer: Please list project experience/project sheet under Tab E - Documented Projects (with at least 3 references) which Demonstrate Proficiency and Experience in Projects of a Similar Nature in Scope and Complexity to the Proposed Project.

Question 11: Is Geotech and Surveying apart of the Architectural team?

Answer: The City of Port Orange will not be supplying Geotech or Surveying. Geotech and Surveying will be provided by a proposer's subconsultant.

Question 12: Will a firm be selected from their written documentation? Will there be a shortlist or presentation?

Answer: The City of Port Orange has the right to select a firm in how it sees fit—either by a firm’s written documentation if the Selection Committee sees them as “head and shoulders” above the other firm’s proposals or by a shortlist and subsequent presentation if the Selection Committee deems multiple firms to be close with their submitted proposals. Language on this topic can be found in the RFSQ on pages 42 and 43 under “EVALUATION PROCEDURE”.

Michael Hall

Buyer

mhall@port-orange.org

In all other respects, except as specifically stated herein, the subject RFSQ #20-03 PUBLIC UTILITIES FIELD OPERATIONS FACILITY ARCHITECTURAL SERVICES remains unchanged.

END OF ADDENDUM NO. #1



CITY OF PORT ORANGE

PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5740
purchdiv@port-orange.org

ADDENDUM NO. #2

August 14, 2020

RFSQ #20-03 PUBLIC UTILITIES FIELD OPERATIONS FACILITY ARCHITECTURAL SERVICES

To All Bidders:

The following changes, clarifications and additions are hereby made part of the bidding and specifications for the above referenced project dated July 23, 2020 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. **CLARIFICATIONS:**

N/A

B. **CHANGES TO SPECIFICATIONS:**

N/A

C. **QUESTIONS AND ANSWERS:**

Question 1: Will the pre-proposal conference be available for virtual participation/televised?

Answer: No, there will not be a virtual attendance or call in option for the pre-proposal conference. The pre-proposal conference is non-mandatory, and all questions asked at the conference will appear on Addendum #1. We will also have the audio to the pre-proposal conference available upon request.

Question 2: Will you please clarify how location will affect the point scale under the evaluation criteria? Is location a part of "able to meet City's needs" (page 40)?

Answer: There is no specific formula for how location will affect the point scale under the evaluation criteria and no specific instruction is given to the Evaluation Committee as to how location should affect the point scale. The location of a submitting firms office(s) is primarily used for reference and is not considered a major factor in the five (5) points available under that section of the evaluation criteria.

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Answer: Please provide one (1) original and one (1) identical digital (CD or flash drive) version in PDF format as stated on Page 3. The requested number of submittals found on Page 37 is outdated and is no longer applicable.

Question 4: Has it been determined if the construction portion will be advertised as an ITB for a lump sum bid or an RFQ for Construction Management at Risk Services?

Answer: The subsequent solicitation will be advertised as an ITB for the construction of the Public Utilities Field Operations Facility.

Question 5: Will the Sign-In Sheet be available?

Answer: Yes, the Sign-In Sheet is available on DemandStar and the City of Port Orange website as of 8/6/2020.

Question 6: Can you please discuss the scope of the project and what is anticipated to be included?

Answer: The general scope as it is outlined in the solicitation is for Architectural Services to design, permit, and provide bidding assistance for a brand-new Field Operations Facility located on a designated property that is owned by the City of Port Orange. The zoning is appropriate so there will be no zoning issues. A decent amount of civil work will be required. The facility will be an all-inclusive facility that includes office space, storage space (enclosed and open storage), and other civil work such as a potential Vac Truck Pump-out pit connected to the sanitary system.

Question 7: What is the approximate budget of the project?

Answer: The approximate budget for Construction is \$3,000,000.00. At the end of the design, the City of Port Orange expects a full estimate of the Construction costs.

Question 8: Can you clarify which tab of Section 7 will be for the required forms?

Answer: The required forms are their own separate section of the solicitation, which is Section 9 on Page 44. They are not under any tabs for Section 7. Tab E of Section 7 is not to be confused with Section 9's *Form 9.8 – Professional References for Previous Experience*. Additionally, the selection committee does not see the required forms as that is under the purview of the Purchasing Division when opening the received proposals.

Question 9: Will "Due Diligence" (Geotechnical and Environmental) be included in this RFSQ?

Answer: Yes.

Question 10: Can you confirm which tab that you will want a proposer's project experience/project sheet to be listed?

Answer: Please list project experience/project sheet under Tab E - Documented Projects (with at least 3 references) which Demonstrate Proficiency and Experience in Projects of a Similar Nature in Scope and Complexity to the Proposed Project.

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Question 12: Will a firm be selected from their written documentation? Will there be a shortlist or presentation?

Answer: The City of Port Orange has the right to select a firm in how it sees fit—either by a firm’s written documentation if the Selection Committee sees them as “head and shoulders” above the other firm’s proposals or by a shortlist and subsequent presentation if the Selection Committee deems multiple firms to be close with their submitted proposals. Language on this topic can be found in the RFSQ on pages 42 and 43 under “EVALUATION PROCEDURE”.

Question 13: Can you share the parcel number or address for the site?

Answer: The Parcel Number for the Public Utilities Field Operations Facility site is PID: 630600000062.

Michael Hall

Buyer

mhall@port-orange.org

In all other respects, except as specifically stated herein, the subject RFSQ #20-03 PUBLIC UTILITIES FIELD OPERATIONS FACILITY ARCHITECTURAL SERVICES remains unchanged.

END OF ADDENDUM NO. #2

EXHIBIT “2”

RFSQ 20-03 SAMPLE TASK AUTHORIZATION

Consisting of 4 Pages

TASK AUTHORIZATION NO. [REDACTED]
Master Contract for Architectural Services dated [REDACTED]
Between the City of Port Orange, Florida and Schenkel & Shultz, 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 **SCHENKEL & SHULTZ, INC.**, a Florida corporation with its principal place of business at 200 East Robinson Street, Suite 300, Orlando, Florida 32801 ("Architect"), and hereinafter collectively referred to as the "Parties," and is to that certain Master Contract for Architectural 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, Architect shall provide services relating to [REDACTED] as more particularly described in the Scope of Services attached hereto and incorporated herein as Task Authorization Exhibit "1."
3. Architect shall complete the services to be provided herein within [REDACTED] days of a written Notice to Proceed issued by the City, to the Architect.
4. In return for the services identified above, the City agrees to compensate Architect at the prices set forth in Exhibit "[REDACTED]" attached hereto and made a part hereof for all purposes, subject to a limit up to but not to exceed \$[REDACTED]. 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, Architect 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 Architect and null and void for the purposes of this Contract or Task Authorization. The signature on this Contract by the Architect 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) Architect'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 Architect 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 Architect 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.

[Remainder of page intentionally left blank]

Witnesses:

SCHENKEL & SHULTZ, INC.

Printed Name: _____

By: _____
Daniel C. Laggan, 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.

Printed Name: _____

Date: _____

Witnesses:

CITY OF PORT ORANGE

Printed Name: _____ By: _____
Wayne Clark, City Manager OR
Donald O. Burnette, Mayor

Printed Name: _____ Date: _____

Witnesses: ATTEST:

Printed Name: _____ By: _____
Robin L. Fenwick, MMC, City Clerk

Printed Name: _____ Date: _____

[CA 7525]

TASK AUTHORIZATION NO. 1
Master Contract for Architectural Services dated _____
Between the City of Port Orange, Florida and Schenkel & Shultz, 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 **SCHENKEL & SHULTZ, INC.**, a Florida corporation with its principal place of business at 200 East Robinson Street, Suite 300, Orlando, Florida 32801 ("Architect"), and hereinafter collectively referred to as the "Parties," and is to that certain Master Contract for Architectural 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, Architect shall provide services relating to the Design, Permitting, and Bidding Assistance Services, and as more particularly described in the Scope of Services attached hereto and incorporated herein as Task Authorization Exhibit "1."
3. Architect shall complete the services to be provided herein within Eighteen (18) months from issuance of a written Notice to Proceed by the City to the Architect.
4. In return for the services identified above, the City agrees to compensate Architect at the prices set forth in Exhibit "1" attached hereto and made a part hereof for all purposes, subject to an amount not to exceed \$350,000.00. 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, Architect 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 Architect and null and void for the purposes of this Contract or Task Authorization. The signature on this Contract by the Architect 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) Architect'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 Architect 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 Architect 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.

[Remainder of page intentionally left blank]

Witnesses:

SCHENKEL & SHULTZ, INC.

Printed Name: _____

By: _____
Daniel C. Laggan, 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.

Printed Name: _____

Date: _____

Witnesses:

CITY OF PORT ORANGE

Printed Name: _____ By: _____
Donald O. Burnette, Mayor

Printed Name: _____ Date: _____

Witnesses: ATTEST:

Printed Name: _____ By: _____
Robin L. Fenwick, MMC, City Clerk

Printed Name: _____ Date: _____

[CA 7525]

EXHIBIT “1”

RFSQ 20-03 Task Authorization No. 1 Architect's Quote

Consisting of 11 Pages

April 12, 2021

Mr. Junos Reed, P.E.
Engineering & Construction Manager
City of Port Orange
1395 Dunlawton Ave.
Port Orange, FL 32127

RE: Port Orange Public Utilities Field Operations Facility
SUBJECT: Professional Architectural and Engineering Services

Dear Mr. Reed:

SchenkelShultz Architecture is pleased to submit this proposal to provide architectural and engineering services for the City of Port Orange Utilities Administration Building along with the attached exhibits: A-Scope of Project, B-Scope of Services, C-Schedule of Compensation and D-Deliverables.

For Task One, design of the Utilities Administration Building, we propose a fixed fee of \$350,000.00 (Three Hundred and Fifty Thousand Dollars). This fee includes architectural, interior design, civil, structural, landscape, irrigation, land surveying, environmental engineering, geotechnical engineering, mechanical, electrical, plumbing, fire protection and security performed in five phases: programming, schematic design, design development and construction documents.

Our proposal is based upon the final scope of work identified in attachment B. SCHENKELSHULTZ will be responsible for the architectural and engineering design utilizing the following consultants:

1. Zev Cohen & Associates, Inc./Civil, Landscape, Environmental Engineering located in Ormond Beach, FL.
2. BBM Structural Engineers/ Structural Engineer located in Longwood, FL.
3. TLC Engineering for Architecture/ MEP/FP/Security Engineers located in Cocoa, FL.
4. Bechtol Engineering & Testing, Inc./Geotechnical located in Deland, FL.
5. ASSA ABLOY Door Security Solutions/Hardware located in Oviedo, FL.
6. Slinger & Associates/Land Surveying located in Port Orange, FL.

The Florida DMS curve was utilized to develop a baseline fee percentage of 7.2%. The following items are above and beyond basic A/E services and have been included with the baseline fee to develop the lump sum fee above. These include:

1. IT/AV Design engineering services. These services will be performed by our MEP consultant TLC Engineering.

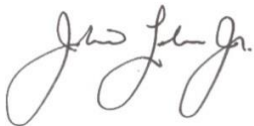
ATTN: Mr. Junos Reed
RE: Public Utilities Field Operations Facility
March 10, 2021 - Page 2

2. Environmental assessment and required permitting engineering services. These services will be performed our Civil Engineering Consultant Zev Cohen & Associates, Inc.
3. Civil, Landscape & Irrigation engineering services. These services will be performed by our Civil engineering consultant Zev Cohen & Associates, Inc.
4. Offsite draining analysis, design and additional surveying. These services will be performed by our Civil engineering consultant Zev Cohen & Associates, Inc.
5. Security design engineering services. These services will be performed by our security consultant TLC Engineering.
6. In terms of document printing, we are including the costs for submittal document printing. This does not include printing of construction documents for bidders.
7. Land survey as required including topography, utility locates, specimen and historic tree census, and tree replacement stock surveys. These services will be performed by Slinger & Associates.
8. Geotechnical Engineering services. These services will be performed by our Geotechnical Engineer Bechtol Engineering.

*Construction Administration services to be issued through a separate contract at a later date.

Thank you.

Sincerely,
SCHENKELSHULTZ



Johnnie Lohrum Jr, AIA
Principal

Attachments: Exhibit A – Scope of Project
Exhibit B – Scope of Services
Exhibit C – Schedule of Compensation
Exhibit D – Deliverables
Cc: DL, JDL, IZ/ SCHENKELSHULTZ

City of Port Orange
Public Utilities Field Operations Facility
Exhibit A – Project Scope of Work
Planning, Design, Permitting and Construction Administration
April 12, 2021 – Page 3

Project to be a new Public Utilities Field Operations Facility located on an eight acre site and will include office space, meeting space, warehouse space and indoor outdoor equipment storage areas. The building will be sized appropriately within the City's current construction budget of \$3,500,000. In addition to this scope, off-site utility/stormwater evaluation and design will be performed.

SchenkelShultz Architecture's scope to include investigation and evaluation of existing conditions, survey, geotechnical, site and stormwater design, landscape design, building space needs analysis, building architectural and engineering design, permitting, preparation of bid documents and bidding assistance. The building will be designed and constructed to meet sustainability goals but will not be required to be certified.

The project is to be constructed via Design/Bid/Build method. SchenkelShultz will coordinate with the City and selected Contractor to develop / implement fiscally responsible design, materials and systems for the building and site within an approved construction budget. Design and permitting duration is estimated at 8-9 months. Construction duration is currently estimated at approximately 10-12 months.

City of Port Orange
Public Utilities Field Operations Facility
Exhibit B – Scope of Services
Planning, Design, Permitting and Construction Administration
April 12, 2021 – Page 4

TASK ASSIGNMENT ONE

Phase One – Programming & Planning

- 1) The CONSULTANT shall evaluate the locations and develop a list of locations/areas of the facility that will adequately serve the primary purpose.
- 2) The CONSULTANT shall develop a master plan study to evaluate and compare site planning options.
- 3) THE CONSULTANT shall conduct interviews of City staff for the development of conceptual design for the new administration facility.
- 4) THE CONSULTANT shall prepare a PRM (Project Requirements Manual) to include the following:
 - A) Conceptual Design Narrative :
 - List of goals and objectives of the City for the building.
 - Design criteria for each building system
 - B) Detailed list of all permits required, estimated application fees, required documents and calendar schedule.
 - C) Summary of sustainable strategies to be implemented.
 - D) Building Program Spreadsheet with room names, square footages of City program spaces and core infrastructure space and total square footage. The program shall include base bid and alternates.
 - E) Conceptual site plan. Diagrammatic site plan layouts including building footprint, parking and drive access, storm water, utilities, emergency vehicle access, easements, setbacks, environmental analysis.
 - F) Water/ sewer utility capacity analysis and recommendation.
 - G) Report of data collection and analysis.
- 5) THE CONSULTANT shall conduct Design Workshops where THE CONSULTANT sketches diagrams and drawings alongside City staff to fully investigate the building and site layout in a collaborative manner.

- 6) THE CONSULTANT shall request tests and analyze existing water/sewer off-site utilities in and adjacent to the project site to confirm that the utilities have sufficient capacity to support the new Utilities Administration Facility. THE CONSULTANT will also verify that the existing water system has enough flow and pressure to meet current potable and fire flow standards for the new buildings. If required, CONSULTANT shall provide professional services (design, permitting, bidding assistance and construction administration) for modifications to on-site utilities.
- 7) THE CONSULTANT shall conduct Meetings with the City, vendors and agencies as necessary to design the building. THE CONSULTANT shall prepare Meeting Agenda and Meeting Reports for each encounter. The City will schedule City-CONSULTANT meetings. THE CONSULTANT will schedule vendor and agency meetings such that the City may be present at all meetings.
- 8) THE CONSULTANT shall provide geotechnical and land surveying engineering services.

Phase Two – Schematic Design

- 1) THE CONSULTANT shall prepare computer generated dimensioned, to scale drawings:
 - a) Floor plan with structural elements, furniture, equipment and cabinetry.
 - b) Life safety floor plan
 - c) Exterior elevation views of the building indicating materials of exterior envelope. (renderings are acceptable).
 - d) Building Section (one).
 - e) Typical Wall Section.
 - f) Civil site drawings.
 - g) Electrical single line diagram.
 - h) Schematic electrical and security site plans.
 - i) Schematic HVAC plan.
 - j) Schematic plumbing and fire protection plans.
- 2) THE CONSULTANT shall prepare a building and site code summaries including FBC, NFPA, NEC City of Port Orange Ordinances and other jurisdictional agency codes.
- 3) THE CONSULTANT shall conduct meetings with the City, vendors and agencies as necessary to design the building. THE CONSULTANT shall prepare Meeting Agenda and Meeting Reports for each encounter. The City will schedule City- CONSULTANT meetings.

THE CONSULTANT will schedule vendor and agency meetings such that the City may be present at all meetings. The quantity of meetings will be on the basis of the preliminary schedule and includes additional meetings as necessary due to specific issues or needs as they arise.

Phase Three – Design Development

- 1) THE CONSULTANT shall obtain site development permits, FFWCC, SJRWMD, FDEP, City Building & Planning (conceptual, final if required and development order), DOH and any others required for the construction of the project. The costs of required utility permitting is estimated and included in the overall consultant fee.
 - A. ENVIRONMENTAL SERVICES – THE CONSULTANT shall provide an environmental assessment consisting of wetland delineation, formal wetland determination, and survey for listed species (gopher tortoise survey 15%, 100% and mitigation). A/E will provide the following services, as detailed below; as needed based on site selection.
 - i. THE CONSULTANT will prepare ecological elements of the SJRWMD ERP Permit application, including the following
 - ii. THE CONSULTANT will produce Dredge & Fill permit sketches, if necessary.
 - iii. THE CONSULTANT will prepare all required elements of the Environmental Resource Permit (ERP) Permit application to SJRWMD. THE CONSULTANT will prepare responses to the jurisdictional agency comments.
 - iv. Uniform Mitigation Assessment Method (UMAM): THE CONSULTANT will prepare an analysis of pre- & post-development wetland impacts and mitigation value following the UMAM as required by SJRWMD.
 - v. THE CONSULTANT will prepare a Post-Development FLUCFCS Map for purposes of the SJRWMD permitting. Mapping will follow the Florida Land Use Cover and Forms Classification System (FLUCFCS) (FDOT 1999).
 - vi. Coordinate the approval of a Mitigation Plan to compensate for any proposed unavoidable and adverse wetland impacts. A/E will coordinate with a Mitigation Bank for the purchase of credits.
 - vii. THE CONSULTANT will prepare written responses to requests for information (RAI) by the SJRWMD regarding ecological elements of the ERP application prepared by THE CONSULTANT.

B. SJRWMD PERMITTING

- i. THE CONSULTANT shall prepare stormwater management computations to support the proposed improvements.
 - ii. THE CONSULTANT shall prepare all required elements of the ERP application to SJRWMD.
 - iii. THE CONSULTANT shall prepare responses to the jurisdictional agency
- 2) THE CONSULTANT shall prepare an outline specification (CSI div 1 through 26) with product cut sheets per division.
- 3) THE CONSULTANT shall prepare two color, computer generated, rendered, three dimensional exterior views of the building. Size 24x36 (mounted on ¼ inch black gator board). Fully rendered with cars, people, landscaping, sunlight and shadows and the like. THE CONSULTANT shall revise colors and cladding on rendering as may be necessary to match the color and cladding material approvals by the City.
- 4) THE CONSULTANT shall prepare exterior colored elevations.
- 5) THE CONSULTANT shall prepare an electronic interior finishes sample board.
- 6) THE CONSULTANT shall prepare dimensioned, to scale drawings including base bid and alternate plans:
 - a) Updated floor plan with structural elements, furniture, equipment, and cabinetry. Plans or specifications to include infrastructure, furniture and fixed equipment such and the like, integration of that system with the building and furnishings design recommendations.
 - b) Structural foundation and framing plans.
 - c) Exterior elevation views of the building indicating materials of exterior envelope. North, south, east, west.
 - d) Building Sections.
 - e) Wall Sections.
 - f) Roof plan with all penetrations and equipment.
 - g) Typical roof detail.
 - h) Interior finish schedule.
 - i) Door and Window Schedule.
 - j) Reflected ceiling plan with all ceiling mounted systems.

- k) Life safety plan with updated building code summary.
 - l) Civil site drawings.
 - m) Landscape and irrigation drawings.
 - n) Electrical, communication, lighting and A/V drawings.
 - o) Lighting design plan with photometric analysis.
 - p) Lightning protection plan.
 - q) Electrical and communications site plan.
 - s) Enlarged room plans with furniture and equipment layouts – mechanical, electrical, communications, restrooms and showers, lobby, rooms with cabinetry, plumbing, lobby and special finishes or special equipment.
 - t) HVAC, plumbing and fire protection drawings.
 - u) Building automation drawings.
 - v) Watering and fueling station drawings.
 - w) Generators and redundant systems plans.
- 7) THE CONSULTANT shall conduct Meetings with the City, vendors and agencies as necessary to design and permit the building. THE CONSULTANT shall prepare Meeting Agenda and Meeting Reports for each encounter. The City will schedule City-CONSULTANT meetings. THE CONSULTANT will schedule vendor and agency meetings such that the City may be present at all meetings. The quantity of meetings will be on the basis of the preliminary schedule and includes additional meetings as necessary due to specific issues or needs as they arise.

Phase Four – Construction Documents

- 1) THE CONSULTANT shall provide all required documents for building permit application and jurisdictional agency submittals. SJRWMD, DEP, FFWCC City of Port Orange infrastructure and building permits and any others required for the construction of the project. THE CONSULTANT shall respond to agencies and revise the construction documents as necessary to obtain agency approvals and for construction permits.
- 2) THE CONSULTANT shall prepare technical specifications division 1 through 26 – Construction Specification Institute format.
- 3) THE CONSULTANT shall revise the construction documents as directed by the OWNER.
- 4) THE CONSULTANT shall prepare dimensioned, to scale drawings:

- a) Updated floor plan with structural elements, furniture, equipment, and cabinetry.
 - b) Plans or specifications to include infrastructure for the furniture and fixed equipment and the like.
 - c) Structural foundation and framing plans.
 - d) Structural details.
 - e) Exterior elevation views of the building indicating materials of exterior envelope. North, south, east, west.
 - f) Building Sections.
 - g) Wall Sections.
 - h) Building envelope and penetration details. Scale: 1 1/2 in = 1 ft.
 - i) Roof plan with all penetrations and equipment.
 - j) Roof detail. Scale: 3 in = 1 ft.
 - k) Interior finish schedule.
 - l) Door and Window Schedule.
 - m) Door and window details. Scale: 1 1/2 in = 1 ft.
 - n) Reflected ceiling plan with all ceiling mounted systems.
 - o) Ceiling and wall details. Scale: 1 1/2 in = 1 ft.
 - p) Life safety plan with building code summary.
 - q) Civil site drawings.
 - r) Landscape and irrigation drawings.
 - s) Electrical, security, lighting and communications site plan.
 - t) Enlarged room plans with furniture and equipment layouts – mechanical, electrical, communications, restrooms and showers, lobby, rooms with cabinetry, plumbing, special finishes or special equipment.
 - u) Interior elevation views.
 - v) Cabinet details.
 - w) HVAC, plumbing and fire protection drawings.
 - x) Building automation drawings.
 - y) Generator and redundant systems drawings.
 - z) Lightning protection drawings.
- 9) THE CONSULTANT shall conduct Meetings with the City, vendors and agencies as necessary to design and permit the building. The CONSULTANT shall attend the PREBID conference. THE CONSULTANT shall prepare Meeting Agenda and Meeting Reports for each encounter. THE CONSULTANT will schedule vendor and agency meetings such that the City may be present at all meetings. The quantity of meetings will be on the basis of the preliminary schedule includes additional meetings as necessary due to specific issues or needs as they arise.

**** End of Exhibit B***

City of Port Orange
 Public Utilities Field Operations Facility
 Exhibit C – Schedule of Compensation-Proposed Billing Breakdown
 Planning, Design, Permitting and Construction Administration
~~April 12, 2021~~-Revised May 18, 2021 – Page 1

Professional Services Compensation-Proposed Billing Breakdown

Task Assignment One-Programming Design Thru Bidding

Phase One Services: Programming Phase

Programming documents complete	10%	\$ 35,000.00
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Phase Two Services: Schematic Design Phase

Schematic design documents complete	25%	\$ 87,500.00
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Phase Three Services: Design Development Phase

50% Design Development documents complete	25%	\$ 87,500.00
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Phase Four Services: Construction Documents Phase

90% complete construction documents	20%	\$ 70,000.00
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100% complete construction documents	15%	\$ 52,500.00
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Bidding assistance & documentation complete	5%	\$ 17,500.00
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TOTAL LUMP SUM COMPENSATION (includes expenses)	100%	\$ 350,000.00
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City of Port Orange
Public Utilities Field Operations Facility
Exhibit D – Deliverables
Planning, Design, Permitting and Construction Administration
April 12, 2021 – Page 11

- 1) Per phased submittal, the Consultant will submit prints as follows to the City:
 - 1 set of electronic media (PDF) of the above documents per submittal.
- 2) The Consultant will submit prints and calculations as necessary to jurisdictional agencies.
- 3) For DD submittal, the Consultant will submit 24 inch x 26 inch color renderings, dry mounted, on 1/4 inch thick black foam boards. 1 set initial boards, 1 set revised boards. (PDF & JPG files of the same)



City of Port Orange Public Works & Utilities Department

TO: Wayne Clark, City Manager

THRU: Lynn Stevens, Public Works & Utilities Director
Julia Wiggins, Public Works & Utilities Business Manager

FROM: Junos Reed, P.E., Public Works & Utilities Engineering and Construction Manager

DATE: May 19, 2021

SUBJECT: RFSQ 20-03 Master Contract and Task Authorization 1 for Architectural Services for the Public Utilities Field Operations Facility with Schenkel Shultz Architecture.

REQUEST:

The Public Works & Utilities Department is requesting City Council approval of the Master Contract for Architectural Services with Schenkel Shultz Architecture and Task Authorization 1 under the Master Contract. TA-1 is for the design, permitting, and bidding assistance of the Public Utilities Field Operations Facility project in the amount not to exceed \$350,000.00

PURPOSE:

On August 27, 2020 Purchasing received seven submittals for RFSQ 20-03 – Public Utilities Field Operations Facility. The Statements of Qualifications were evaluated on the criteria outlined in the RFSQ by an evaluation committee comprised of Public Works, Parks, Building & Utilities staff to evaluate and rank the Statements of Qualifications received. The Selection Committee reviewed each submittal with respect to the evaluation criteria listed in the RFSQ documents. On November 2, 2020 the Selection Committee met and short listed three of the seven firms that submitted Statements of Qualifications and on December 3, 2020 the three short listed firms were invited back to give presentations to the Committee. The Committee selected Schenkel Shultz Architecture to enter a Master Contract with for Architectural Services to provide design, permitting, bidding assistance, and construction phase services for the Public Utilities Field Operations Facility. TA 1 is for design, permitting, and bidding assistance services. A separate TA will be issued for construction phase services.

CONSIDERATION:

The Public Utilities Field Operations is located on Oak Street, just north of the Public Works yard. The site is currently limited on space which has required that some of Public Utilities Field Operations staff to be located at the wastewater treatment plant. The heavy equipment used in field operations also had to be located elsewhere in the city. Additionally, Field Operations is a critical part of the City's emergency response team. When a potential emergency occurs, these crews must be housed at the water treatment plant to avoid the flooded roads in the surrounding area of the current Public Utilities Field Operations facility.

This project is for the design, permitting, and construct of a new operations facility that all Public Utilities Field Operations employees and equipment will be housed. The location of the new facility will be on the city owned property behind the Police Station (known as the Gray property).

The project is part of the 5-year Capital Improvement Program and included in prior fiscal year budget planning.

FUNDING:

Fund: 401

Name: Water & Sewer Op Fund

Cost Center: Water & Sewer

Project UBO 011

Program: Water Sewer Distribution

Spend Category: Building – new construction

Budget: \$283,369.00

Actual: \$283,369.00

Fund: 403

Name: Water & Sewer Op Fund

Cost Center: Water & Sewer R&R

Program: W/S Distribution

Spend Category: Building – new construction

Budget: \$3,000,000.00

Actual: \$66,631.00

RECOMMENDATION:

The Public Works & Utilities and Works Department recommends City Council approval of the Master Contract for Architectural Services with Schenkel Shultz Architecture and Task Authorization 1 under the Master Contract for the design, permitting, and bidding assistance of the Public Utilities Field Operations Facility project in the amount not to exceed \$350,000.00

ANTICIPATED SCHEDULE:

- a) Council Approval June 15, 2021
- b) Design & Permitting 18 months from NTP

ATTACHMENTS:

- a) Schenkel Shultz Architecture RFSQ 20-03 Proposal for Public Utilities Field Operations Facility

CITY OF PORT ORANGE, FLORIDA

REQUEST FOR STATEMENT of QUALIFICATIONS

Public Utilities Field Operations Facility

Architectural Services

RFSQ #20-03



City of Port Orange Purchasing Division

Prepared by: Michael Hall, Buyer

Release Date: July 23, 2020

Statement of Qualifications Due Date & Time:

August 27, 2020 at 2:30 P.M.

City of Port Orange, Florida

1000 City Center Circle

Port Orange, FL 32129

(386) 506-5740

purchdiv@port-orange.org

www.port-orange.org



Legal Notice to Proposers

RFSQ #20-03

Public Utilities Field Operations Facility Architectural Services

Notice is hereby given that the City of Port Orange is seeking Statements of Qualifications for RFSQ #20-03 Public Utilities Field Operations Facility Architectural Services. Submissions of Statements of Qualifications will be accepted in the City Clerk's Office, Port Orange City Hall, 1000 City Center Circle, Port Orange, Florida 32129 until **2:30 P.M. on August 27, 2020** which may be amended by addendum issued by the City. All untimely statements will not be considered and will be returned to the Proposer unopened. All statements will be evaluated to ensure they contain all required forms in order to deem the Proposer responsive or non-responsive. Statements will be opened and read aloud at 2:30 P.M. in Council Chambers.

There will be a Non-Mandatory Pre-Proposal Conference for the project at **10:00 A.M.** (local time) on **August 6, 2020** at City Hall, Council Chambers (1st floor), 1000 City Center Circle, Port Orange, Florida 32129. All attendees to the Pre-Proposal Conference must sign in. The representative of each Responder shall be an authorized employee of the Proposer and shall sign in accordingly. Responders are urged to obtain Proposal documents and familiarize themselves with the documents prior to the Pre-Proposal meeting.

DESCRIPTION: *The City of Port Orange is soliciting sealed Proposals to acquire the services for professional architectural services for the design of a new Public Utilities Operations Facility located on an eight (8)-acre site which will include office space, meeting space, warehouse space, indoor and outdoor equipment.*

All Statements of Qualifications are solicited and will be evaluated on the criteria outlined in the RFSQ. An evaluation committee primarily comprised of City staff has been appointed to evaluate and rank the Statements of Qualifications received in accordance with the Code of Ordinances City of Port Orange, Chapter 2, Article VI, Division 2, Section 2-256, and all Proposals 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. Local Proposers may be given a local preference pursuant to the Code of Ordinances, City of Port Orange, Chapter 2, Article VI, Division 2, Section 2-275.

Copies of the RFSQ 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 website at <https://www.port-orange.org/bids.aspx> and (DemandStar) via their website at www.demandstar.com. All questions shall be directed **in writing** to Michael Hall, Buyer at mhall@port-orange.org or purchdiv@port-orange.org and reference **"Questions on RFSQ #20-03 Public Utilities Field Operations Facility Architectural Services"** in the subject line. Last day for questions will be **August 13, 2020 at 5:00 P.M.**

All Proposers are required to complete and submit a Public Entity Crime Statement, the Anti-Collusion Statement, and Drug-Free Proposal Preference Statement, as well as other documents as required by the solicitation.

NO Proposal shall be withdrawn for a period of ninety (90) days subsequent to the Proposal opening without the consent of the City of Port Orange, Florida.

No Statements received after the time and date specified for the opening will be considered. The City of Port Orange reserves the right to negotiate modifications to any submittal that it deems to be acceptable; to reject with or without cause, any or all submittals, or to interview or not interview individual submitters, to waive any non-substantial irregularity in submissions received in whole or in part whenever such waiver or rejection is in the best interest of the City.

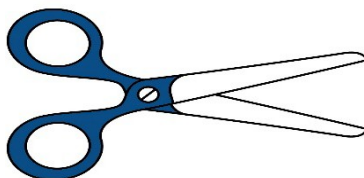
Statements of Qualifications shall be **submitted to the City Clerk's office** with one (1) original and one (1) identical digital (CD or flash drive) version in PDF format, addressed to Michael Hall, Buyer, Purchasing Division, City Hall, 1000 City Center Circle, Port Orange, Florida 32129 in a **SEALED ENVELOPE/PACKAGE** plainly marked on the outside: "**RFSQ #20-03 Public Utilities Field Operations Facility Architectural Services**".

Michael Hall – Buyer

Legal Ad - One Time – **July 23, 2020**

[Remainder of this page left intentionally blank]

Cut along the outer border and affix this label to your sealed Statement envelope/package to identify it as a "Sealed Statement of Qualifications". Be sure to include the name of the company submitting the Statement where requested.



SEALED STATEMENT OF QUALIFICATIONS • DO NOT OPEN

SEALED STATEMENT NO.

RFSQ #20-03

STATEMENT TITLE:

**Public Utilities Field Operations Facility
Architectural Services**

DUE DATE/TIME:

August 27, 2020 at 2:30 P.M.

SUBMITTED BY:

(Name of Company)

DELIVER TO:

**City of Port Orange City Clerk's Office
Attn: Michael Hall
Buyer
Purchasing Division
1000 City Center Circle
Port Orange, Florida 32129**

DATE/TIME RECEIVED:

(To be stamped by Clerk's Office)

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SECTION 1 – PURPOSE AND OVERVIEW

The purpose for this Request for Statement of Qualifications (RFSQ) is to solicit competitive sealed Statements of Qualifications, in compliance with the Consultants Competitive Negotiation Act. F.S. 287.055, from qualified individuals and/or engineering firms that are interested in providing the City of Port Orange the services for professional architectural services for the design of a new Public Utilities Operations Facility located on an eight (8)-acre site which will include office space, meeting space, warehouse space, indoor and outdoor equipment.

NOTE: The City may not accept proposals from firms, that have had adversarial relationships with the City or firms that have represented entities that have had adversarial relationships with the City. This includes the firm, employees and financial or legal interests. The City will not enter into a contract or conduct business with any firm or any personnel that is listed on the Federal, State, or other local government agencies' Excluded Parties List, Suspended List or Debarment List.

It is the intent and purpose of the City of Port Orange (City) that this Request for Statement of Qualifications promotes competitive selection. It shall be the Proposer's responsibility to advise the Purchasing Division if any language, requirements, etc., or any combination thereof, inadvertently restricts or limits the requirements stated in this RFSQ to a single source.

[Remainder of this page left intentionally blank]

SECTION 2 – INSTRUCTIONS TO PROPOSERS

Firms or companies (Proposer) desiring to provide services, as described herein shall submit sealed statements of Qualifications, including one original copy and one (1) digital (CD or flash drive) version in PDF format, in conformance with the detailed submittal instructions.

TIMELINE (Local Time):

The City reserves the right to alter dates as needed.

Date of Distribution:July 23, 2020
Non-Mandatory Pre-Proposal Conference.....August 6, 2020 at 10:00 A.M.
Deadline for Questions:August 13, 2020 by 5:00 P.M.
Final Addendum Posting:August 20, 2020 by 5:00 P.M.
Proposals Due:August 27, 2020 by 2:30 P.M.
Evaluation PeriodAugust 28 – September 7, 2020
City Council Meeting for Approval of Recommendation of Award.....To Be Determined

Proposals must be delivered in a sealed envelope/package to:

City of Port Orange City Clerk’s Office
Attn: Michael Hall
Buyer
Purchasing Division
1000 City Center Circle
Port Orange, Florida 32129

Statement of Qualifications must be delivered **no later** than the date and time listed in the Timeline above. All times referenced are local time.

Statements of Qualifications shall be sealed, and Proposers shall clearly indicate on the outside of their Proposal the following:

- a) Request for Statement of Qualifications (RFSQ) Number and Title
- b) Date of Opening
- c) Name of Proposer
- d) Address of Proposer

Due to the timing of mail service, the City cautions Proposers to assure actual delivery of Statements of Qualifications to the City prior to the deadline set for receiving Proposals. Carrier and hand deliveries of Statements of Qualifications 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. Proposals received after the established deadline shall not be considered.

Proposers are cautioned that they are responsible for delivery to the specific location cited above. Therefore, if your proposal is delivered by an express mail carrier or by any other means, it is your responsibility to ensure delivery to the above address. This office will not be responsible for deliveries made to any place other than the specified address.

Offers by telephone, email or telegram shall not be accepted. Also, Proposers are instructed NOT to fax their Proposal package. **Faxed Proposals shall be rejected as non-responsive regardless of where or when the fax is received.**

All Statements of Qualifications will be opened publicly, and the names of all Proposers shall be read aloud. All conferences and meetings regarding this RFSQ are recorded electronically (audio only).

The City of Port Orange reserves the right to reject any or all Statements of Qualifications or parts of Statements of Qualifications if it is in the best interest of the City.

QUESTIONS REGARDING THIS RFSQ:

All questions shall reference “**RFSQ #20-03 Public Utilities Field Operations Facility Architectural Services**” in the subject line. All questions concerning this RFSQ shall be submitted in writing no later than the date & time referenced in the Timeline above to:

Michael Hall
Buyer
1000 City Center Circle
Port Orange, FL 32129
mhall@port-orange.org or
purchdiv@port-orange.org

ADDENDA REGARDING THE REQUEST FOR STATEMENT OF QUALIFICATIONS:

The City will issue responses to inquiries and any other corrections or amendments it deems necessary in written addenda issued prior to the Statement Date. Proposers should not rely on any representations, statements or explanations other than those made in this RFSQ or in any addendum to this RFSQ. Where there appears to be a conflict between the RFSQ and any addenda issued, the last addendum issued will prevail.

It is the Proposers responsibility to be sure all correct number of addenda was received. The Proposer should verify with the designated contact persons prior to submitting a Statement that all addenda have been received. Proposers should acknowledge the correct number of addenda received as part of their Statements. It is the responsibility of the Proposer to ensure all addenda have been received prior to submitting a Statement.

Written responses, in the form of an addendum, will be provided via the City website www.port-orange.org/Proposals.aspx and Demand Star websites. 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 RFSQ submittal.

This provision exists solely for the convenience and administrative efficiency of the City of Port Orange. No Proposer or other third party gains any rights by virtue of this provision or the application thereof, nor shall any Proposer or third party have any standing to sue or cause of action arising therefrom.

CLARIFICATIONS:

It is the Proposers responsibility to become familiar with and fully informed regarding the terms, conditions and specifications of this RFSQ. Lack of understanding and/or misinterpretation of any portions of this RFSQ shall not be cause for withdrawal of your Statement after opening or for subsequent protest of award. Proposers must contact the Purchasing Representative, at the email provided, should clarification be required.

Modification or alteration of the documents contained in the solicitation or contract shall only be valid if mutually agreed to in writing by the parties.

MINIMUM QUALIFICATIONS:

Proposers shall be licensed to do business in the State of Florida. The City of Port Orange will verify Sunbiz report showing your license registered as "Active".

Proposers must be properly registered and licensed to engage in the scope of work pertaining to this RFSQ, by all applicable state and local agencies.

Proposers must provide a minimum of three (3) verifiable references from similar scopes of work as identified in this RFSQ on the provided "Professional References" form. Failure to provide references that verify required experience will cause the Proposer to be deemed non-responsive. The City of Port Orange is not to be used as a reference.

NO LOBBYING:

All Proposers 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 RFSQ. During the entire procurement process, all Proposers 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 Proposals for this project. Any Proposer contacting individuals mentioned herein in violation of this warning may automatically be disqualified from further consideration for this RFSQ.

PROPOSAL FORM:

Proposal Forms are to be completed as directed and without modification and returned as part of the RFSQ submittal prior to the RFSQ deadline for submission. Failure to fill out the Proposal Forms as directed and without modification may negatively affect the evaluation of your Proposal.

EXCEPTIONS TO SPECIFICATIONS:

If taking exception to any portion of the RFSQ requirements, the Proposer must indicate those exceptions as stated on the Proposer's Acknowledgement Form.

STATEMENT SUBMISSION AND WITHDRAWAL:

Unless otherwise specified, Proposer shall use the forms supplied by the Purchasing Division. Statements, once opened, become the property of the City, cannot be withdrawn, and will not be returned to the Proposers. Upon opening, Statements become subject to public disclosure in accordance with Chapter 119, Florida Statutes.

CORRECTION OF STATEMENTS:

Correction of inadvertently erroneous Statements shall be permitted up to the time of RFSQ opening. Proposers shall not be allowed to modify their Proposals after the opening time and date.

WITHDRAWAL OF STATEMENTS:

NO Statements shall be withdrawn for a period of ninety (90) days subsequent to the Statement opening without the consent of the City of Port Orange, Florida. Negligence on the part of the Proposer preparing the Statement confers no right of withdrawal or modification after the Statement has been opened, at the appointed time and place by the City of Port Orange. Any such withdrawn Statement shall not be resubmitted.

OPENING OF PROPOSALS/PROPOSALS:

Statements will be received until the date and time stated in this RFSQ and will be publicly opened and read at the place, time and date stated. No responsibility will attach the Purchasing Department for the premature opening of a Statements not properly addressed and identified.

LITIGATION HISTORY:

The City will consider a Proposer's litigation history information in its review and determination of responsibility. All Proposers 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 Proposer, any parent or subsidiary of the Proposer, or any predecessor organization. If the Proposer 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 Proposer'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 Proposer's debarment history information in its review and determination of responsibility. All Proposers 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 Proposer, any parent or subsidiary of the Proposer, or any predecessor organization. If the Proposer 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 Proposer's debarment history is an issue of responsibility, the failure to provide debarment history as required in the Proposal Submittal and Requirements Section may result in a recommendation of non-responsive by the Purchasing Manager.

REJECTION OF STATEMENTS:

The City reserves the right to reject any and/or all Statements when such rejection is in the best interest of the City.

STATEMENTS MAY BE REJECTED AND/OR PROPOSER(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 conduct of business.
- (d) Evidence of a violation of any federal or state antitrust law based on the submission of Proposals/Proposals or proposals, or the awarding of contracts. Evidence that the Proposer has attempted to give a Board employee a gratuity of any kind for the purpose of influencing a recommendation or decision in connection with any part of the Board's purchasing activity.
- (e) Other reasons deemed appropriate by the City.

OWNERSHIP OF DOCUMENTS:

All documents resulting from this project will become the sole property of the City of Port Orange. The Proposer must meet all requirements for retaining public records and transfer, at no cost, to the City all public records in the possession of the Proposer 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 for 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.

[Remainder of this page left intentionally blank]

SECTION 3 – SCOPE OF SERVICES/WORK AND REQUIREMENTS

Introduction:

The City of Port Orange Public Works & Utilities requests statements of qualifications from architectural firms for the design of a new Public Utilities Operations Facility. The facility will be located on an eight (8)-acre site which will include office space, meeting space, warehouse space, indoor and outdoor equipment storage areas. Site improvements will include stormwater collection and management along with utilities site grading and other necessary site improvements. The current site is unimproved.

Scope:

The Public Utilities Field Operations Facility scope of services shall consist of, but not be limited to, the following:

- Facility offices for employees, warehouse, and equipment storage needs
- Building(s) design
- Site design
- Permitting
- Construction phase services
- As-built preparation and certification

Qualifications/Certifications:

The preferred firm will have a current Professional Registration Certificate from the appropriate governing board. The firm must be properly registered at the time of submittal to practice their profession in the State of Florida. The preferred firm shall provide professional certifications of staff such as Licensed Architect, Professional Engineer (P.E) and other relevant professional titles/accomplishments related to the proposed project.

Evaluation Method:

The City will appoint a committee consisting of department staff to evaluate the proposals and to make recommendation to the City Council. The City will be the sole judge of its own best interests, the proposals, and the resulting contract. The City's decisions will be final. Award will be made to the proposal, which presents the best value to the City based on the entire evaluation process and all the information gathered. The City may require the short-listed firm(s) to do an oral presentation or have discussions by proposed team relative to their specific experience on similar projects. Although each member of the evaluation committee independently examines the proposals prior to the meeting, the short-listing or selection of the firm(s) is determined by the consensus of the committee.

Evaluation Criteria:

In determining a firm's qualifications, the following criteria will be considered based on qualifications, experience and project approach:

- Company profile including size, location(s), and primary area of professional focus;
- Credentials, qualifications and years' experience of the staff for both the prime and sub consultants and key personnel as presented by resumes, education, and training;
- Number of years prime and sub consultants worked together;
- Professional license, certifications, titles, resumes, and accomplishments of staff designated to this project;
- Location of office facilities and staff whom will be assigned to this project.

- Experience designated project staff has in providing similar projects;
- Overall project approach to support the needs and objectives of the project;
- Documentation that the firm can perform the contract and provide the service within budget and scheduling requirements;
- Quality, availability and adaptability of the contractual services to the particular use required;
- Sufficiency of the financial resources and ability of the firm to perform the contract or provide the services;
- Previous and existing compliance by the firm with laws and ordinance relating to contracts or services;
- The number of professional staff, education, and years' experience in public facilities design including support staff such as GIS specialists, surveyors, CADD Techs, Construction Inspectors (CEI), etc.;
- Documented projects (with at least 3 references) which demonstrate proficiency and experience in projects of a similar nature in scope and complexity to the proposed project;
- Quality of performance on previous contracts or services with similar scope

[End of Scope of Work - Remainder of this page left intentionally blank]

SECTION 4 – STANDARD PURCHASE DEFINITIONS

The City will use the following definitions in instructions to proposers, 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 for a 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 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 offerors 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 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. **DemandStar** is the official online repository for all City competitive solicitations.
18. **Due Date** means the date and time specified for receipt of Responses to a Solicitation.
19. **End User** is a person, program, agency, or other eligible user who uses a contract to purchase a commodity or contractual service.
20. **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.
21. **Evaluator** is a member of the evaluation committee/team.
22. **Goods** are supplies, materials, or equipment.
23. **Intent to Award** is a document, published on Onvia/DemandStar, that informs the public and respondents of the City's decision to award a contract pursuant to a previously issued competitive solicitation.
24. **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.
25. **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.

26. **Issues** means points, matters, or concerns to be addressed during negotiations.
27. **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.
28. **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.
29. **Lowest Responsible Bidder** means the Bidder submitting Lowest Responsible Bid.
30. **Negotiation Team** is a temporary group of City personnel who are responsible for negotiations as part of an Invitation to Negotiate (ITN).
31. **Negotiator** is a member of the negotiation team.
32. **Non-Professional Services** are services performed that are not of a professional nature such as lawn care, security, janitorial, etc.
33. **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.
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 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 employment or 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 (Proposer)** is a Proposer 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 (Proposer)** is a Proposer 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 Proposer 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 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 Proposer, who has an interest in the commodities/contractual services needed.
- 54. **Subcontractor** means a person, firm or entity providing goods or services to a Proposer to be used in the performance of the 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.

[Remainder of this page left intentionally blank]

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 REQUIREMENTS/INSTRUCTIONS OR OTHER DATA CONTAINED HEREIN.**

READ THIS ENTIRE DOCUMENT CAREFULLY. FOLLOW ALL INSTRUCTIONS. YOU ARE RESPONSIBLE FOR FULFILLING ALL REQUIREMENTS AND SPECIFICATIONS. BE SURE YOU UNDERSTAND THEM.

1. ADDENDUM

When specifications are revised, the City of Port Orange Purchasing Division will issue an addendum addressing the nature of the change. Proposers should acknowledge all addenda by circling the number of addenda received on the “Proposer 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 Proposer to ensure all addenda have been received prior to submitting a proposal. All Addenda shall be posted by the CITY on www.demandstar.com and City of Port Orange Website, www.port-orange.org.

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. Proposers 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.

2. ANTI-COLLUSION STATEMENT

By submitting this Response to a Formal Solicitation, the Proposer 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 this Response is in all respects fair, and without collusion or fraud. Additionally, Proposer agrees to abide by all conditions of this Solicitation and certifies that they are authorized to sign this Response for the Proposer. In submitting a Response to the City of Port Orange, the Proposer offers and agrees that if the Response is accepted, the Proposer 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 Proposer.

3. APPLICABLE LAWS

In connection with the furnishing of supplies or performance of work under the Contract, the Proposer 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.

4. ASSIGNMENT

The successful Proposer 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 Proposer from all contractual obligations.

5. **AUTHORITY TO CONDUCT BUSINESS IN FLORIDA**

A Florida corporation or partnership is required to provide evidence with its response that the Proposer is authorized to transact business in Florida and is in good standing with the Florida Department of State. If not with the response from the successful Proposer, 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 the Proposer is authorized to transact business in Florida and is in good standing with the Florida Department of State. If not with the response from the successful Proposer, 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 the joint venture, 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 business days from the request of the Purchasing Manager.

6. **AWARDS**

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.

7. **AWARD AND EXECUTION OF CONTRACT**

The Proposer(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 office of the Owner, within the time specified.

8. **PROPOSAL RETURNS**

Proposers 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 Proposers unopened.

9. **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 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 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 protestor.

10. PROPOSAL TABULATION

Proposers who wish to receive a copy of the proposal tabulation may obtain it via www.demandstar.com or on the City of Port Orange website, Bid opportunities page at www.port-orange.org/bids.aspx or by email purchdiv@port-orange.org.

11. BONDS

If this Solicitation requires submission of bid guarantee and performance bonds, there will be a separate page explaining those requirements. Responses submitted without the required bid bond or certified check shall be deemed non-responsive. When the Purchasing Manager deems it necessary, bid bonds/deposits shall be prescribed and are advertised in the public notices inviting bids. 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. Upon award, the successful Proposer may also be required to furnish and pay for a satisfactory contract one hundred percent (100%) Payment and Performance Bond which will be recorded by the City, at the Proposer's sole cost and expense, with the Clerk of the Circuit Court, Volusia County, Florida, and to enter into a written contract with the City of Port Orange. 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. Payment and Performance Bonds shall also be recorded at the Proposer's expense in the Office of the Clerk of the Circuit Court, Volusia County, Florida. All bonds no matter which kind, are advertised in the Solicitation which appears in the newspaper. Unsuccessful Proposers are entitled to the return of their surety where the Purchasing Manager has required such. A successful Proposer shall forfeit any surety required by the Purchasing Manager upon failure on the part of the Proposer to enter into a contract within the time specified after the award of bid.

12. CERTIFICATE OF INSURANCE

If required upon notice of intent to award contract resulting from this solicitation, the selected Proposer 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 a Certificate Holder prior to execution of the contract.

13. 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 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.

14. CHANGE ORDER REQUEST NOTIFICATION

The Successful Contractor is responsible for giving the City of Port Orange, prior to the Contract expiration date, at least forty-five (45) calendar day's advance notice for any anticipated changes to time and/or scope of the awarded Contract. The Contractor **shall not** continue to provide services past the Contract expiration date unless approved by a written Change Order Notice from the City.

15. CLEAN UP

Upon completion of the delivery of materials, the Contractor shall restore any/all public and private property which was 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. Contractor 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. Contractor shall make all repairs and restorations at his expense.

16. CONDUCT OF PROPOSERS

All Proposers or individuals acting on behalf of a Proposer 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 City Manager and staff recommendation for selection of a Proposer. All Proposers or individuals acting on behalf of a Proposer 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 Proposer. Until such recommendation is issued in writing, any questions regarding the pending solicitation shall be submitted to the Purchasing Manager. Failure to comply with this procedure shall result in rejection/disqualification of said submittal without exception. Contact with staff, City Council members and the Evaluation Committee during a public meeting shall not be considered a violation of this requirement.

17. 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 Proposers, 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 Proposer 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 notice 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.

18. CONFLICT OF INTEREST

For purposes of determining any possible conflict of interest, all Proposers must disclose if any City of Port Orange employee is also an owner, corporate officer, or employee of Proposers 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.

19. 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.

20. CONTRACT

Any acquisition above the \$25,000 level shall be done through one of the formal competitive methods except upon City Council waiver and/or shall have City Council approval. Only the Purchasing Manager and/or City Manager, have the authority to obligate the City by entering into a written contract to purchase goods and/or services up to \$25,000.00. The City of Port Orange, Florida reserves the right to reject any and all Responses or to waive any and all non-substantial irregularity in Responses received, whenever such waiver or rejection is in the best interest of the City.

21. CONTRACT OBLIGATION

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 Proposer. 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.

22. CONTRACT RENEWALS

Renewals may be made ONLY by written agreement between the City of Port Orange and the Proposer. Any price escalations are limited to those stated by the Proposer on the original Response.

23. COOPERATIVE PURCHASING

The City Manager may elect to purchase through or join with other governmental units in cooperative purchasing ventures when the best interest of the City would be served thereby, provided the same is in accordance with all applicable laws. In the event the City Manager should elect to purchase through or join with other governmental agencies in cooperative purchasing ventures, all purchases in excess of twenty-five thousand dollars (\$25,000.00) shall require council approval before the purchasing contracts are entered into. (Code 1981, § 8-33, Ord. 1997-22, § 5.6-1997; Ord. No. 2004-15, § 4, 7-20-2004)

24. COPYRIGHT AND PATENT RIGHTS

Proposer 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 Proposer agrees to hold the City harmless from any and all liability, loss or expense by any such violation.

25. COST INCURRED BY PROPOSER

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 Proposer. No payment shall be made for any response received, nor for any other effort required of or made by the Proposer prior to commencement of work as defined by the contract approved by the City Council.

26. DEBARMENT HISTORY

The City will consider a Proposer's debarment history information in its review and determination of responsibility. All Proposers 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 Proposer, any parent or subsidiary of the Proposer or any predecessor organization. If the Proposer 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 Proposer's debarment history is an issue of responsibility, the failure to provide debarment history as required in the Proposal Submittal and Requirements Section may result in a recommendation of non-responsive by the Purchasing Manager.

27. DEFAULT PROVISIONS

In the event of default by the Proposer the City reserves the right to procure the item(s) solicited from other sources and hold the Proposer responsible for excess costs incurred as a result. If a contractor defaults on a City contract the City Council may elect to refrain from doing business with the Proposer for a period of 36 months from the date of default.

28. DISCLOSURE OF CONFLICTS

The award is subject to the provisions of Chapter 112.313, Florida Statutes. All Proposers must disclose with their Response the name of any officer, director, or agent who is also an employee of the City. Further, all Proposers must disclose the name of any employee who owns, directly or indirectly, an interest in the Proposer's firm or any of its branches. The Proposer 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 Proposer. 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 Proposer 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.

29. EXCEPTIONS TO REQUIREMENTS

For purposes of evaluation, the Proposer must indicate any exception to the requirements, terms, and/or conditions, no matter how minor. This includes any agreement or contract forms supplied by the Proposer that are required to be signed by the City. If exceptions are not stated by the Proposer, in his proposal, it will be understood that the item(s)/services fully comply with the requirements, terms and/or conditions stated by the City. Exceptions are to be listed by the Proposer on an attachment included with the proposal. The City will not determine exceptions based on a review of any attached sales or manufacturer's literature.

30. E-VERIFY

Proposers 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 Proposer 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.

31. FACILITIES

The City reserves the right to inspect the Proposer's facilities at any time.

32. FAILURE TO RESPOND

If the Proposer elects not to propose, please return the enclosed "Proposer's Acknowledgement Form" by the proposal due date and state the reason(s) for not proposing. Failure to respond, either by submitting a proposal, or by submitting a "Statement of No Proposal", three (3) times, shall result in the Proposer's name being removed from the City's mailing list.

33. FINANCIAL STABILITY

Proposers 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.

34. 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.

35. 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.

36. GOVERNING LAW

Proposers 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 \$10,000.00 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.

37. 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 Proposer/provider 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.

38. HIPAA COMPLIANCE

The Proposer 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 Proposer uses, discloses or has access to protected health information as defined by HIPAA.

39. INDEMNIFICATION/HOLD HARMLESS

Contractor covenants and agrees that it will indemnify and hold harmless the City and all of the City's officers, agents, and employees from any claim, loss, damage, costs, charge or expense arising out of any act, action, neglect or omission by contractor during the performance of the contract, whether direct, or indirect, and whether to any person or property to which the City of said parties may be subject, except that neither the contractor nor any of its sub-contractors will be liable under this section for damages arising out of injury or damage to persons or property directly caused or resulting from the sole negligence of City or any of its officers, agents, or employees.

40. INDEPENDENT CONTRACTOR

It is expressly understood and agreed by both parties hereto that the City is contracting with the successful Proposer 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 Proposer under this contract and that the successful Proposer has no authority to bind the City.

The Proposer represents itself to be an independent contract or offering such services to the public and shall not represent himself or his employees to be an employee of the City. Therefore, the Proposer 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 Proposer shall further understand that the City cannot save and hold harmless and or indemnify the Proposer and/

or the Proposer's employees against any liability incurred or arising as a result of any activity of the Proposer or any activity of the Proposer's employees performed in connection with the Contract.

41. 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 Proposer 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.

42. INSURANCE

If required upon execution of a contract, the Proposer shall maintain insurance during the life of this agreement, and the City of Port Orange shall be listed as additional insured on that insurance document. A waiver of subrogation must be added in all areas and shall suffice in lieu of additional insured on workers' compensation, in an amount and a form set forth herein, to insure against risks, which are identified herein. Insurance providers must be rated "A" or better accordingly to the A.M. Best Company.

43. INSURANCE CANCELLATION

No change or cancellation in insurance shall be made without thirty (30) days' written notice by the Proposer 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.

44. INSURANCE REQUIREMENTS

If required, the Proposer shall provide to the City a certificate of insurance identifying the City of Port Orange as an additional insured. For workers' compensation coverage, the Proposer's insurance certificate shall include the insurer's waiver of subrogation in lieu of naming the city as an additional insured for workers' compensation.

Proposer may use leased employees if the Proposer 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 Proposer using a leased employee shall complete the City's Leased Employee Affidavit Form Exhibit.

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. Policies for Workers' Compensation may be issued by companies authorized as a group self-insurer by F.S. 440.572. The Proposer shall not commence work under the contract until the City has received a certificate or certificates of insurance and endorsement. Evidencing in the required insurance. The Proposer shall provide the City written notice of cancellation, non-renewal or any other changes in coverage no later than ten (10) days prior to the effective date of the change. **The City reserves the right to increase insurance coverage as determined for higher risk contracts and shall reimburse the Contractor for the reasonable additional costs of increased coverage.**

Standard Insurance Requirements			
	Insurance	Standards	Additional Requirements
☐ Required	<u>Workers' Compensation</u> 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).	<u>Contract Amount Limits</u> 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.
☐ Required	Comprehensive General Liability (including Completed Operations and Contractual Liability)	<u>Limits:</u> 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.
☐ Required	Comprehensive Business, Automobile Liability to include all owned, hired and non-owned automobiles.	<u>Limits:</u> Auto Liability Body Injury and Property Damage: \$1,000,000 each occurrence \$1,000,000 aggregate	
Additional Insurance Requirements			
☐	Property Insurance Builders Risk. <u>Additional Coverage:</u>	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.
☐ Required	Professional Liability	Limits: Coverage - \$1,000,000	
☐	Installation Floater (IT)	Limits: Coverage - \$ <u>To be determined.</u>	
☐	Contractor Pollution Liability	Limits: Coverage - \$1,000,000	
☐ Required	Errors and Omissions	Limits: Coverage - \$1,000,000	
☐	Umbrella Policy	Limits: Coverage - \$ <u>To be determined.</u>	
☐	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.		

45. INVOICES AND PAYMENTS

All invoices shall be sent to: City of Port Orange, Accounts Payable, P.O. Box 291759, Port Orange, Florida, 32129. 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 Proposer offers a payment discount. The City cannot make advance payments, make deposits in advance of receipt of goods, or pay C.O.D. Proposers should state any payment discount in the space provided on the proposal form for construction services.

46. IRREVOCABILITY OF RESPONSES

Each Proposer agrees that Responses shall remain open until the effective date not to exceed 90 days after selection, shall not be subject to revocation or withdrawal, and shall be subject to the City Council's acceptance of a contract with the Proposer.

47. 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.

48. 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 Proposer shall not constitute a cognizable defense against the legal effect thereof.

Upon execution of a contract, the successful Proposer shall hold harmless, indemnify and defend the City of Port Orange, its members, officials, officers and employees against any claim, action, loss, damage, injury, liability, cost and expense of whatsoever kind or nature (including, but not by way of limitation, attorneys' fees and court costs) arising out of or incidental to the performance of the Contract, whether or not due to or caused by negligence of the City of Port Orange, its members, officials, officers or employees. This Contract requirement shall be reflected in the insurance coverage certificate.

49. LICENSES, PERMITS AND TAXES

The Proposer 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 Proposer shall abide by all ordinances and laws pertaining to his operations and shall secure, at his expense, all licenses and permits necessary for construction and operation.

50. LITERATURE (if applicable)

If no brand, model or make is specified, Proposers 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 he proposes to furnish.

51. **LOCAL PREFERENCE**

In accordance with City of Port Orange City Code 2-275, except where federal or state law, or any other funding source, mandates to the contrary, the City shall give preference to local businesses in the following manner:

- A. Request for proposals, qualifications or other qualitative submittal(s). In any ranking conducted pursuant to a request for proposals, qualifications, or other qualitative submittal(s) where the Proposers are rated by a point system, local businesses shall be granted the following preference:
 - 1. Port Orange business shall be granted up to eight (8) percent of the available points.
 - 2. Volusia County business shall be granted up to five (5) percent of the available points.
 - 3. Florida business shall be granted up to three (3) percent of the available points.
 - 4. Tied bid preference. In case of a tie between a local business and a non-local business, the local business shall prevail. In case of a tie between two or more local businesses, the following order of preference shall control: first priority to Port Orange business, second priority to Volusia County business, and third priority to Florida business.
- a) Misrepresentation prohibited; penalty. Any business that misrepresents the local preference status of its firm in a proposal or bid submitted to the city shall lose the privilege to claim preference status and shall lose eligibility to claim local preference status for a period of one year.
- b) Local preference not required. This section shall not be deemed to require the granting of a local preference, and nothing herein prohibits the award of a contract to a non- local business where such award is in the publicinterest.
- B. Definitions. The following words, terms and phrases, when used in this section, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Port Orange Business means a business having its headquarters and principal place of business within the City of Port Orange at least twelve (12) months prior to the bid or proposal opening date, as evidenced by a valid business tax receipt or such other documentation, to the City's satisfaction, demonstrating the physical business presence of the firm within the limits of the City of Port Orange.

Volusia County Business means a business having its headquarters and principal place of business within the County of Volusia, and not within the City of Port Orange, at least twelve (12) months prior to the bid or proposal opening date, as evidenced by a valid business tax receipt or such other documentation, to the City's satisfaction, demonstrating the physical business presence of the firm within the limits of Volusia County.

Florida Business means a business having its headquarters and principal place of business within the State of Florida, and not within Volusia County, at least twelve (12) months prior to the bid or proposal opening date, as evidenced by a valid business tax receipt or such other documentation, to the city's satisfaction, demonstrating the physical business presence of the firm within the limits of the State of Florida.

52. 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.

53. NON-EXCLUSIVITY OF CONTRACT

The selected Proposer 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.

54. 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 Consultant responsible for any excess costs occasioned thereby and may immediately cancel the contract.

55. 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.

56. 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.

57. PRE-PROPOSAL CONFERENCE

The Purchasing Manager shall determine if a pre-proposal conference is required and provide the date, time and location in the Solicitation legal advertisement and Solicitation requirements. 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. Attendance to the pre-proposal conference is normally non-mandatory. Only Proposers attending a mandatory pre-proposal conference will be eligible to submit a Response. The representative of each Proposer shall be an authorized employee of the Proposer and shall sign in accordingly.

58. 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.

59. PROPRIETY 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 Proposer to submit in order to prequalify 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.

60. 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 Proposer during the term of contract, and the Proposer shall be held responsible for any damage to the property occurring by reason of his operation on the property.

61. PUBLIC ENTITY CRIMES

In accordance Section 287.133 (2)(a), Florida Statutes: A person or affiliate who has been placed on the convicted Proposer 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 Proposer list.

62. 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 or 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.

The failure of Contractor to comply with a public records request shall constitute a material breach of the contract.

63. PUBLIC RECORDS/PUBLIC MEETINGS EXEMPTION STATEMENT

Section 119.071(1)(c), Florida Statutes: **Any financial statement that an agency requires a prospective Proposer to submit in order to prequalify 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 Proposers will not be able to procure a copy of their competitor's proposals 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 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 Proposer, or where a Proposer answers questions. In other words, neither Proposers, 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 Proposers, but the new law limits public attendance to portions of such meetings.

64. 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.

65. RECORDS/AUDIT

The Proposer shall maintain records sufficient to document their completion of the scope of services as a public record and as a requirement of the Contract. At all reasonable times, these records, unless exempt or confidential, shall be subject to review, inspection, copy and audit by persons duly authorized by the City. These records shall be kept for a minimum of three (3) years after completion of the Contract and in accordance with the requirements of public records retention as prescribed by general law. Records which relate to any litigation, appeals or settlements of claims arising from performance under this requirement shall be made available until a final disposition has been made of such litigation, appeals, or claims.

66. REQUEST FOR ADDITIONAL INFORMATION

Prior to the final Solicitation selection, Proposers may be required to submit additional information which the City may deem necessary to further evaluate the Proposer's qualifications to perform under the terms of the Solicitation and subsequent Contract.

67. 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.

68. RIGHT OF NEGOTIATION RFP/RFSQ/ITN (N/A for ITBs)

The City reserves the right to negotiate with the selected Proposer the exact terms and conditions of the Contract.

69. RIGHT OF WITHDRAWAL

A bid, proposal, statement, or reply may not be withdrawn before the expiration of ninety (90) days from the Response due date.

70. 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 Proposers shall become the property of the City when received.

71. RULES, REGULATIONS AND LICENSING REQUIREMENT

The Proposers shall comply with all laws, ordinances and regulations applicable to the services contemplated herein, including those applicable to conflict of interest and collusion. Proposers 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.

72. SEPARATION AND DISTRIBUTION

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.

73. 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.

74. 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.

75. SIGNED RESPONSE CONSIDERED AN OFFER

The signed Response is considered an offer on the part of the Proposer, 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 Proposer, 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 Proposer after such acceptance, the City may take such action as it deems appropriate including legal action for damages or specific performance.

76. SOLICITATION FORM COMPLETION, SUBMISSION AND RECEIPT OF RESPONSES

Unless otherwise specified, Proposer 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 Proposer's authorized representative. Responses containing erasures or corrections must be initialed by the Proposer 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: Michael Hall, Buyer, Purchasing Office, a division of the Finance Department, Port Orange City Hall, 1000 City Center, 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. . 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 Responses deemed non-responsive will be returned to the Proposer and will not be opened.

Proposals (Envelope/Package) shall contain one (1) original and one (1) digital (D or flash drive) PDF 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 project name, proposal number and name of the Proposer.

77. 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 Proposer 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 Proposer shall provide follow-up evidence that the Proposer maintains such credentials throughout the period of the agreement. A copy of a current certificate of authority from the Secretary of State authorizing the Proposer/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 <http://ccfcorp.dos.state.fl.us/index.html>. Contract documents shall be executed by the entity's duly authorized officer as evidence by entity records.

78. SUBCONTRACTING

The Proposer will not sub-contract or enter into any subcontracting agreements pertaining to this contract, without obtaining written approval from the City of Port Orange.

79. 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.

80. TERMINATION

The City of Port Orange reserves the right to terminate the contract for default if the Proposer breaches any of the terms therein, including warranties of the Proposer or if the Proposer 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 Proposer 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 Proposer.

81. TERMINATION NOTICE

Either party may cancel the contract at any time after award, unless otherwise specified. The City shall be required to give the Proposer notice thirty (30) days prior to the date of cancellation of the contract. The Proposer shall be required to give the City written notice sixty (60) days prior to the date of cancellation of the contract. The City of Port Orange may terminate the contract without cause upon thirty (30) days written notice.

82. USE OF SOLICITATION FORMS

The Proposer 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 Proposer's Acknowledgement Form contained in each Solicitation.

83. VARIANCES

For purposes of Response evaluation, Proposers must indicate any variances, no matter how slight, contained in the Response. No variations or exceptions by a Proposer 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.

84. 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 Proposers, 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)

[Remainder of this page left intentionally blank]

SECTION 6 – SPECIAL CONDITIONS

PERIOD OF OFFER VALIDITY:

Statements of Qualifications offered in this RFSQ must remain firm for a period of ninety (90) Days from the RFSQ opening date.

CONTRACT TERM:

The term of the contract shall be eighteen (18) months for design and permitting and thirty (30) days for final completion.

ELIGIBILITY OF PROPOSER:

To be eligible to respond to this RFSQ, the Proposers must have prior experience working with the services described in this RFSQ. Please provide eligibility experience with your submittal.

Proposers shall be licensed to do business in the State of Florida. Submit Sunbiz report showing your company registered as “Active”.

The preferred firm will have a current Professional Registration Certificate from the appropriate governing board. The firm must be properly registered at the time of submittal to practice their profession in the State of Florida. Provide professional certifications of staff such as Professional Engineer (P.E) and other relevant professional titles/accomplishments related to the proposed project.

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.

LICENSES AND PERMITS:

Contractor is responsible for all applicable local and state licenses, permits and fees.

[Remainder of this page left intentionally blank]

SECTION 7 – STATEMENTS OF QUALIFICATIONS SUBMITTAL & REQUIREMENTS

Statements of Qualifications shall include all of the information solicited in this RFSQ, and any additional data that the respondent deems pertinent to the understanding and evaluation of the Statement. The respondent should not withhold any information from the written response in anticipation of presenting the information orally or in a demonstration.

Submittal of a Statement of Qualifications shall constitute the Proposer's agreement and intent to follow and adhere to all statements and offerings contained within this RFSQ.

The sections of the submitted Statements that will be scored during the evaluation process are identified with the maximum attainable points. Additional areas used for awarding evaluation points are addressed in "Section 8 – Evaluation of Statements of Qualifications."

In conjunction with other material and information requested in the RFSQ, all Proposers responding to this solicitation shall provide one (1) original, six (6) identical copies and one (1) identical digital version in PDF format on CD or USB flash/thumb drive. **The digital version must be an identical copy of the fully signed original submission.** All required attachments are to be in 8 ½" by 11" format, clearly legible, tabbed and bound in the following order:

TABLE OF CONTENTS:

The Table of Contents should outline in sequential order the areas of submittal. All pages, including enclosures, must be clearly and consecutively labeled and/or numbered and correspond to the Table of Contents.

STATEMENT OF INTEREST:

The responding firm will provide a letter, on letterhead, not exceeding two (2) pages, which serves as a statement of interest and introduction to the submittal. The Statement of Interest shall show the RFSQ number and title. This letter must be signed by the person authorized to bind the firm, company, or corporate entity.

TAB A – COMPANY PROFILE – HISTORY, QUALIFICATIONS, LOCATION(S), & PRIMARY AREA OF PROFESSIONAL

FOCUS: (15 Evaluation Points)

- Provide a brief narrative, not exceeding two (2) pages, of the corporate history of the firm.
- Provide a statement of the firm's qualifications, ability, and capacity to perform the scope of work, not exceeding ten (10) pages. Include a description of the way you will successfully complete the proposed work.
 - This section should include the firm's qualifications and capacity to meet the needs of the City of Port Orange. This may take the form of a narrative or chart and may include pictures or graphics which describes the firm's qualifications, work philosophy, as well as the projected commitment of resources throughout the expected time frame for the project.
 - What ability does the firm have to sustain the potential loss of key personnel and still adequately meet the terms of the contract?
 - Include a list, table, or graphic along with a short narrative explanation depicting services or practice areas in which the firm/team has exceptional expertise in specific service(s) or niche practices.
- Provide the location of the Home or Corporate Office for the Prime and all Sub Consultants.

- Provide the location of the Office(s) that will be directly working on this project for the Prime and all Sub Consultants.

TAB B – CREDENTIALS, QUALIFICATIONS, PROFESSIONAL LICENSE, CERTIFICATIONS, RESUMES, ACCOMPLISHMENTS AND YEARS’ EXPERIENCE OF THE STAFF FOR BOTH THE PRIME, SUB CONSULTANTS AND KEY PERSONNEL AS PRESENTED BY RESUMES, EDUCATION, AND TRAINING ON SIMILAR PROJECTS: (30

Evaluation Points)

- Provide a description, not exceeding five (5) pages, of the proposed project team. This description should provide the following:
 - o Names;
 - o Titles;
 - o Organization structure for the proposed project team;
 - o Firm names (if sub-consultants are involved); and
 - o Clearly identify the proposed role and responsibility in the project team for each person.
- **For each person named**, provide a brief description of qualifications, not exceeding a total of ten (10) pages. The descriptions shall include at a minimum:
 - o The professional qualifications and experience for each person;
 - o A summary of experience on projects similar to that described by this RFSQ; and
 - o Resumes of the proposed personnel to be assigned to this project (to include years of experience and years with the company).
- **For support staff such as GIS Specialists, Surveyors, CADD Techs**, provide a list of available staff that will be used for this project.
- **For Prime and all Sub Consultants**, provide a copy of license to do business in the State of Florida or Sunbiz report showing your company registered as “Active.”
- **For Prime and all Sub Consultants**, provide a copy of any and all professional licenses and certifications as required to perform the services described herein.
- Provide the number of years you have worked with each sub consultant and describe at least three (3) projects of similar size and scope to this RFP that you have successfully completed with the each of the sub consultant.

TAB C – OVERALL PROJECT APPROACH TO SUPPORT THE NEEDS AND OBJECTIVES OF THE PROJECT: (25 Evaluation Points)

- Provide example(s) of innovative solutions in which your firm’s involvement on a specific project resulted in cost savings or better solutions.
- Explain in concept how your firm will deliver this project on time and within budget.
- Explain your teams’ approach to projects like this one, detailing areas that you feel provide the greatest benefit to your clients.

TAB D – FINANCIAL STABILITY/LITIGATION and DEBARMENT HISTORY: (10 Evaluation Points)

- All Proposers shall submit a financial statement, 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. Enclose the financial statement in a separate envelope marked “CONFIDENTIAL pursuant to Florida Statutes Section 119.071(1)(c)”.

- This Tab shall contain information on the nature and magnitude of any litigation or proceeding whereby, during the past five (5) years, a court or any administrative agency has ruled against the firm in any matter related to the professional activities of the firm.
- This shall include any class actions within your company where named, industry investigations by Attorneys General, in addition to individual cases.
- This Tab shall contain information on the nature and magnitude of any debarment or proceeding during the past five (5) years against the firm in any matter related to the professional activities of the firm.
- This shall include any debarment actions against your company by the City or other public entity.
- Respondent must indicate whether any contract awarded by another government agency has been terminated in default or convenience.
- Respondent has a continuing duty to inform the City of any new claims filed against the Respondent.

TAB E – DOCUMENTED PROJECTS (WITH AT LEAST 3 REFERENCES) WHICH DEMONSTRATE PROFICIENCY AND EXPERIENCE IN PROJECTS OF A SIMILAR NATURE IN SCOPE AND COMPLEXITY TO THE PROPOSED PROJECT:

(20 Evaluation Points)

- Provide a maximum of three (3) Client References **(DO NOT INCLUDE THE CITY OF PORT ORANGE AS REFERENCES)** within the last five (5) years for the services described in this RFSQ. Information should include:
 1. Company name;
 2. Name, title, address, email, and telephone number of prime contact;
 3. Year of the project completion; and
 4. Total cost of contract;

The information provided under this tab, must be current and the City must be able to contact for verification as part of the evaluation process.

- All reference contact information MUST be verified as current by the Proposer prior to submittal. References which cannot be verified using the provided contact information will receive no points under the evaluation criteria.
- Below is a sample of the verification questions that may be used:
 1. What type of services did the Proposer do for you? What was the scope of the project?
 2. Did they meet the terms of the contract?
 3. Was the project completed on time and within budget?
 4. Did the Proposer keep you apprised on any issues with the project? How well did the Proposer communicate with you?
 5. Did they respond in a timely manner to calls, requests, etc.?
 6. Did they provide adequate staff to take care of the needs of your company/agency?
 7. Did the Proposer manage sub-consultants and/or sub-contractors?
 8. How was your experience in working with this Proposer? What frustrations, if any, did you have along the way?
 9. What is your level of confidence in using this Proposer in the future? Do you feel the Proposer will meet your needs in the next 3-5 years?
 10. Overall, would you recommend this Proposer?

SECTION 8 – EVALUATION OF STATEMENTS OF QUALIFICATIONS

EVALUATION CRITERIA:

Firms submitting the required criteria will have their Statements of Qualifications evaluated and scored for quality of response, qualifications and experience and engagement approach and schedule. The following represents the principal selection criteria, which will be considered during the evaluation process. Criteria will be weighted based on 100% of total value. Category Scores listed below are the maximum number of points to be awarded per each evaluator.

EVALUATION CRITERIA for WRITTEN STATEMENTS of QUALIFICATIONS

CATEGORY SCORE

A. COMPANY PROFILE – SIZE, LOCATION(S) AND PRIMARY AREA OF PROFESSIONAL FOCUS: (Max 15 points)

(1) Company Profile – Size, Location(s), and Primary area of Professional Focus (5 points)

- 5 points – More than 5 years of related experience and able to meet City's needs
- 3-4 points – 3 to 4 years of related experience and able to meet City's needs
- 1-2 points – 1 to 2 years related experience and able to meet City's needs
- 0 points – No prior related experience

(2) Strength of statement of qualifications (10 points)

- 8-10 points – Statement is exceptionally well written and clearly addresses all issues outlined in the RFSQ
- 4-7 points – Statement is understandable and addresses most of the specific issues outlined in the RFSQ
- 1-3 points – Statement is somewhat understandable and addresses some of the issues outlined in the RFSQ
- 0 points – Statement does not address issues outlined in the RFSQ

B. CREDENTIALS, QUALIFICATIONS, PROFESSIONAL LICENSES, CERTIFICATIONS, RESUMES, ACCOMPLISHMENTS AND YEARS' EXPERIENCE of KEY PERSONNEL: (Max 30 points)

(1) Credentials, Qualifications and Years' Experience of the Staff for both the Prime and Sub Consultants and Key Personnel as presented by Resumes, Education, and Training.....(10 points)

- 8-10 points – More than 5 years of related experience
- 4-7 points – 3 to 4 years of related experience
- 1-3 points – 1 to 2 years related experience
- 0 points – No prior related experience

(2) Number of Years Prime and Sub Consultants Worked Together..... (5 points)

- 5 points – 3 or more directly related projects
- 3-4 points – 1 to 2 directly related projects
- 1-2 points – Similar but not directly related projects
- 0 points – No directly related or similar projects

(3) Experience Designated Project Staff have in providing Similar Projects (10 points)

- 8-10 points – More than 5 years of related experience
- 4-7 points – 3 to 4 years of related experience
- 1-3 points – 1 to 2 years related experience
- 0 points – No prior related experience

- (4) Number of Professional Staff, Education, and Years' Experience in Public Facilities Design including Support Staff such as GIS Specialists, surveyors, CADD Techs, Construction Inspectors (CEI), etc.....(5 points)**
- 5 points – 3 or more directly related projects
 - 3-4 points – 1 to 2 directly related projects
 - 1-2 points – Similar but not directly related projects
 - 0 points – No directly related or similar projects

C. STRENGTH of OVERALL PROJECT APPROACH: (Max 25 points)

- 19-25 points – Innovative solutions and project approach is exceptionally detailed, well organized, and shows project milestones and staff assignments and clearly demonstrates capacity to carry out a project within set deadlines
- 12-18 points – Innovative solutions and project approach is generally organized and shows a capacity to carry out tasks but lacks enough detail
- 6-11 points – Innovative solutions and project approach is addressed but poorly organized
- 0-5 points – Innovative solutions and project approach is not addressed or is difficult to understand and not organized

D. FINANCIAL STABILITY/LITIGATION and DEBARMENT HISTORY: (Max 10 points)

(1) Sufficiency of the Financial Resources and Ability of the Firm to Perform the Contract or Provide the Services (5 points)

- 5 points – Current Ratio is strong
- 3-4 points – Current Ratio is moderate
- 1-2 points – Current Ratio is slight risk
- 0 points – Current Ratio is risky

(2) Documentation that the Firm can Perform the Contract and Provide the Service within Budget and Scheduling Requirements (5 points)

- 5 points – No Litigation nor Debarment history in last 5 years
- 3-4 points – Litigation and/or Debarment history in last 5 years, no actions taken against firm
- 1-2 points – Litigation and/or Debarment history in last 5 years, action was taken against firm, no current active litigation and/or debarment actions
- 0 points – Current active Litigation action and/or Debarment action in current year

E. REFERENCES: (Max 20 points overall)

(1) Documented projects (with at least 3 references) which demonstrate proficiency and experience in projects of a similar nature in scope and complexity to the proposed project (10 points)

(2) References were able to be contacted and verified (10 points)

Total Maximum Points (100 points)

RFSQ SCHEDULE:

Refer to the Timeline in Section 2 of the RFSQ document regarding proposed evaluation date(s) and time(s). *The City reserves the right to alter dates as needed.*

EVALUATION PROCEDURE:

The Evaluation Committee is comprised of City staff and **may** include a City Council Member or Council appointed Board of Commission member who will evaluate, and rank proposals based on a weighted score point formula. All interested professionals are hereby cautioned **not** to contact any staff or Council member of the City of Port Orange, or any member of the Evaluation Committee. Any and all questions should be made through the Purchasing Manager and any attempts to lobby or persuade through any other channels may result in disqualification.

All Statements of Qualifications will be subject to a review and evaluation process pursuant to and in compliance with the Consultants Competitive Negotiation Act, Florida Statutes 287, Section 287.055. It is the intent of the City that all Firms responding to this RFSQ, who meet the requirements, will be ranked in accordance with the criteria established in these documents. The City will consider all responsive and responsible Statements received in its evaluation and award process. The committee may choose to conduct an oral interview with each finalist.

The City's evaluation criteria will include consideration of, but will not be limited to the following:

1. Responsiveness of the Statement related to the Scope of Services;
2. The ability, capability and skill of the Proposer to perform the contract, including the range of services offered.
3. Whether the provider can perform the contract within the time specified without delay or interference.
4. The quality, availability and adaptability of the supplies or contractual services to the particular use required;
5. The character, integrity, reputation, judgment, experience and efficiency of the Proposer;
6. Professional licensure required when service of a skilled nature is required by law to perform such service and/or skill;
7. The quality of performance of previous contracts;
8. The number and scope of conditions attached to the Proposal or proposal;
9. Responsiveness of client references;
10. Such other information as may be secured.

FORMAL ORAL PRESENTATIONS/INTERVIEWS (If Required):

The City may choose to conduct oral interviews with or receive oral presentations from one or more of the Proposers. If the City chooses to allow oral interviews and/or presentations, such interviews or oral presentations **will not be open** to the public pursuant to the conditions set forth in Florida Statute § 286.0113. If oral presentations or interviews are held the following guidelines will be used:

The City's Purchasing Division will establish the schedule and Proposers will be notified via www.demandstar.com at least five (5) calendar days in advance of the date, time and place of the presentations. The specific format of each presentation will be provided to Proposers with the notifications.

The City will allot equal time for each Proposer divided into two sequential parts: formal presentations and questions and answers. The times allotted are maximums and no Proposer will be penalized for using less than the allotted time.

FINAL RANKING AND RECOMMENDATION FOR AWARD:

After oral presentations are completed, the Evaluation Committee will score the presentations for qualifications, experience, engagement approach, and schedule to determine a final ranking of the short-listed Proposers considered to be the most capable of performing the required project in the best interest of the City. The following represents the principal selection criteria, which will be considered during the evaluation process.

Criteria will be weighted based on 100% of total value. Category Scores listed below are the maximum number of points to be awarded per each evaluator.

<u>EVALUATION CRITERIA for ORAL PRESENTATIONS</u>	<u>CATEGORY SCORE</u>
A. <u>QUALIFICATIONS and RELATED EXPERIENCE:</u> (Max 60 points outlined below)	
(1) <i>Company Profile – Size, Location(s), and Primary area of Professional Focus.....</i>	<i>(10 points)</i>
(2) <i>Credentials, Qualifications and Years’ Experience of the Staff for both the Prime and Sub Consultants and Key Personnel as presented by Resumes, Education, and Training.....</i>	<i>(15 points)</i>
(3) <i>Number of Years Prime and Sub Consultants Worked Together</i>	<i>(10 points)</i>
(4) <i>Experience Designated Project Staff have in providing Similar Projects</i>	<i>(15 points)</i>
(5) <i>Number of Professional Staff, Education, and Years’ Experience in Public Facilities Design including Support Staff such as GIS Specialists, Surveyors, CADD Techs, Construction Inspectors (CEI),</i>	<i>(10 points)</i>
B. <u>STRENGTH of PROPOSAL AND PRESENTATION:</u> (Max 40 points outlined below)	
(1) <i>Understanding of Scope of Services.....</i>	<i>(20 points)</i>
(2) <i>Quality of Innovative Solutions and Project Approach.....</i>	<i>(20 points)</i>
Total Maximum Points	(100 points)

The Evaluation Committee’s final ranking will be provided to the Purchasing Manager to read aloud. The City’s Project Manager will provide a notice of intent to award to the Purchasing Manager. The intent to award will be posted on www.demandstar.com The City project manager will create an agenda item recommending award to the City Council. City Council’s decision will be final.

[Remainder of this page left intentionally blank]

SECTION 9 – REQUIRED FORMS

FORM 9.1 – PROPOSAL SUBMITTAL CHECKLIST

- _____ Form 9.2 – Proposer’s Acknowledgement
- _____ Form 9.3 – Addendum and Change Order Procedure Acknowledgement
- _____ Form 9.4 – Drug Free Preference Statement
- _____ Form 9.5 – Public Entity Crimes Statement
- _____ Form 9.6 – Affidavit of Anti-Collusion
- _____ Form 9.7 – Statement of Qualifications
- _____ Form 9.8 – Professional References for Previous Experience
- _____ Form 9.9 – Local Business Affidavit of Eligibility
- _____ Copy of License (Contractor, Sunbiz, etc.)
- _____ Submission of one (1) original marked “ORIGINAL” and one (1) digital (CD or flash drive) version in PDF format.

Name of Business

BY:

Authorized Signature

Date

This document must be completed and returned with your Submittal

FORM 9.2 – PROPOSER’S ACKNOWLEDGEMENT FORM

I have carefully examined the Request for Statement of Qualifications (RFSQ), Instructions to Proposers, 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 Request for Statement of Qualifications at the prices or rates as finally negotiated. I agree that my Proposal will remain firm for a period of up to ninety (90) days in order to allow the City of Port Orange adequate time to evaluate the proposed Proposal. Furthermore, I agree to Proposal by all conditions of the Request for Statement of Qualifications.

I certify that all information contained in this Proposal is truthful to the best of my knowledge and belief. I further certify that I am a duly authorized to submit this Proposal on behalf of the Proposer/Contractor as its act and deed and that the Proposer/Contractor is ready, willing and able to perform if awarded the contract.

I further certify that this Proposal is made without prior understanding, Contract, connection, discussion, or collusion with any person, firm or corporation submitting a Proposal for the same product or service; no officer, employee or agent of the City of Port Orange City Council or of any other Proposer interested in said RFSQ; and that the undersigned executed this Proposer’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 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 RFSQ.

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 Proposal non-responsive.

NO EXCEPTIONS ALLOWED AFTER THE PROPOSAL 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

NAME, TITLE, TYPED

TELEPHONE NUMBER / FAX NUMBER

FEDERAL IDENTIFICATION #

E-MAIL ADDRESS

STATE OF _____ COUNTY OF _____

The foregoing instrument was acknowledged before me this day of _____, 20____ by _____, who is personally known to me or who has produced ad identification and who did take an oath.

My Commission Expires:

Notary Public

This document must be completed and returned with your Submittal

FORM 9.3 – ADDENDUM and CHANGE ORDER PROCEDURE ACKNOWLEDGEMENT

ADDENDUM ACKNOWLEDGEMENT

I have carefully examined the Request for Statement of Qualifications (RFSQ), Instructions to Proposers, General and/or Special Conditions, Specifications, and any other documents accompanying or made a part of this Request for Statement of Qualifications.

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 Proposal form.

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 orders 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 following statement regarding Change Orders to the awarded Contract:

Name of Business

By: _____

Printed Name: _____

Title: _____

STATE OF _____

COUNTY OF _____

Sworn to (or affirmed) and subscribed before me this ____ day of _____, 20____, by _____, as _____ of _____

(NAME)

(TITLE)

and who:

(NAME OF ORGANIZATION)

[Notary: Please select one]

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 9.4 – DRUG-FREE PREFERENCE STATEMENT

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 Proposal 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 Proposal, 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 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 any 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.

STATE OF _____
COUNTY OF _____

Name of Business

By: _____
Printed Name: _____
Title: _____

Sworn to (or affirmed) and subscribed before me this ____ day of _____, 20____, by
_____, as _____ of
(NAME) (TITLE)

_____ and who:
(NAME OF ORGANIZATION)

[Notary: Please select one]

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 9.5 – SWORN STATEMENT UNDER SECTION 287.133(3)(A), FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES

(To be signed in the presence of notary public or other officer 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 an 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 Proposer list. The name of the convicted person or affiliate is _____. A copy of the order of the Division of Administrative Hearings is attached to this statement. **(Draw a line through paragraph 7 if paragraph 6 above applies.)**

Name of Business

By: _____

Printed Name: _____

Title: _____

STATE OF _____

COUNTY OF _____

Sworn to (or affirmed) and subscribed before me this ____ day of _____, 20____, by _____, as _____ of _____ and who:

[Notary: Please select one]

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 9.6 – ANTI-COLLUSION FORM

ANTI-COLLUSION STATEMENT PROPOSAL FORM:

By signing this form, the Proposer agrees that this Proposal is made without any other understanding, agreement, or connection with any person, corporation, or firm submitting a Proposal for the same purpose and that the Proposal is in all respects fair and without collusion or fraud.

SIGN in ink in the space provided below. Unsigned Proposals will be considered incomplete, and will be disqualified, and rejected.

IT IS AGREED BY THE UNDERSIGNED PROPOSER THAT THE SIGNING AND DELIVERY OF THE PROPOSAL REPRESENTS THE PROPOSER'S ACCEPTANCE OF THE TERMS AND CONDITIONS OF THE FOREGOING SPECIFICATIONS, CONTRACT AND PROVISIONS, AND IF AWARDED, THIS CONTRACT WILL REPRESENT THE AGREEMENT BETWEEN THE PROPOSERS 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: _____ ZIP CODE: _____

TELEPHONE: _____ FAX: _____

COMPLETION TIME: _____

F.E.I.N. NUMBER: _____

NO Proposal may be withdrawn for a period of ninety (90) days subsequent to the submittal of the Proposals, without the consent of the City of Port Orange.

NO PROPOSAL (REASON): _____

This document must be completed and returned with your Submittal

FORM 9.7 – STATEMENT OF QUALIFICATIONS

The undersigned warrants that he or she is duly authorized to complete this document, and hereby affirms that the information contained in Form 9.7 is complete, true, and correct to the best of their knowledge and belief. If necessary, questions may be answered on separate paper and attached, with any additional information that may be pertinent.

- A. Name of Proposer.
- B. Permanent main office address.
- C. Date organized.
- D. If a corporation, where incorporated.
- E. How many years have you been engaged in the contracting business under your present firm or trade name?
- F. Contracts on hand: (Schedule these, showing amount of each contract and the appropriate anticipated dates of completion.)
- 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.
- K. List your major equipment currently owned or leased.
- L. Experience in work similar to this type of project.
- M. Background and experience of the principal members of your organization, including the officers.
- N. Credit currently available: \$ _____
- O. Give bank reference: _____
- P. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the Owner?
- Q. The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the Owner in verification of the recitals comprising this Statement of Qualifications.

Name of Business

By: _____

Printed Name: _____

Title: _____

STATE OF _____

COUNTY OF _____

Sworn to (or affirmed) and subscribed before me this ____ day of _____, 20____, by _____, as _____ of _____ and who:

[Notary: Please select one]

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 9.8 – PROFESSIONAL REFERENCES FOR PREVIOUS EXPERIENCE

The Proposer proposes that he/she is 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 or
Services provided: _____
Contract Amount: _____
Start/End Date of Contract: _____
2. Company Name: _____
Contact Person: _____
City, State: _____
Telephone Number: _____
Email Address: _____
Description of goods or
Services provided: _____
Contract Amount: _____
Start/End Date of Contract: _____
3. Company Name: _____
Contact Person: _____
City, State: _____
Telephone Number: _____
Email Address: _____
Description of goods or
Services provided: _____
Contract Amount: _____
Start/End Date of Contract: _____

This document must be completed and returned with your Submittal.

LISTING OF PREVIOUS EXPERIENCE

Commercial Client List

The Proposer proposes that he/she is 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 all clients to whom you currently provide or have in the past provided **Architectural Services** equal or similar to those required under the City's contract and as outlined in this Proposal package. A minimum of three (3) projects shall be listed below in order to Proposal on this contract. The Owner reserves the right to check references and confirm information provided herein.

	Contact Name	Phone	Current Client? Y or N	Number of years service provided	Description of service
1					
2					
3					

This document must be completed and returned with your Submittal.

FORM 9.9 – 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 State of Florida***THIS AFFIDAVIT IS SUBMITTED IN REFERENCE TO THE FOLLOWING SOLICITATION:**

RFSQ/RFP/ITN/BID/CONTRACT/PROJECT #(as applicable): _____

BUSINESS NAME: _____ CONTACT PERSON/TITLE: _____ MAILING ADDRESS: _____

CITY-STATE-ZIP: _____ Length of Time at Address Provided: _____

Physical Presence of Business: ☐ Headquarters, ☐ Manufacturing Facility, or ☐ Locally Owned FranchiseAnd within Legal Boundaries: ☐ The City of Port Orange ☐ Volusia County ☐ The State of

Florida FEIN (Federal Employer Identification Number): _____

BUSINESS STRUCTURE: ☐ Corporation ☐ LLC ☐ Partnership ☐ Sole Proprietorship☐ Other (Specify): _____

PHONE NUMBER: _____ FAX: _____

EMAIL: _____

****Please attach a valid business tax receipt, or other such documentation****

ATTESTATION – I understand that:

- In accordance with City Of Port Orange City Code 2-275, local businesses shall have five (5) business days from bid/proposal opening to submit a best and final bid for evaluation. To qualify: A Port Orange business initial bid must be within (8%) of the lowest and best responsible bid from a non-Port Orange business; A Volusia County business initial bid must be within (5%) of the lowest and best responsible bid from a non-Volusia County business; A State of Florida business initial bid must be within (3%) of the lowest and best responsible bid from a non-State of Florida business.
- A local business must have its headquarters, manufacturing facility, or locally owned franchise located within the legal boundaries of the City of Port Orange, Volusia County, or the State of Florida, as indicated herein, for at least twelve (12) months prior to the bid or proposal opening date and a valid business license, issued by the corresponding government agency. Post office boxes are not verifiable and shall not be used for the purpose of establishing said physical address. Bidders shall attach to this affidavit of eligibility with a bid or proposal, a copy of a valid business tax receipt or such other documentation, to the city's satisfaction, demonstrating the physical business presence of the firm within corresponding local limits.
- The preference does not apply to goods or services exempted by statute or prohibited by Federal law, State law, or other funding source restrictions.
- The preference established in this policy does not prohibit the right of the City, or other authorized purchasing authority, to compare quality or fitness for use of supplies, materials, equipment and services proposed for purchase and compare qualifications, character, responsibility and fitness of all persons, firms or corporations submitting bids or proposals.
- The information contained herein may be subject to verification.
- A vendor who misrepresents the local preference status of its firm in a proposal or bid submitted to the City of Port Orange will lose the privilege to claim local preference status, and shall lose eligibility to claim local preference for a period of one (1) year. The City Manager may also recommend that the firm be referred for debarment.

As an authorized representative of the firm, I certify that this firm complies fully with the above requirements.

Name of Business

By: _____

Printed Name: _____

Title: _____

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me by means of _____ physical presence or _____ online notarization, this _____ day of _____, 20____, by _____, as _____ of _____, a _____, He or she is _____ personally known or _____ 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

**CERTIFICATE OF INSURANCE
FOR WORKERS' COMPENSATION**

IMPORTANT

This certificate must be completed and returned by the Awarded Vendor, upon issuance of a Notice of Intent to Award by the Purchasing Department of the City of Port Orange. Please note, the City of Port Orange does not accept exemptions for Workers' Compensation coverage. This certificate must be completed by a duly authorized official of the Insurance Company carrying the risk, or a separate certificate of similar context executed On Insurance Company's Standard Form may be attached hereto.

This is to certify that _____, Company has
issued to _____, of the City of _____,
State of _____, the following policy or policies:

Workers' Compensation and Employer's Liability Policy No. _____
Effective on _____, 20____, and expiring on _____, 20____.
Description of limits: _____

If at any time this coverage is to be cancelled, the undersigned will notify the insured and
the _____ in writing thirty (30) days prior to cancellation
of policy.

WITNESS:

By: _____

Name: _____

INSURANCE COMPANY:

Company: _____

By: _____

Name/Title: _____

AFFIDAVIT REGARDING WORKERS' COMPENSATION

IMPORTANT

This certificate must be completed and returned by the Awarded Vendor, upon issuance of a Notice of Intent to Award by the Purchasing Department of the City of Port Orange. Please note, the City of Port Orange does not accept exemptions for Workers' Compensation coverage.

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 said 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: _____

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me by means of ____ physical presence or ____ online notarization, this ____ day of _____, 20__, by _____, as _____ of _____, a _____.
He or she is ____ personally known or ____ produced _____ as identification.

Notary Public, State of _____
Printed, typed or stamped name, commission and expiration:

LEASED EMPLOYEE AFFIDAVIT

EXHIBIT CONTRACT # _____

☐ I hereby certify that I do not utilize an employee leasing company or employee 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 arrangement. 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: _____



CITY OF PORT ORANGE STANDARD CONTRACT FOR SERVICES

This Standard Contract for Services ("Contract") is entered into this ____ day of _____, 2016, 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 _____ ("Contractor"), a _____ corporation whose principal address is _____. The City and Contractor are collectively referred to herein as the "Parties."

1. Provision of Services

- (a) The Contractor hereby agrees to provide the following equipment, materials, labor and other such related services to the City of Port Orange:

(i) _____

- (b) The time, manner and place for performance of such services shall be:

Term: This Contract shall become effective on the last date the Contract is signed by the Parties. Work shall be substantially completed within ____ calendar days from issuance of a Notice to Proceed and final completion ____ days thereafter (the "Term").

Manner and Place: The work shall be performed as outlined in Exhibit "____," 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. Contractor shall not deliver goods or services without a written Purchase Order(s) or Notice to Proceed(s), signed by an authorized agent of the City of Port Orange.

Time and Essence: Contractor acknowledges that time is of the essence for this Contract.

Authorization for Services: This Contract standing alone does not authorize the purchase of any work or services or require the City to place any orders for work or service. Authorization for performance of services by the Contractor under this Contract shall be in the form of a written Notice to Proceed issued and executed by the City. The City reserves the right to contract with other parties for work and services contemplated by this Contract, as determined in the City's sole and absolute discretion.

Liquidated Damages: Contractor shall pay \$_____ for each day that expires after the date the Work is required to be Substantially Completed until the Contractor achieves Substantial Completion with the work. Contractor and City agree and recognize that the liquidated damages set forth herein shall not be treated as a penalty and are just damages that are proportionate to any damages that might reasonably be expected to follow from a delay to Substantial Completion.

2. City Obligations. In return for the services identified above, the City agrees to compensate the Contractor at the prices set forth in Exhibit "___" attached hereto, subject to a limit up to but not to exceed \$_____ for the term of this Contract. The City's obligation to pay Contractor under this Contract is limited to the budgeted amount for the fiscal year approved by the Port Orange City Council for the then current 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.

3. Contract Documents. The following forms are attached as Exhibit "___" and must be completed, signed, witnessed and notarized as indicated, and returned to the City prior to the commencement of any services by Contractor under this Contract:

- a. Front Page for Bond (F.S. § 255.05)
- b. Combination Payment and Performance Bond (F.S. §255.05)

4. Liens. Contractor acknowledges that Contractor shall not be entitled to lien the City or other public property.

5. Contract Administration. The _____ shall perform contract administration of this Contract. For notice provisions, see the paragraph below entitled "Notice."

6. Termination for Convenience of the City

(a) The parties agree that the City may terminate this 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.

(b) Termination, in whole or in part, shall be effected by delivery of a Notice of Termination signed by the City Manager or his designee, mailed or delivered to the Contractor, and specifically setting forth the effective date of termination.

(c) Upon receipt of such Notice, the Contractor shall:

- (i) cease any further deliveries or work due under this Contract, on the date, and to the extent, which may be specified in the Notice;
- (ii) place no further orders with any subcontractors except as may be necessary to perform that portion of this Contract not subject to the Notice;
- (iii) terminate all subcontracts except those made with respect to contract performance not subject to the Notice;
- (iv) settle all outstanding liabilities and claims which may arise out of such termination, with the ratification of the Finance Director of Port Orange; and
- (v) use best efforts to mitigate any damages which may be sustained by the Contractor as a consequence of termination under this clause.

(d) After complying with the provisions of subparagraph (c), above, the Contractor shall submit a termination claim, in no event later than six (6) months after the effective date of termination, unless one or more extensions of three (3) months each are granted by the Finance Director.

(e) The Finance Director, with the approval of the City Manager, shall pay from the using department's budget, reasonable costs of termination, including a reasonable amount for profit on supplies or services delivered or work completed. In no event shall this amount be greater than the original contract price, reduced by any payments made prior to Notice of Termination, and further reduced by the price of the supplies not delivered or the services not provided. This Contract shall be amended accordingly, and the Contractor shall be paid the agreed amount.

(f) In the event that the parties cannot agree on the whole amount to be paid to the Contractor by reason of termination under this clause, the Finance Director shall pay the Contractor the amounts determined as follows, without duplicating any amounts which may have already been paid under the preceding paragraph of this clause:

- (i) With respect to all Contract performance prior to the effective date of Notice of Termination, the total of:
 - (1) the cost of work performed or supplies delivered;
 - (2) the cost of settling and paying any reasonable claims as provided in paragraph (c) (iv), above;
 - (3) a sum as profit on (a) determined by the Finance Director to be fair and reasonable.
- (ii) The total sum to be paid under (i) above shall not exceed the contract price, as further reduced by the contract price of work or supplies not terminated.

(g) In the event that the Contractor is not satisfied with any payments which the Finance Director shall determine to be due under this clause, the Contractor may appeal any claim to the City Council in accordance with Paragraph 20 of this contract concerning disputes.

7. Termination for Convenience for Subcontractors. In accordance with the termination for the convenience of the City provision of this contract, the Contractor shall include similar provisions in any subcontract, and shall specifically include a requirement that subcontractors make all reasonable efforts to mitigate damages which may be suffered. Failure to include such provisions shall bar the Contractor from any recovery from the City whatsoever of loss or damage sustained by a subcontractor as a consequence of termination for convenience.

8. Termination for Default. Either party may terminate this Contract, without further obligation, for the default of the other party or its agents or employees with respect to any agreement or provision contained herein.

9. Examination of Records

(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.

10. Public Records Compliance. Contractor shall comply with public records laws as set forth in Chapter 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 for the duration of the Contract term.

(d) Upon completion of the Contract, Contractor shall transfer to the City, at no cost, all public records in possession of the Contractor 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 Contractor does not comply with a public records request, the City shall enforce the contract provisions in accordance with the contract.

CONTRACTOR QUESTIONS RELATING TO CONTRACTOR'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

11. 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 Contractor. Should termination be accomplished in accordance with this Section, the City shall be liable only for payments due through the date of termination.

(b) 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.

12. Insurance. Contractor shall maintain insurance during the life of this Contract. Contractor shall provide to the City a certificate of insurance identifying the City of Port Orange as an additional insured. For workers' compensation coverage, the bidder's insurance certificate shall include the insurer's waiver of subrogation in lieu of naming the city as an additional insured for workers' compensation.

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. Policies for Workers' Compensation may be issued by companies authorized as a group self-insurer by F.S. 440.572. Contractor shall not commence work under this Agreement until the City has received a certificate or certificates of insurance and endorsement evidencing the required insurance. Contractor shall provide the City written notice of cancellation, nonrenewal or any other changes in coverage no later than ten (10) days prior to the effective date of the change.

The City reserves the right to increase insurance coverage as determined for higher risk contracts and shall reimburse the Contractor for the reasonable additional costs of increased coverage.

Insurance	Standards	Comments
Workers' Compensation <u>Additional Coverage:</u>	<u>Limits:</u> Coverage A - Statutory Coverage B - \$100,000 All States (Broad Form) Voluntary Compensation	If the contract requires work on or about navigable waters, require Longshoreman's and Harbor Workers' Coverage. If vessels involved, require Jones Act coverage with limits of \$500,000.
Comprehensive General Liability (including Completed Operations and Contractual Liability)	<u>Limits:</u> Combined Single Limit Bodily Injury and Property damage \$500,000 occurrence \$1,000,000 Aggregate	When the Contractor work 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 automobiles. <u>Additional Coverage:</u>	<u>Limits:</u> Auto Liability Bodily Injury: \$100,000 each person \$300,000 each occurrence. Property Damage Liability \$100,000 each occurrence. Non-Owned, Hired Car	Or \$500,000 Combined Single Limit for Bodily Injury and Property Damage
Property Insurance Builders Risk. <u>Additional Coverage:</u>	<u>Limits:</u> Buildings - Completed value of contract. "All Risk" coverage on latest ISO form or its equivalent. Permission granted to occupy. Owner named as insured AIMA	If the Contract 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 (Errors & Omissions)	<u>Limits:</u> Coverage - \$1,000,000 minimum	

13. Assignability of Contract. Neither this contract, nor any part hereof, may be assigned by the Contractor to any other party without the express written approval of the City Council.

14. Modifications or Changes to this Contract

(a) Change Orders. The Department Head, with the concurrence of the City's signatory 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 the services to be performed 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 Contractor's cost of, or time required for the performance of the work hereunder, Contractor shall receive an equitable adjustment in accordance

with subparagraph (d), which shall include all compensation to the Contractor, or the City, of any kind in connection with such change, including all costs and damages related to or incidental to such change.

(c) Contractor need not perform any work described in any change order unless it has received a certification from the City that there are funds budgeted and appropriated sufficient to cover the cost of such changes.

(d) No claim for changes ordered hereunder shall be considered if made after final payment in accordance with the Contract.

15. **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.

16. **Warranties.** Contractor warrants that (1) the supplies to be provided to the City pursuant to this Contract are fit and sufficient for the purpose intended; (2) the supplies are merchantable, of good quality, and free from defects, whether patent or latent, in material or workmanship, and (3) the supplies sold to the City pursuant to this Contract conform to the standards required by this Contract.

Contractor further warrants that Contractor has title to the supplies provided, and that the supplies are free and clear of all liens encumbrances, and security interests. All warranties made in this Contract, together with service warranties and guarantees, shall run to the City and its successors and assigns.

17. **Additional Warranties.** Contractor further expressly warrants that materials and workmanship are warranted from defect for a one-year period. This is a minimum acceptable warranty.

18. **Additional Bond Security.** If any surety bond furnished in connection with this Contract becomes unacceptable to the City, Contractor shall promptly furnish such additional security as may be required from time to time to protect the interests of the City and a person supplying labor and materials in the prosecution of work contemplated by this Contract. Contractor expressly acknowledges that if the work to be performed hereunder is a public work, a Payment and Performance Bond, in accordance with Florida Statutes Section 255.05, in a form acceptable to the City, shall be provided and recorded with the Clerk of Volusia County at Contractor's expense.

19. **Inspection**

(a) All supplies (which term throughout this clause includes without limitation raw materials, components, intermediate assemblies, and their products) shall be subject to inspection and test by the City, to the extent practicable at all times and places including the place of manufacturer, and in any event prior to acceptance.

(b) In the event any supplies or lots of supplies are defective in material or workmanship, or otherwise not in conformity with the requirements of this Contract, the City shall have the right either to reject them (with or without instructions as to their disposition) or to require their correction. Supplies or lots of supplies which have been rejected or required to be corrected shall be removed or, if permitted or required by the Finance Director, corrected in place by and at the expense of Contractor promptly after notice, and shall not thereafter be tendered for acceptance unless the former rejection or requirement of correction is disclosed. If Contractor fails promptly to remove such supplies or lots of supplies which are required to be removed or promptly to replace or correct such supplies or lots of supplies, the City may either (i) by contract or otherwise replace or correct such supplies and charge Contractor the cost for such replacement or correction; or (ii) may terminate this Contract for default as provided in the clause of

this Contract entitled "Termination for Default." Unless Contractor corrects or replaces such supplies within the delivery schedule, the Finance Director may require the delivery of such supplies at a reduction in price, which is equitable under the circumstances. Acceptance or rejection of the supplies shall be made as promptly as practicable after delivery, except as otherwise provided in this Contract. Failure to inspect and accept or reject supplies shall neither relieve Contractor from responsibility for such supplies as are not in accordance with the Contract requirements nor impose liability on the City therefor.

(c) The inspection and test by the City of any supplies or lots thereof does not relieve Contractor from any responsibility regarding defects or other failures to meet the Contract requirements, which may be discovered prior to acceptance. Except as otherwise provided in this Contract, acceptance shall be conclusive except as regards latent defects, fraud, or such gross mistakes as amount to fraud.

20. Liability for Loss or Damage. Contractor shall be liable for any loss of, or damage to, City property caused by the negligence, recklessness, or intended wrongful misconduct of Contractor, 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 Contractor, his/its agents, servants and employees. Contractor 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, Contractor agrees as follows:

(a) Contractor 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 Contractor. Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause. Contractor agrees and fully supports and complies with the Americans with Disabilities Act of 1990.

(b) Contractor shall state in all solicitations or advertisements for employees placed by or on behalf of Contractor that Contractor 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. Contractor 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. Disputes. The Finance Director, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to Contractor, shall decide disputes with respect to this Contract in the first instance. The decision shall be final and binding unless, within thirty-(30) days from the date of such decision, Contractor mails or otherwise furnishes to the Finance Director a written appeal addressed to the City Manager. The decision by the City Manager 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 Finance Director, Contractor shall proceed diligently with the performance of this Contract in accordance with that decision.

23. 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.

24. 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.**

25. Additional Provisions. This Contract includes all additional provisions as may have been outlined in _____ and 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.

26. 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.

27. 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: _____
1000 City Center Circle
Port Orange, Florida 32129
(386) 506-_____

Contractor: _____
Attention: _____

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.

28. 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 Contractor and the City until the City signs this Agreement.

29. 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]

SAMPLE

Witnesses: _____

By: _____
Printed Name: _____ Printed Name: _____

Title: _____
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.

Printed Name: _____
Date: _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 2017, by _____, as _____ of _____, a _____ corporation, and who:

[Notary: Please select one]

- ☐ is personally known to me; or
☐ has produced _____ as identification.

Notary Public, State of _____
Printed, typed or stamped name, commission and expiration:

Witnesses:

CITY OF PORT ORANGE

Printed Name: _____ By: _____
Donald O. Bumette, Mayor

Printed Name: _____ Date: _____

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me this _____ day of _____, 2017, by Donald O. Bumette, as Mayor of the City of Port Orange, a Florida municipal corporation, on behalf of the city, and who is personally known to me.

Notary Public, State of Florida
Printed, typed or stamped name, commission and expiration:

Witnesses:

ATTEST:

Printed Name: _____ By: _____
Robin L. Fenwick, CMC, City Clerk

Printed Name: _____ Date: _____

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me this _____ day of _____, 2017, by Robin L. Fenwick, as City Clerk of the City of Port Orange, a Florida municipal corporation, on behalf of the city, and who is personally known to me.

Notary Public, State of Florida
Printed, typed or stamped name, commission and expiration:



End of Solicitation Documents



CITY OF PORT ORANGE

PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5740
purchdiv@port-orange.org

ADDENDUM NO. # 1

August 7, 2020

RFSQ #20-03 PUBLIC UTILITIES FIELD OPERATIONS FACILITY ARCHITECTURAL SERVICES

To All Bidders:

The following changes, clarifications and additions are hereby made part of the bidding and specifications for the above referenced project dated July 23, 2020 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. CLARIFICATIONS:

N/A

B. CHANGES TO SPECIFICATIONS:

N/A

C. QUESTIONS AND ANSWERS:

Question 1: Will the pre-proposal conference be available for virtual participation/televised?

Answer: No, there will not be a virtual attendance or call in option for the pre-proposal conference. The pre-proposal conference is non-mandatory, and all questions asked at the conference will appear on Addendum #1. We will also have the audio to the pre-proposal conference available upon request.

Question 2: Will you please clarify how location will affect the point scale under the evaluation criteria? Is location a part of "able to meet City's needs" (page 40)?

Answer: There is no specific formula for how location will affect the point scale under the evaluation criteria and no specific instruction is given to the Evaluation Committee as to how location should affect the point scale. The location of a submitting firms office(s) is primarily used for reference and is not considered a major factor in the five (5) points available under that section of the evaluation criteria.

Question 3: The RFSQ states on page 3 "one (1) original and one (1) identical digital (CD or flash drive) version in PDF format" and then on page 37 it requests "provide one (1) original, six (6) identical copies and one (1) identical digital version in PDF format on CD or USB flash/thumb drive". Can you please confirm the number of submittals that the City is requiring?

Answer: Please provide one (1) original and one (1) identical digital (CD or flash drive) version in PDF format as stated on Page 3. The requested number of submittals found on Page 37 is outdated and is no longer applicable.

Question 4: Has it been determined if the construction portion will be advertised as an ITB for a lump sum bid or an RFQ for Construction Management at Risk Services?

Answer: The subsequent solicitation will be advertised as an ITB for the construction of the Public Utilities Field Operations Facility.

Question 5: Will the Sign-In Sheet be available?

Answer: Yes, the Sign-In Sheet is available on DemandStar and the City of Port Orange website as of 8/6/2020.

Question 6: Can you please discuss the scope of the project and what is anticipated to be included?

Answer: The general scope as it is outlined in the solicitation is for Architectural Services to design, permit, and provide bidding assistance for a brand-new Field Operations Facility located on a designated property that is owned by the City of Port Orange. The zoning is appropriate so there will be no zoning issues. A decent amount of civil work will be required. The facility will be an all-inclusive facility that includes office space, storage space (enclosed and open storage), and other civil work such as a potential Vac Truck Pump-out pit connected to the sanitary system.

Question 7: What is the approximate budget of the project?

Answer: The approximate budget for Construction is \$3,000,000.00. At the end of the design, the City of Port Orange expects a full estimate of the Construction costs.

Question 8: Can you clarify which tab of Section 7 will be for the required forms?

Answer: The required forms are their own separate section of the solicitation, which is Section 9 on Page 44. They are not under any tabs for Section 7. Tab E of Section 7 is not to be confused with Section 9's *Form 9.8 – Professional References for Previous Experience*. Additionally, the selection committee does not see the required forms as that is under the purview of the Purchasing Division when opening the received proposals.

Question 9: Will "Due Diligence" (Geotechnical and Environmental) be included in this RFSQ?

Answer: Yes.

Question 10: Can you confirm which tab that you will want a proposer's project experience/project sheet to be listed?

Answer: Please list project experience/project sheet under Tab E - Documented Projects (with at least 3 references) which Demonstrate Proficiency and Experience in Projects of a Similar Nature in Scope and Complexity to the Proposed Project.

Question 11: Is Geotech and Surveying apart of the Architectural team?

Answer: The City of Port Orange will not be supplying Geotech or Surveying. Geotech and Surveying will be provided by a proposer's subconsultant.

Question 12: Will a firm be selected from their written documentation? Will there be a shortlist or presentation?

Answer: The City of Port Orange has the right to select a firm in how it sees fit—either by a firm’s written documentation if the Selection Committee sees them as “head and shoulders” above the other firm’s proposals or by a shortlist and subsequent presentation if the Selection Committee deems multiple firms to be close with their submitted proposals. Language on this topic can be found in the RFSQ on pages 42 and 43 under “EVALUATION PROCEDURE”.

Michael Hall

Buyer

mhall@port-orange.org

In all other respects, except as specifically stated herein, the subject RFSQ #20-03 PUBLIC UTILITIES FIELD OPERATIONS FACILITY ARCHITECTURAL SERVICES remains unchanged.

END OF ADDENDUM NO. #1



CITY OF PORT ORANGE

PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5740
purchdiv@port-orange.org

ADDENDUM NO. #2

August 14, 2020

RFSQ #20-03 PUBLIC UTILITIES FIELD OPERATIONS FACILITY ARCHITECTURAL SERVICES

To All Bidders:

The following changes, clarifications and additions are hereby made part of the bidding and specifications for the above referenced project dated July 23, 2020 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. CLARIFICATIONS:

N/A

B. CHANGES TO SPECIFICATIONS:

N/A

C. QUESTIONS AND ANSWERS:

Question 1: Will the pre-proposal conference be available for virtual participation/televised?

Answer: No, there will not be a virtual attendance or call in option for the pre-proposal conference. The pre-proposal conference is non-mandatory, and all questions asked at the conference will appear on Addendum #1. We will also have the audio to the pre-proposal conference available upon request.

Question 2: Will you please clarify how location will affect the point scale under the evaluation criteria? Is location a part of "able to meet City's needs" (page 40)?

Answer: There is no specific formula for how location will affect the point scale under the evaluation criteria and no specific instruction is given to the Evaluation Committee as to how location should affect the point scale. The location of a submitting firms office(s) is primarily used for reference and is not considered a major factor in the five (5) points available under that section of the evaluation criteria.

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Answer: Please provide one (1) original and one (1) identical digital (CD or flash drive) version in PDF format as stated on Page 3. The requested number of submittals found on Page 37 is outdated and is no longer applicable.

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Answer: The subsequent solicitation will be advertised as an ITB for the construction of the Public Utilities Field Operations Facility.

Question 5: Will the Sign-In Sheet be available?

Answer: Yes, the Sign-In Sheet is available on DemandStar and the City of Port Orange website as of 8/6/2020.

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Question 9: Will "Due Diligence" (Geotechnical and Environmental) be included in this RFSQ?

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Question 12: Will a firm be selected from their written documentation? Will there be a shortlist or presentation?

Answer: The City of Port Orange has the right to select a firm in how it sees fit—either by a firm’s written documentation if the Selection Committee sees them as “head and shoulders” above the other firm’s proposals or by a shortlist and subsequent presentation if the Selection Committee deems multiple firms to be close with their submitted proposals. Language on this topic can be found in the RFSQ on pages 42 and 43 under “EVALUATION PROCEDURE”.

Question 13: Can you share the parcel number or address for the site?

Answer: The Parcel Number for the Public Utilities Field Operations Facility site is PID: 630600000062.

Michael Hall

Buyer

mhall@port-orange.org

In all other respects, except as specifically stated herein, the subject RFSQ #20-03 PUBLIC UTILITIES FIELD OPERATIONS FACILITY ARCHITECTURAL SERVICES remains unchanged.

END OF ADDENDUM NO. #2

April 12, 2021

Mr. Junos Reed, P.E.
Engineering & Construction Manager
City of Port Orange
1395 Dunlawton Ave.
Port Orange, FL 32127

RE: Port Orange Public Utilities Field Operations Facility
SUBJECT: Professional Architectural and Engineering Services

Dear Mr. Reed:

SchenkelShultz Architecture is pleased to submit this proposal to provide architectural and engineering services for the City of Port Orange Utilities Administration Building along with the attached exhibits: A-Scope of Project, B-Scope of Services, C-Schedule of Compensation and D-Deliverables.

For Task One, design of the Utilities Administration Building, we propose a fixed fee of \$350,000.00 (Three Hundred and Fifty Thousand Dollars). This fee includes architectural, interior design, civil, structural, landscape, irrigation, land surveying, environmental engineering, geotechnical engineering, mechanical, electrical, plumbing, fire protection and security performed in five phases: programming, schematic design, design development and construction documents.

Our proposal is based upon the final scope of work identified in attachment B. SCHENKELSHULTZ will be responsible for the architectural and engineering design utilizing the following consultants:

1. Zev Cohen & Associates, Inc./Civil, Landscape, Environmental Engineering located in Ormond Beach, FL.
2. BBM Structural Engineers/ Structural Engineer located in Longwood, FL.
3. TLC Engineering for Architecture/ MEP/FP/Security Engineers located in Cocoa, FL.
4. Bechtol Engineering & Testing, Inc./Geotechnical located in Deland, FL.
5. ASSA ABLOY Door Security Solutions/Hardware located in Oviedo, FL.
6. Slinger & Associates/Land Surveying located in Port Orange, FL.

The Florida DMS curve was utilized to develop a baseline fee percentage of 7.2%. The following items are above and beyond basic A/E services and have been included with the baseline fee to develop the lump sum fee above. These include:

1. IT/AV Design engineering services. These services will be performed by our MEP consultant TLC Engineering.

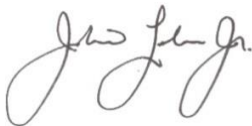
ATTN: Mr. Junos Reed
RE: Public Utilities Field Operations Facility
March 10, 2021 - Page 2

2. Environmental assessment and required permitting engineering services. These services will be performed our Civil Engineering Consultant Zev Cohen & Associates, Inc.
3. Civil, Landscape & Irrigation engineering services. These services will be performed by our Civil engineering consultant Zev Cohen & Associates, Inc.
4. Offsite draining analysis, design and additional surveying. These services will be performed by our Civil engineering consultant Zev Cohen & Associates, Inc.
5. Security design engineering services. These services will be performed by our security consultant TLC Engineering.
6. In terms of document printing, we are including the costs for submittal document printing. This does not include printing of construction documents for bidders.
7. Land survey as required including topography, utility locates, specimen and historic tree census, and tree replacement stock surveys. These services will be performed by Slinger & Associates.
8. Geotechnical Engineering services. These services will be performed by our Geotechnical Engineer Bechtol Engineering.

*Construction Administration services to be issued through a separate contract at a later date.

Thank you.

Sincerely,
SCHENKELSHULTZ



Johnnie Lohrum Jr, AIA
Principal

Attachments: Exhibit A – Scope of Project
Exhibit B – Scope of Services
Exhibit C – Schedule of Compensation
Exhibit D – Deliverables
Cc: DL, JDL, IZ/ SCHENKELSHULTZ

City of Port Orange
Public Utilities Field Operations Facility
Exhibit A – Project Scope of Work
Planning, Design, Permitting and Construction Administration
April 12, 2021 – Page 3

Project to be a new Public Utilities Field Operations Facility located on an eight acre site and will include office space, meeting space, warehouse space and indoor outdoor equipment storage areas. The building will be sized appropriately within the City's current construction budget of \$3,500,000. In addition to this scope, off-site utility/stormwater evaluation and design will be performed.

SchenkelShultz Architecture's scope to include investigation and evaluation of existing conditions, survey, geotechnical, site and stormwater design, landscape design, building space needs analysis, building architectural and engineering design, permitting, preparation of bid documents and bidding assistance. The building will be designed and constructed to meet sustainability goals but will not be required to be certified.

The project is to be constructed via Design/Bid/Build method. SchenkelShultz will coordinate with the City and selected Contractor to develop / implement fiscally responsible design, materials and systems for the building and site within an approved construction budget. Design and permitting duration is estimated at 8-9 months. Construction duration is currently estimated at approximately 10-12 months.

City of Port Orange
Public Utilities Field Operations Facility
Exhibit B – Scope of Services
Planning, Design, Permitting and Construction Administration
April 12, 2021 – Page 4

TASK ASSIGNMENT ONE

Phase One – Programming & Planning

- 1) The CONSULTANT shall evaluate the locations and develop a list of locations/areas of the facility that will adequately serve the primary purpose.
- 2) The CONSULTANT shall develop a master plan study to evaluate and compare site planning options.
- 3) THE CONSULTANT shall conduct interviews of City staff for the development of conceptual design for the new administration facility.
- 4) THE CONSULTANT shall prepare a PRM (Project Requirements Manual) to include the following:
 - A) Conceptual Design Narrative :
 - List of goals and objectives of the City for the building.
 - Design criteria for each building system
 - B) Detailed list of all permits required, estimated application fees, required documents and calendar schedule.
 - C) Summary of sustainable strategies to be implemented.
 - D) Building Program Spreadsheet with room names, square footages of City program spaces and core infrastructure space and total square footage. The program shall include base bid and alternates.
 - E) Conceptual site plan. Diagrammatic site plan layouts including building footprint, parking and drive access, storm water, utilities, emergency vehicle access, easements, setbacks, environmental analysis.
 - F) Water/ sewer utility capacity analysis and recommendation.
 - G) Report of data collection and analysis.
- 5) THE CONSULTANT shall conduct Design Workshops where THE CONSULTANT sketches diagrams and drawings alongside City staff to fully investigate the building and site layout in a collaborative manner.

- 6) THE CONSULTANT shall request tests and analyze existing water/sewer off-site utilities in and adjacent to the project site to confirm that the utilities have sufficient capacity to support the new Utilities Administration Facility. THE CONSULTANT will also verify that the existing water system has enough flow and pressure to meet current potable and fire flow standards for the new buildings. If required, CONSULTANT shall provide professional services (design, permitting, bidding assistance and construction administration) for modifications to on-site utilities.
- 7) THE CONSULTANT shall conduct Meetings with the City, vendors and agencies as necessary to design the building. THE CONSULTANT shall prepare Meeting Agenda and Meeting Reports for each encounter. The City will schedule City-CONSULTANT meetings. THE CONSULTANT will schedule vendor and agency meetings such that the City may be present at all meetings.
- 8) THE CONSULTANT shall provide geotechnical and land surveying engineering services.

Phase Two – Schematic Design

- 1) THE CONSULTANT shall prepare computer generated dimensioned, to scale drawings:
 - a) Floor plan with structural elements, furniture, equipment and cabinetry.
 - b) Life safety floor plan
 - c) Exterior elevation views of the building indicating materials of exterior envelope. (renderings are acceptable).
 - d) Building Section (one).
 - e) Typical Wall Section.
 - f) Civil site drawings.
 - g) Electrical single line diagram.
 - h) Schematic electrical and security site plans.
 - i) Schematic HVAC plan.
 - j) Schematic plumbing and fire protection plans.
- 2) THE CONSULTANT shall prepare a building and site code summaries including FBC, NFPA, NEC City of Port Orange Ordinances and other jurisdictional agency codes.
- 3) THE CONSULTANT shall conduct meetings with the City, vendors and agencies as necessary to design the building. THE CONSULTANT shall prepare Meeting Agenda and Meeting Reports for each encounter. The City will schedule City- CONSULTANT meetings.

THE CONSULTANT will schedule vendor and agency meetings such that the City may be present at all meetings. The quantity of meetings will be on the basis of the preliminary schedule and includes additional meetings as necessary due to specific issues or needs as they arise.

Phase Three – Design Development

- 1) THE CONSULTANT shall obtain site development permits, FFWCC, SJRWMD, FDEP, City Building & Planning (conceptual, final if required and development order), DOH and any others required for the construction of the project. The costs of required utility permitting is estimated and included in the overall consultant fee.
 - A. ENVIRONMENTAL SERVICES – THE CONSULTANT shall provide an environmental assessment consisting of wetland delineation, formal wetland determination, and survey for listed species (gopher tortoise survey 15%, 100% and mitigation). A/E will provide the following services, as detailed below; as needed based on site selection.
 - i. THE CONSULTANT will prepare ecological elements of the SJRWMD ERP Permit application, including the following
 - ii. THE CONSULTANT will produce Dredge & Fill permit sketches, if necessary.
 - iii. THE CONSULTANT will prepare all required elements of the Environmental Resource Permit (ERP) Permit application to SJRWMD. THE CONSULTANT will prepare responses to the jurisdictional agency comments.
 - iv. Uniform Mitigation Assessment Method (UMAM): THE CONSULTANT will prepare an analysis of pre- & post-development wetland impacts and mitigation value following the UMAM as required by SJRWMD.
 - v. THE CONSULTANT will prepare a Post-Development FLUCFCS Map for purposes of the SJRWMD permitting. Mapping will follow the Florida Land Use Cover and Forms Classification System (FLUCFCS) (FDOT 1999).
 - vi. Coordinate the approval of a Mitigation Plan to compensate for any proposed unavoidable and adverse wetland impacts. A/E will coordinate with a Mitigation Bank for the purchase of credits.
 - vii. THE CONSULTANT will prepare written responses to requests for information (RAI) by the SJRWMD regarding ecological elements of the ERP application prepared by THE CONSULTANT.

B. SJRWMD PERMITTING

- i. THE CONSULTANT shall prepare stormwater management computations to support the proposed improvements.
 - ii. THE CONSULTANT shall prepare all required elements of the ERP application to SJRWMD.
 - iii. THE CONSULTANT shall prepare responses to the jurisdictional agency
- 2) THE CONSULTANT shall prepare an outline specification (CSI div 1 through 26) with product cut sheets per division.
- 3) THE CONSULTANT shall prepare two color, computer generated, rendered, three dimensional exterior views of the building. Size 24x36 (mounted on ¼ inch black gator board). Fully rendered with cars, people, landscaping, sunlight and shadows and the like. THE CONSULTANT shall revise colors and cladding on rendering as may be necessary to match the color and cladding material approvals by the City.
- 4) THE CONSULTANT shall prepare exterior colored elevations.
- 5) THE CONSULTANT shall prepare an electronic interior finishes sample board.
- 6) THE CONSULTANT shall prepare dimensioned, to scale drawings including base bid and alternate plans:
 - a) Updated floor plan with structural elements, furniture, equipment, and cabinetry. Plans or specifications to include infrastructure, furniture and fixed equipment such and the like, integration of that system with the building and furnishings design recommendations.
 - b) Structural foundation and framing plans.
 - c) Exterior elevation views of the building indicating materials of exterior envelope. North, south, east, west.
 - d) Building Sections.
 - e) Wall Sections.
 - f) Roof plan with all penetrations and equipment.
 - g) Typical roof detail.
 - h) Interior finish schedule.
 - i) Door and Window Schedule.
 - j) Reflected ceiling plan with all ceiling mounted systems.

- k) Life safety plan with updated building code summary.
 - l) Civil site drawings.
 - m) Landscape and irrigation drawings.
 - n) Electrical, communication, lighting and A/V drawings.
 - o) Lighting design plan with photometric analysis.
 - p) Lightning protection plan.
 - q) Electrical and communications site plan.
 - s) Enlarged room plans with furniture and equipment layouts – mechanical, electrical, communications, restrooms and showers, lobby, rooms with cabinetry, plumbing, lobby and special finishes or special equipment.
 - t) HVAC, plumbing and fire protection drawings.
 - u) Building automation drawings.
 - v) Watering and fueling station drawings.
 - w) Generators and redundant systems plans.
- 7) THE CONSULTANT shall conduct Meetings with the City, vendors and agencies as necessary to design and permit the building. THE CONSULTANT shall prepare Meeting Agenda and Meeting Reports for each encounter. The City will schedule City-CONSULTANT meetings. THE CONSULTANT will schedule vendor and agency meetings such that the City may be present at all meetings. The quantity of meetings will be on the basis of the preliminary schedule and includes additional meetings as necessary due to specific issues or needs as they arise.

Phase Four – Construction Documents

- 1) THE CONSULTANT shall provide all required documents for building permit application and jurisdictional agency submittals. SJRWMD, DEP, FFWCC City of Port Orange infrastructure and building permits and any others required for the construction of the project. THE CONSULTANT shall respond to agencies and revise the construction documents as necessary to obtain agency approvals and for construction permits.
- 2) THE CONSULTANT shall prepare technical specifications division 1 through 26 – Construction Specification Institute format.
- 3) THE CONSULTANT shall revise the construction documents as directed by the OWNER.
- 4) THE CONSULTANT shall prepare dimensioned, to scale drawings:

- a) Updated floor plan with structural elements, furniture, equipment, and cabinetry.
 - b) Plans or specifications to include infrastructure for the furniture and fixed equipment and the like.
 - c) Structural foundation and framing plans.
 - d) Structural details.
 - e) Exterior elevation views of the building indicating materials of exterior envelope. North, south, east, west.
 - f) Building Sections.
 - g) Wall Sections.
 - h) Building envelope and penetration details. Scale: 1 1/2 in = 1 ft.
 - i) Roof plan with all penetrations and equipment.
 - j) Roof detail. Scale: 3 in = 1 ft.
 - k) Interior finish schedule.
 - l) Door and Window Schedule.
 - m) Door and window details. Scale: 1 1/2 in = 1 ft.
 - n) Reflected ceiling plan with all ceiling mounted systems.
 - o) Ceiling and wall details. Scale: 1 1/2 in = 1 ft.
 - p) Life safety plan with building code summary.
 - q) Civil site drawings.
 - r) Landscape and irrigation drawings.
 - s) Electrical, security, lighting and communications site plan.
 - t) Enlarged room plans with furniture and equipment layouts – mechanical, electrical, communications, restrooms and showers, lobby, rooms with cabinetry, plumbing, special finishes or special equipment.
 - u) Interior elevation views.
 - v) Cabinet details.
 - w) HVAC, plumbing and fire protection drawings.
 - x) Building automation drawings.
 - y) Generator and redundant systems drawings.
 - z) Lightning protection drawings.
- 9) THE CONSULTANT shall conduct Meetings with the City, vendors and agencies as necessary to design and permit the building. The CONSULTANT shall attend the PREBID conference. THE CONSULTANT shall prepare Meeting Agenda and Meeting Reports for each encounter. THE CONSULTANT will schedule vendor and agency meetings such that the City may be present at all meetings. The quantity of meetings will be on the basis of the preliminary schedule includes additional meetings as necessary due to specific issues or needs as they arise.

**** End of Exhibit B***

City of Port Orange
 Public Utilities Field Operations Facility
 Exhibit C – Schedule of Compensation-Proposed Billing Breakdown
 Planning, Design, Permitting and Construction Administration
~~April 12, 2021~~-Revised May 18, 2021 – Page 1

Professional Services Compensation-Proposed Billing Breakdown

Task Assignment One-Programming Design Thru Bidding

Phase One Services: Programming Phase

Programming documents complete	10%	\$ 35,000.00
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Phase Two Services: Schematic Design Phase

Schematic design documents complete	25%	\$ 87,500.00
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Phase Three Services: Design Development Phase

50% Design Development documents complete	25%	\$ 87,500.00
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Phase Four Services: Construction Documents Phase

90% complete construction documents	20%	\$ 70,000.00
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100% complete construction documents	15%	\$ 52,500.00
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Bidding assistance & documentation complete	5%	\$ 17,500.00
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TOTAL LUMP SUM COMPENSATION (includes expenses)	100%	\$ 350,000.00
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City of Port Orange
Public Utilities Field Operations Facility
Exhibit D – Deliverables
Planning, Design, Permitting and Construction Administration
April 12, 2021 – Page 11

- 1) Per phased submittal, the Consultant will submit prints as follows to the City:
 - 1 set of electronic media (PDF) of the above documents per submittal.
- 2) The Consultant will submit prints and calculations as necessary to jurisdictional agencies.
- 3) For DD submittal, the Consultant will submit 24 inch x 26 inch color renderings, dry mounted, on 1/4 inch thick black foam boards. 1 set initial boards, 1 set revised boards. (PDF & JPG files of the same)



CITY COUNCIL AGENDA ITEM

REQUESTED COUNCIL MEETING DATE 6/15/2021

Consent item: Yes

SUBJECT: (C8c) Award of ITB 21-09 Herbert and Nova Master Lift Station Rehabilitation to US Water Services Corporation

DEPARTMENT: Public Utilities

GOAL: 2 - Infrastructure

RECOMMENDED MOTION: Move to approve award of ITB 21-09 Herbert and Nova Master Lift Station Rehabilitation to lowest responsive bidder, US Water Services Corporation, for the amount of \$997,536.00; and authorize an allowance for unforeseen conditions (contingency) in an amount not to exceed \$50,000.00; subject to City Attorney and City Manager review and approval of final contract documents; and authorizing the Mayor and City Clerk to execute all contract documents.

SUMMARY: The Herbert & Nova Master Lift Station (LS 39) is a regional wastewater pumping facility that collects and conveys flows from over 6,000 connections (residential & commercial) in the northwest portion of the City's wastewater collection system. The lift station was originally constructed in 1987 and modified to its current configuration in 2001. Rehab of this station is part of the City's planned infrastructure repair/replacement program.

The major elements of the project include but are not limited to, demolishing the existing building and generator, installation of a new generator and automatic transfer switch, wet well coating system, top slab, piping, valves, valve vault, and decorative wall (for screening). The liner system shall consist of both a high-strength structural cementitious build-up layer and a corrosion-resistant 100 percent solids epoxy coating system. The work must take place while the station remains in service.

Purchasing received six (6) bids for ITB 21-09 Herbert and Nova Master Lift Station Rehabilitation. Staff recommends award to the lowest responsive and responsible bidder, U.S. Water Services Corporation, for \$997,536.00. Staff is requesting City Council authorize an allowance for unforeseen conditions in an amount not to exceed \$50,000.00 (Contingency) for a total project amount not to exceed \$1,047,536.00. All unforeseen work must be justified and approved in writing in accordance with Code of Ordinances prior to authorization to the contractor.

The contract term is three hundred & sixty-five (365) days from the Notice to Proceed (final completion time).

Project Funding Account No.: Fund: 401 Name: Water & Sewer Services Cost

No.: SLS004 Center: Water and Sewer Program: Wastewater Treatment Spend
SLS004 Category: Lift Stations Tag: SLS004
Fund: 403 Name: Water and Sewer R&R Cost Center: Water and
Sewer Program: Wastewater Treatment Spend Category: Lift Stations
Tag: SLS004

Presenter: Lynn Stevens

ATTACHMENTS:

1.	ITB 21-09 EJCDC Agreement - Complete Agreement	ITB 21-09 EJCDC Agreement - Complete Agreement.pdf
2.	Department Justification Memo - Herbert & Nova ITB 21-09 (3) rev 6.1.21 jlw	Department Justification Memo - Herbert & Nova ITB 21-09 (3) rev 6.1.21 jlw.docx
3.	ITB 21-09 Herbert and Nova Master Lift Station Rehabilitation NOTICE of INTENT 5.10.21	ITB 21-09 Herbert and Nova Master Lift Station Rehabilitation NOTICE of INTENT 5.10.21.pdf
4.	Mead Hunt Recommendation of Award ITB 21 09 Herbert Nova Lift Station	Mead Hunt Recommendation of Award ITB 21 09 Herbert Nova Lift Station.pdf
5.	BID SUBMITTAL US Water Services Corportation ITB 21 09 Herbert Nova Lift Station	BID SUBMITTAL US Water Services Corportation ITB 21 09 Herbert Nova Lift Station.pdf
6.	BID PKG ITB 21 09 Herbert Nova Lift Station Improvements Bid Set Specifications_12.03.20	BID PKG ITB 21 09 Herbert Nova Lift Station Improvements Bid Set Specifications_12.03.20.pdf
7.	Attachment A - Drawings for ITB 21-09 Herbert Nova Master Lift Station 3.3.21	Attachment A - Drawings for ITB 21-09 Herbert Nova Master Lift Station 3.3.21.pdf
8.	ITB 21-09 Herbert and Nova Master Lift Station Pricing Sheet FINAL 3.3.21	ITB 21-09 Herbert and Nova Master Lift Station Pricing Sheet FINAL 3.3.21.xlsx
9.	ADDENDUM 1 OF 4 21-09 Herbert and Nova Master Lift Station Rehabilitation Addendum No.1 Final (4.5.2021)_2	ADDENDUM 1 OF 4 21-09 Herbert and Nova Master Lift Station Rehabilitation Addendum No.1 Final (4.5.2021)_2.pdf
10.	ADDENDUM 2 OF 4 ITB 21-09 Herbert and Nova Master Lift Station Rehabilitation Addendum No.2 Final (4.8.2021)	ADDENDUM 2 OF 4 ITB 21-09 Herbert and Nova Master Lift Station Rehabilitation Addendum No.2 Final (4.8.2021).pdf
11.	ADDENDUM 3 OF 3 ITB 21-09 Herbert and Nova Master Lift Station Rehabilitation 4.13.21	ADDENDUM 3 OF 3 ITB 21-09 Herbert and Nova Master Lift Station Rehabilitation 4.13.21.pdf
12.	ADDENDUM 4 OF 4 FINAL ITB 21-09 Herbert and Nova Master Lift Station Rehabilitation 4.15.21	ADDENDUM 4 OF 4 FINAL ITB 21-09 Herbert and Nova Master Lift Station Rehabilitation 4.15.21.pdf
13.	Executed Reso 21 7	Executed Reso 21 7.pdf
14.	BT-000775 SLS004	BT-000775 SLS004.pdf
15.	BT-000776 SLS002 to SLS004	BT-000776 SLS002 to SLS004.pdf

Kynah Cockcroft	Created/Initiated - 5/10/2021
Julia Wiggins	Approved - 5/12/2021
Richard Colby	Approved - 5/12/2021
Junos Reed	Approved - 5/13/2021
Steve Parnell	Approved - 5/13/2021
Lynn Stevens	Approved - 5/17/2021
Lupe Reyna-Coffin	Approved - 5/17/2021
Scott Neils	Approved - 5/20/2021
Matthew Jones	Approved - 5/28/2021
Wayne Clark	Approved - 6/3/2021
Robin Fenwick	Final Approval - 6/4/2021

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

**City of Port Orange
1000 City Center Circle
Port Orange, Florida 32129**

THIS AGREEMENT is by and between _____ (“Owner”) and

U.S. Water Services Corporation, 4939 Cross Bayou Boulevard, New Port Richey, FL34652 (“Contractor”).

The Effective Date of this Agreement shall be _____ (If no date is specified then the Effective Date shall be the date on which the Agreement is signed by the last of the two parties.)

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:

Demolition of the existing building and generator, installation of a new generator and automatic transfer switch, wetwell coating system, top slab, piping, vales, valve vault and decorative wall.

ARTICLE 2 – THE PROJECT

- 2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

ITB 21-09 Herbert Street and Nova Road Master Lift Station Rehabilitation

ARTICLE 3 – ENGINEER

- 3.01 The part of the Project that pertains to the Work has been designed by the Project Engineer, Kevin A. Lee, P.E. (“Civil Engineer”), and Keff Kurella, P.E. (“Electrical Engineer”). Brad Blais, P.E. 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 of the Essence*

- A. All time limits for Substantial Completion and Final Completion as stated in the Contract Documents, particularly Paragraph 4.02 below, are of the essence of the Contract.
- B. All time limits for Milestone dates set forth in the Contract Documents are of the essence of the Contract.

4.02 *Days to Achieve Substantial Completion and Final Completion*

- A. Unless as otherwise modified in a Notice to Proceed issued after the Effective Date of the Agreement or an allowable extension of time in accordance with Paragraph 12.02 of the General Conditions, the Work shall be substantially completed within 330 days after the Effective Date of the Agreement.
- B. Unless as otherwise modified in a Notice to Proceed issued after the Effective Date of the Agreement or an allowable extension of time in accordance with Paragraph 12.02 of the General Conditions, the Work shall be finally completed in accordance with Paragraph 14.06 of the General Conditions within 365 days after the Effective Date of the Agreement.
- C. If a Notice to Proceed is issued more than 60 days from the Effective Date of this Agreement, then the dates for Substantial Completion and the Final Completion shall be extended by the same number of days. (For example, if the Notice to Proceed is issued 63 days after the Effective Date of the Agreement, then the Substantial Completion and Final Completion dates shall be extended by 63 days.)

4.03 *Liquidated Damages*

- A. Contractor and Owner agree and recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial loss that is not readily ascertainable as of the Effective Date of this Agreement if the Work is delayed and not Substantially Completed within the time period specified in Paragraph 4.02 above, plus any allowable extension of time in accordance with Paragraph 12.02 of the General Conditions. Contractor agrees and recognizes that any delay to Substantial Completion shall constitute a material breach. Accordingly, Owner and Contractor agree that as liquidated damages for delay, Contractor shall pay Owner \$0.00 for each day that expires after the date the Work is required to be Substantially Completed until the Contractor achieves Substantial Completion with the Work. Contractor and Owner agree and recognize that the liquidated damages set forth herein shall not be treated as a penalty and are just damages that are proportionate to any damages that might reasonably be expected to follow from a delay to Substantial Completion.
- B. Owner may withhold Contractor's final payment in order offset the liquidated damages that Contractor owes Owner. Owner may also withhold progress payments if Owner reasonably believes that Contractor's final payment will not sufficiency cover the liquidated damages that Contractor owes Owner.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraphs 5.01.A, 5.01.B, and 5.01.C below:

- A. For all Work other than Unit Price Work, a lump sum of: \$N/A

Any allowances specifically identified and called for in the Contract Documents are included in the above price in accordance with Paragraph 11.02 of the General Conditions.

- B. For all Unit Price Work in accordance with Paragraph 11.03 of the General Conditions, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the actual quantity of that item:

<u>UNIT PRICE WORK</u>					
<u>Item</u> <u>No.</u>	<u>Description</u>	<u>Unit</u>	<u>Estimated</u> <u>Quantity</u>	<u>Bid Unit</u> <u>Price</u>	<u>Bid Price</u>

See Attachments

Total of all Bid Prices (Unit Price Work) \$997,536.00

The Bid Unit Prices set forth above are guaranteed prices. Although the Estimated Quantities are estimates and may increase or decrease based on determinations of Engineer, Contractor agrees and understands that the Bid Unit Prices shall remain the same irrespective of the quantities. Contractor understands that in agreeing to any Bid Unit Price it is agreeing to bear the risk associated with any material price increase or escalation. Owner agrees and understands that in agreeing to any Bid Unit Price it is agreeing to bear the risk associated with any material price decrease or reduction.

- C. 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 Progress Payments

- A. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions.

6.02 Progress Payments; Retainage

- A. Progress payments shall be made on account of the Contract Price on the basis of Contractor's Applications for Payment during performance of the Work in accordance with Paragraph 14.02 of the General Conditions. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed). Progress payments will be made in an amount equal to the percentage of the Work completed in accordance with the Schedule of Values, less the aggregate of payments previously made, less the retainage, and less such amounts as Engineer may determine Owner may withhold, including, but not limited to, liquidated damages.
- B. Owner shall withhold 5 percent of each progress payment as retainage until 100 percent completion.

6.03 Final Payment

- A. Final Payment inclusive of retainage shall be made to Contractor in accordance with Paragraph 14.07 of the General Conditions.

ARTICLE 7 – INTEREST

7.01 All monies not paid in strict accordance with Florida Statute §218.735 shall bear interest as provided for therein.

ARTICLE 8 – CONTRACTOR’S REPRESENTATIONS

8.01 In order to induce Owner to enter into this Agreement and in determining the Contract Price, Contractor makes the following representations:

- A. Contractor has carefully examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
- B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), if any, that have been identified in Paragraph SC-4.02 of the Supplementary Conditions as containing reliable "technical data," and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in Paragraph SC-4.06 of the Supplementary Conditions as containing reliable "technical data." Contractor's receipt and study of such reports shall not relieve it of visiting the Site and becoming familiar with and satisfied with the Site conditions that may affect cost, progress, and performance of the Work.
- E. Contractor has considered the information known to Contractor; 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 Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (3) Contractor's safety precautions and programs.
- F. Based on the information and observations referred to in Paragraph 8.01.E above, Contractor does not consider that 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 Documents.
- G. 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.

- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 Contents

- A. The Contract Documents consist of the following:
 - 1. This Agreement (pages 1 to 10, inclusive).
 - 2. Combination Payment and Performance Bond (pages 1 to 3, inclusive).
 - 3. General Conditions (pages 1 to 68, inclusive).
 - 4. Supplementary Conditions (pages 1 to 7, inclusive).
 - 5. Technical Specifications as listed in ITB 21-09 Herbert Street and Nova Road Lift Station Improvements and Upgrades, as identified in “Section 3 - Scope of Work” (pages 1 to 391, not attached, on file with Junos Reed, P.E., City Engineering and Construction Manager).
 - 6. Bid Set Drawings as listed in ITB 21-09 Herbert Street and Nova Road Lift Station Improvements and Upgrades (pages 1 to 19, not attached, on file with Junos Reed, P.E., City Engineering and Construction Manager).
 - 7. Addendum No. 1 (pages 1 to 14, inclusive).
 - 8. Addendum No. 2 (pages 1 to 2, inclusive).
 - 9. Addendum No. 3 (page 1, inclusive).
 - 10. Addendum No. 4 (page 1, inclusive).
 - 11. Exhibits to this Agreement (enumerated as follows):
 - a. Exhibit No. 1 Contractor’s Bid Schedule of Unit Prices (page 1, inclusive).
 - b. Documentation submitted by Contractor prior to Notice of Award (N/A).
 - 1. Affidavit Regarding Workers’ Compensation (page 1, inclusive).
 - 2. Leased Employee Affidavit Exhibit (page 1, inclusive).
 - c. Exhibit No. 2 Contractor’s Proposal (pages 1 to 49, inclusive).

- d. Composite Exhibit No. 3 City's Invitation to Bid Request No. 21-09 (pages 1 to 558, not attached, on file with City Clerk).
12. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
- a. Notice to Proceed (pages _____ to _____, inclusive).
 - b. Work Change Directives.
 - c. Change Orders.
- B. The documents listed in Paragraph 9.01.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 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 Terms

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

10.02 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.

10.03 Successors and Assigns

- A. 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.

10.04 Severability

- A. Any provision 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.

10.05 *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 10.05:
1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing 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.
- B. Contractor certifies that in the event a Lien is recorded on the Project by any person or entity providing labor, services, or materials with respect to any portion of the Work, it will immediately transfer such lien to its payment bond or take other appropriate action to immediately remove the encumbrance.

10.06 *No-Damage-for-Delay*

- A. 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 considered this no-damage-for-delay provision and understands that it is not entitled to any damages whatsoever for a delay to its Work.

10.07 *No Intended Third-Party Beneficiaries*

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

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement. Counterparts have been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or have been identified by Owner and Contractor or on their behalf.

CITY OF PORT ORANGE

Owner

By: Donald O. Burnette

Title: Mayor

Date: _____

Attest: Robin L. Fenwick, MMC

Title: City Clerk

Address for giving notices:

1000 City Center Circle

Port Orange, Florida 32129

(386) 506-5500

U.S. Water Services Corporation

By: Gary Deremer

Title: CEO

Date: _____

Attest: _____

Title: _____

Address for giving notices:

4939 Cross Bayou Boulevard

New Port Richey, Florida 34652

Telephone: (727) 848-8292

E-Mail: _____

License No.: CGC003307 & CUC1223914

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: _____

Phone Number: _____

City Manager
(386) 506-5501

Amount: \$997,536.00

City Case/Project No. ITB 21-09 Herbert Street and Nova Road Master Lift
Station Rehabilitation

Description of Work: ITB 21-09 Herbert Street and Nova Road Master Lift Station Rehabilitation

Project Location: Herbert Street and Nova Road Master Lift Station, City of Port Orange, Volusia County,
Florida

Legal Description: The 40 x 60 lift station easement on the Plat of Springwood Square, as recorded in Map
Book 36, Page 178 of the Public Records of Volusia County, Florida

Front Page

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

ITB 21-09 Herbert Street and Nova Road Master Lift Station Rehabilitation

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, **U.S. WATER SERVICES CORPORATION** 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 **NINE HUNDRED NINETY-SEVEN THOUSAND FIVE HUNDRED THIRTY-SIX AND 00/100 DOLLARS (\$997,536.00)**, 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 Herbert Street and Nova Road Master Lift Station Rehabilitation, 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 shall be deemed an original, this _____, day of _____, 2021.

Attest:

U.S. WATER SERVICES CORPORATION

(As to Corporate Principal) Secretary

By: _____
Gary Deremer, CEO

(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.

General Conditions

Consisting of 68 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

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly by



AMERICAN COUNCIL OF ENGINEERING COMPANIES

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AMERICAN SOCIETY OF CIVIL ENGINEERS

PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
A Practice Division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

Endorsed by



CONSTRUCTION SPECIFICATIONS INSTITUTE

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor (EJCDC C-520 or C-525, 2007 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the Narrative Guide to the EJCDC Construction Documents (EJCDC C-001, 2007 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (EJCDC C-800, 2007 Edition).

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. 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 which is evidence of the agreement between Owner and Contractor covering the Work.
 3. *Application for Payment*—The form acceptable to Engineer and Owner which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 6. *Bidder*—The individual or entity who submits a Bid directly to Owner.
 7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
 9. *Change Order*—A document recommended by Engineer and/or Owner 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, issued on or after the Effective Date of the Agreement.
 10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
 11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; (iii) achieve Final Completion; and (iv) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.
15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work*—See Paragraph 11.01 for definition.
17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed by the last of the two parties.
19. *Engineer*—The individual or entity named as such in the Agreement.
20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *Final Completion* – This shall occur when Contractor, in the opinion of Engineer or Owner, performs and completes all corrective action associated with the Punchlist in addition to any other work required of Contractor under the Contract Documents.
22. *General Requirements*—Sections of Division 1 of the Specifications.
23. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
24. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

27. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
29. *Notice to Proceed*—A written notice given 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 under the Contract Documents.
30. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
31. *PCBs*—Polychlorinated biphenyls.
32. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
33. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
34. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
35. *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.
36. *Punchlist* – The detailed list of incomplete, unsatisfactory or unacceptable, or defective items that Contractor is required to complete to achieve Final Completion that is generated in accordance with Paragraph 14.06 of the General Conditions.
37. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
38. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
39. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
40. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

41. *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.
42. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, samples, product data, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
43. *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 for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
44. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
45. *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 at the Site.
46. *Substantial Completion*—The time and date at which the Work has progressed to the point where, in the opinion of Engineer, the Work is sufficiently complete, in accordance with the Contract Documents, so that the Work 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 thereof. 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 is intended.
47. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
48. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
49. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, 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 Subcontractor.
50. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
51. *Unit Price Work*—Work to be paid for on the basis of unit prices.
52. *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, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

53. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 *Terminology*

- A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. 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 Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day:*

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

c. is failing or has been damaged.

E. *Furnish, Install, Perform, Provide:*

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean 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, shall mean 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, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.
- F. 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 Bonds and Evidence of Insurance*

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request such as the specific additional insured endorsement included in the liability policy) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5 and/or the Supplementary Conditions.

2.02 *Copies of Documents*

- A. At the request of Contractor, Owner or Engineer shall furnish to Contractor up to 5 hard copies of the Drawings and Specifications. Additional copies of the Drawings and Specifications will be furnished upon request at the cost of reproduction.

2.03 *Notice to Proceed; Starting the Work*

- A. 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 Agreement.

2.04 N/A

2.05 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer and Owner 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 Documents, and identifying the Substantial Completion and Final Completion dates;
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 / line-items 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.

2.06 *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 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, 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 instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial 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 for acceptability to Engineer or Owner as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted 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 the 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 component parts / line-items of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one 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. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents (*e.g.*, answering Requests for Information) shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

- A. Standards, Specifications, Codes, Laws, and Regulations
 1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement 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, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements and dimensions. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, 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) any standard, specification, manual, or code, or (c) 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 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04 below.
3. Contractor shall not be liable to Owner 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 the Contract Documents and checking and verifying pertinent figures therein and all applicable field measurements and dimensions.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); 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).
2. 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 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 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
 - 1. A Field Order;
 - 2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or
 - 3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

- A. Contractor and any Subcontractor or Supplier 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 editions; or
 - 2. 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.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting

from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor 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. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- B. *N/A*
- 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.

4.02 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions may identify:
 - 1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents and shall under no circumstance 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. Such "technical data" is identified in the Supplementary Conditions. Except for such limited reliance on such "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; or
 - 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.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to establish that any “technical data” on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
2. is of such a nature as to require a change in the Contract Documents; or
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 6.16.A), 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 as aforesaid) until receipt of written order to do so.

B. *Engineer’s Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner’s obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer’s findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition 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 meet any one or more of the categories described in Paragraph 4.03.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 Paragraphs 9.07 and 11.03; and
 - c. Contractor notifies Owner and Engineer of such condition within 5 days after first becoming aware of such condition.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew of the existence of such conditions at the time Contractor made a final 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
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 4.03.A within 5 days after first becoming aware of such condition.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or 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) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

- A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
 1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and
 2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all such information and data;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents;
 - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
 - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, 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 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer within 5 days. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that (i) they are attributable to the existence or location of any Underground Facility 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 existence or location, and (iii) Contractor notifies Owner and Engineer of such condition within 5 days after first becoming aware of such condition. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *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.

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and

drawings are not Contract Documents. Such “technical data” is identified in the Supplementary Conditions. Except for such reliance on such “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; or
 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 any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work or identified in a report listed in the Supplemental Conditions. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible or if such condition is caused by the negligence, recklessness, or intentional misconduct of Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) 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 4.06.E.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. An equitable adjustment shall be made in the Contract Price or Contract Times, 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. 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, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

- F. 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. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. N/A
- H. N/A
- I. N/A

ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish performance and payment bonds in accordance with Florida Statute §255.05, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. The obligations, duties, responsibilities, and requirements of Contractor set forth in this Contract shall be incorporated into Contractor's performance bond.
- B. All bonds shall be in the form prescribed by the Contract Documents. All bonds 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 shall show that it is effective on the date the agent or attorney-in-fact signed each bond. The performance and payments bonds shall be recorded in the public records in and for Volusia County, Florida. As a courtesy to the Contractor and to expedite recording, the City shall record the bond on behalf of the Contractor and shall cause a copy of the recording information to be provided to the Contractor by the Project Engineer.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in Florida or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed

or authorized in Florida to issue bonds or insurance policies for the limits and coverages so required.

5.03 *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. *N/A*
- F. In the event of any conflict between this Paragraph 5.03 and the specific insurance requirements of Contractor set forth in the Supplemental Conditions, the specific insurance requirements in the Supplemental Conditions govern.

5.04 *Contractor's Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed 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:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 - 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 - 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

- a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;
 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom;
 6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle;
- B. The policies of insurance required by this Paragraph 5.04 shall:
1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds for ongoing and completed operations, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
 2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
 3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraph 6.20 below and as otherwise set forth in the Contract;
 4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
 5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
 6. include completed operations coverage:
 - a. Such insurance shall remain in effect for 10 years after Substantial Completion.
 - b. Contractor shall furnish Owner and each other 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.

- C. Contractor shall be solely responsible for any insurance deductible or self-insured retention.
- D. In the event of any conflict between this Paragraph 5.04 and the specific insurance requirements of Contractor set forth in the Supplemental Conditions, the specific insurance requirements in the Supplemental Conditions govern.

5.05 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). Such policy shall identify both Contractor and Owner as named insureds. Contractor shall solely be responsible for any deductible. This insurance shall:
 - 1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
 - 2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, flood, windstorm, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
 - 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 - 4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 - 5. allow for partial utilization of the Work by Owner;
 - 6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.

B. *N/A*

- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. *N/A*

E. *N/A*

- F. Contractor's all-risk property insurance shall not terminate or expire if Owner elects to utilize or occupy any portion or portions of the Project prior to Substantial Completion. Contractor shall obtain an occupancy / use endorsement that allows Owner to utilize or occupy a portion or portions of the Project prior to Substantial Completion (such that if a temporary Certificate of Occupancy or Completion is issued for a portion(s) of the Project, the all-risk property insurance shall remain in full force).

- G. In the event of any conflict between this Paragraph 5.06 and the specific insurance requirements of Contractor set forth in the Supplemental Conditions, the specific insurance requirements in the Supplemental Conditions govern.

5.07 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their 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 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 Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (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. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Contractor as trustee or otherwise payable under any policy so issued.

B. *N/A*

C. *N/A*

D. In the event of any conflict between this Paragraph 5.07 and the specific insurance requirements of Contractor set forth in the Supplemental Conditions, the specific insurance requirements in the Supplemental Conditions govern.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Contractor and made payable to Contractor as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Contractor shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and, only if applicable, the cost thereof covered by an appropriate Change Order.

B. Contractor as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Contractor's exercise of this power. If such objection be made, Contractor as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Contractor as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

C. 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.

D. In the event of any conflict between this Paragraph 5.08 and the specific insurance requirements of Contractor set forth in the Supplemental Conditions, the specific insurance requirements in the Supplemental Conditions govern.

5.09 *Acceptance Insurance; Option to Replace*

A. If Owner has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by the Contractor in accordance with Article 5 and/or the Supplementary Conditions on the basis of non-conformance with the Contract Documents, Owner shall so notify Contractor in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Contractor shall provide Owner such additional information in respect of insurance provided as the Owner may reasonably request. If Contractor does not purchase or maintain all of the insurance required of it by the Contract

Documents, Owner shall notify Contractor 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, which shall constitute a material breach of the Contract by Contractor. Without Owner's prejudice to any other right or remedy, Owner may elect to obtain equivalent insurance to protect its interests at the expense of Contractor, and a Change Order shall be issued to adjust the Contract Price accordingly.

- B. In the event of any conflict between this Paragraph 5.09 and the specific insurance requirements of Contractor set forth in the Supplemental Conditions, the specific insurance requirements in the Supplemental Conditions govern.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

- A. N/A

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

6.01 *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. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents. Contractor shall submit a Request for Information to Engineer seeking clarification as to any aspect of the Contract Documents as soon as practical to, among other things, maintain the orderly progress of the Work and avoid any delay to the Work.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent or superintendents, as appropriate, who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

6.02 *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 at all times maintain good discipline and order at the Site.
- B. 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 shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *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.
- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall 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 shall 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.

6.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer and Owner for acceptance (to the extent indicated in Paragraph 2.07) proposed monthly adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will be submitted with Contractor's Applications for Payment, as conditions precedent to payment, and will comply with any provisions of the General Requirements applicable thereto.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.
 - 3. All proposed Progress Schedules submitted to Engineer and Owner shall identify Contractor's critical path sequence of scheduled activities of the Work as well as earliest start dates for scheduled activities, the earliest finish date for scheduled activities, the latest start date for scheduled activities, and the latest finish date for scheduled activities. All float in the Progress Schedules shall belong to Owner to offset a delay to Contractor's critical path attributable to Owner or its agents.

6.05 *Substitutes and "Or-Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description 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 or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *“Or-Equal” Items:* If in Engineer’s sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an “or-equal” item, in which case review and approval of the proposed item may, in Engineer’s sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it 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; and
 - 3) it has a proven record of performance and availability of responsive service.
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
2. *Substitute Items:*
 - a. If in Engineer’s sole discretion an item of material or equipment proposed by Contractor does not qualify as an “or-equal” item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
 - b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
 - c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.
 - d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - 1) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,

- b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
- 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
 - b) 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
 - c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
- 3) will identify:
 - a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services; and
- 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.

- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. 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.

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

6.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection. Additionally, subject to Paragraph 6.06.B below, Contractor shall provide to Owner within 10 days from the Effective Date of this Agreement a written list of all Subcontractors (or other individuals or entities it plans on engaging to perform a scope of the Work), together with their Certificates of Insurance that must identify Owner as an additional insured. Subcontractors must identify Owner as an additional insured for purposes of ongoing and completed operations.
- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor
 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor and ensure that they perform the Work in a good and workmanlike manner and pursuant to the Contract Documents.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (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 any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *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 a particular 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 shall be disclosed by Owner in the Contract Documents.
- B. *N/A*
- C. *N/A*

6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. 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 opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *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. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear 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. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *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.

6.11 *Use of Site and Other Areas*

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

- 1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
- 2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
- 3. *N/A*

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall 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. At the completion of the Work Contractor shall remove from the Site 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 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 property to stresses or pressures that will endanger it.

6.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show as-built conditions and changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *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. 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, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. 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. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.

- D. 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.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.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 (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).
- F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of 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.

6.16 *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 threatened 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 thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

- A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*
 - a. Submit number of copies specified in the General Requirements.
 - b. Data shown on the Shop Drawings will 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 6.17.D.
 2. *Samples:*
 - a. Submit number of Samples specified in the Specifications.
 - b. 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 6.17.D.
- B. 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. *Submittal Procedures:*
1. Before submitting each Shop Drawing or Sample, Contractor shall have:
 - a. thoroughly reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
 2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
 3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop

Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. *Engineer's Review:*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. 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, conform to the information given in 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 (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.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's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures:*

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.

6.18 *Continuing the Work*

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements regarding payment or otherwise, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *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 and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper 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.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
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 or the issuance of a notice of acceptability by Engineer;
 6. any inspection, test, or approval by others;
 7. any correction of defective Work by Owner; or
 8. the achievement of Final Completion (including Contractor's completion of Punchlist items that were deemed satisfactory to Engineer).

6.20 *Indemnification*

- A. To the fullest extent permitted by Florida law including Florida Statute §725.06, Contractor shall indemnify and hold harmless Owner (including Owner's officers and employees) from liabilities, damages, losses, and costs, including, but not limited to, reasonable attorney's fees, 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. Contractor agrees and understands that the monetary limitation on the extent of its indemnification shall be \$1 million per occurrence or the per occurrence limits of its commercial general liability (CGL) insurance, whichever is greater, which bears a reasonable commercial relationship to the Contract and is hereby part of the project specifications and bid documents.
- B. To the fullest extent permitted by Florida law, Contractor shall defend Owner (including Owner's officers and employees) from claims, demands, and litigation asserted against Owner to the extent such claims, demands, or litigation are 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.
- C. Contractor agrees and understands that its obligation to indemnify, hold harmless, and defend as set forth in Paragraphs 6.20.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 incident 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.

6.21 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed 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 Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
 - 1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. 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. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, 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.

7.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 3. the extent of such authority and responsibilities will be provided.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.

- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C or as otherwise provided in Florida Statute §218.735.

8.05 *Lands and Easements; Reports and Tests*

- A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

- A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *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.

8.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

- A. N/A

8.12 *Compliance with Safety Program*

- 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 pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *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 Documents.

9.02 *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 9.09. 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.

9.03 *Project Representative*

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which 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. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

- A. 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, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the clarification or interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing as soon as practical (so as to maintain the orderly progress of the Work and to avoid any delay to the Work) but in no event later than 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred or render a written answer with respect to any Request for Information Contractor submits to Engineer seeking clarification as to an aspect of the Contract Documents. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. *N/A*
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents 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 shall 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 Paragraph 14.07.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 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *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 by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *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 as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
2. changes in the 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 a Work Change Directive; and
3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05 that are then resolved by the parties to the Agreement.

10.04 *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.

10.05 *Claims*

- A. *Engineer's Decision Required:* All Claims, except those otherwise waived pursuant to the Contract, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims. Owner, however, may, but is not required to, refer to Engineer its assessment of liquidated damages against Contractor in accordance with Paragraph 4.03 of the Agreement or any claim it has with respect to construction defects discovered after Final Completion.
- B. *Notice:* Unless as otherwise set forth herein, written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with detailed, supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event. A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event.
- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant take one of the following actions in writing:
 1. deny the Claim in whole or in part;
 2. approve the Claim; or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. *N/A*
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.
- G. All Claims Contractor submits for an adjustment in Contract Time or Contract Price shall be subject to the No-Damage-For-Delay provision in Paragraph 10.06 of the Agreement.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall 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. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall 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 shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall 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, who 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 shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors) employed for services specifically related to the Work. Attorneys and accountants shall not constitute a Cost of the Work.
5. Supplemental costs including 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, and hand tools not owned by the workers, 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.
 - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the 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 property insurance established in accordance with Paragraph 5.06.D), 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 shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall 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 telegrams, long distance telephone calls, telephone 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 Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, 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 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. 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.
- 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.

C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data. Owner shall have the right to inspect and audit Contractor's books and cost records at any time during the course of the Project and for three years after Final Completion. Owner must give Contractor 7 days written notice that it plans on inspecting and auditing Contractor's books and cost records.

11.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances specifically identified and called for 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:*
 - 1. Contractor agrees that:
 - a. 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
 - b. 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 on account of any of the foregoing will be valid.
- C. *Contingency Allowance:*
 - 1. Contractor agrees that a 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 on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 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 are estimates and solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- 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. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect to any other item of Work; and
3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense for supplying additional units or Owner believes that Owner is entitled to a decrease in Contract Price for Contractor supplying fewer units and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for 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, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01 excluding 11.01.A.1) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C). Contractor shall keep detailed backup supporting its actual costs incurred associated with the adjustment in Contract Price.
- C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall 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 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five 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 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1

and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

- d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
- e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
- f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires not caused by Contractor or anyone whom Contractor is responsible, floods not caused by Contractor or anyone whom Contractor is responsible, epidemics, abnormal weather conditions not anticipated or customary in Volusia County, or acts of God.
- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, 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. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Contractor must provide Engineer and Engineer an updated Progress Schedule reflecting how the critical path has been impacted as a condition precedent to being entitled to an adjustment in Contract Time.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions not anticipated or customary in Volusia County, acts of God, acts

or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall only be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Contractor must provide Engineer and Engineer an updated Progress Schedule reflecting how the critical path has been impacted as a condition precedent to being entitled to an adjustment in Contract Time.

- D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or 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) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will 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 therewith as applicable.

13.03 *Tests and Inspections*

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.
- 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 and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. 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.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, 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, furnishing all necessary labor, material, and equipment.
- C. If it is found that the uncovered Work is defective, Contractor shall pay 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 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 Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. 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, or both, 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, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *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, 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 shall 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.

13.06 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay 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 correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *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 terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. repair such defective land or areas; or
 - 2. correct such defective Work; or
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If 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. 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 correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

- C. 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.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, 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.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay 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) 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 pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor 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 the defective work (whether as-is, by receiving a credit, or receiving other compensation, losses, or damage from Contractor as discussed above in Paragraph 13.08). 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.

13.09 *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 rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the

Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, 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 13.09, 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, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, 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 (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) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. 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 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A 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 on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. *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 or which will be completed by the end of the month, accompanied by such supporting documentation as is required by the Contract Documents. 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 shall also be accompanied by a bill of sale, invoice, or other documentation

warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor (in a form approved by Owner) certifying that all previous progress payments received on account of the Work have been applied to pay Contractor's Subcontractors and Suppliers and to otherwise discharge Contractor's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments is set forth in Paragraph 6.02.B of the Agreement.

B. Review of Applications:

1. Engineer will, within 10 days after receipt of each Application for Payment, indicate in writing a recommendation of payment or nonpayment and present the Application to Owner. If Contractor's Application for Payment is deficient, Owner shall reject the payment request and return it to Contractor within 20 business days after the date on which the payment request is stamped as received indicating in writing the reasons for refusing to recommend payment; 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 under Paragraph 9.07, 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 Documents; 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, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, 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 for any responsibility or liability with 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 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due:

- 1. Subject to the provisions of Paragraph 14.02.D and Florida Statute §218.735, Owner shall pay Contractor 25 business days after the date on which the payment request is stamped as received by Engineer.

D. *Reduction in Payment:*

1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. 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;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or
 - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any undisputed 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, when Contractor remedies the reasons for such action.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 *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; provided, however, that Substantial Completion shall not occur until the governing building department issues a Certificate of Occupancy (or Certificate of Completion, if applicable) that allows Owner to utilize the entire Project for the purposes for which it is 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 tentative certificate of Substantial Completion which shall fix the date of Substantial Completion subject to the Certificate of Occupancy (or Completion).
- D. 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 Punchlist.

14.05 *Partial Utilization*

- 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. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and 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 14.04.A through D for that part of the Work.
 - 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and 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 14.04 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 5.10 regarding property insurance.

14.06 *Final Completion- Punchlist*

- A. Within 30 days from Contractor achieving Substantial Completion the following must occur: Contractor shall notify Engineer and Owner in writing that the Project is complete in which case Engineer and Owner will promptly make a final inspection (or inspections, if necessary) with Contractor for the purpose of reviewing and developing a detailed Punchlist of items that are incomplete, unsatisfactory or unacceptable, or defective that Contractor is required to complete. However, if the Contract Price is \$10 million or more, the foregoing must occur within 60 days from Contractor achieving Substantial Completion.

- B. The Punchlist shall be provided to Contractor by Engineer and/or Owner no later than 5 days after the punchlist of items has been reviewed and developed in accordance with paragraph 14.06.A above. Contractor shall then have 30 days from its receipt of the Punchlist to perform and complete the corrective work identified therein.
- C. Final Completion shall be the date that Engineer or Owner determines that Contractor satisfactorily performed and completed the corrective work identified in the Punchlist in addition to any other work required of Contractor under the Contract Documents.

14.07 *Final Payment*

A. Application for Payment:

1. After Contractor achieves Final Completion and furnishes all required maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up or as-built record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment inclusive of retainage following the procedure for progress payments.
2. The final Application for Payment shall 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. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective final releases or waivers (satisfactory to Owner) of all Lien rights or Liens filed in connection with the Work.
3. In lieu of the final releases or waivers of Liens specified in Paragraph 14.07.A.2.d and as approved by Owner, Contractor may furnish an affidavit of Contractor whereby Contractor swears that: (i) all payrolls, 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 (ii) 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.
4. The documents and materials that Contractor is required to submit to accompany its Final Application for Payment (as set forth in this Paragraph 14.07) are conditions precedent to final payment.

B. Engineer's Review of Application and Acceptance:

1. 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 Documents have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09 below. 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. Payment Becomes Due:

1. Twenty-five (25) business days after the date on which the Application for Payment is stamped as received by Engineer, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

- A. The making and acceptance of final payment will constitute:
 1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
 2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *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 notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will 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 established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
 - 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 - 3. Contractor's repeated disregard of the authority of Engineer;
 - 4. Contractor's violation in any substantial way of any provisions of the Contract Documents;
 - 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 15.02.A occur, Owner may, after giving Contractor (and surety) 5 days written notice of its intent to terminate the services of Contractor:
 - 1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
 - 2. 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
 - 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.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 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) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed 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.

- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within 5 days of the notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. 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. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *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;
 - 3. N/A; and
 - 4. reasonable expenses directly attributable to termination such as demobilization expenses. Attorneys' fees, accountant fees, and home office overhead expenses shall not be deemed reasonable expenses.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority or (ii) Contractor complies with all conditions precedent to payment and Owner fails for 60 days to pay Contractor the sum Owner undisputedly determined to be due to Contractor, 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 15.03. 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 Contractor complies with all conditions precedent to payment and Owner has failed for 60 days to pay Contractor any sum Owner undisputedly determined to be due to Contractor, 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 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 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 16 – DISPUTE RESOLUTION

16.01 *Methods and Procedures*

- A. Mediation shall be a condition precedent to any dispute between Owner and Contractor relating to the Contract; provided, however, that Owner, in its sole discretion, can waive mediation as a condition precedent to pursue a claim / litigation against Contractor or defend a claim / litigation from Contractor. The party initiating mediation must submit written request to the other party of its desire to mediate and provide the names of suggested mediators. The parties shall work together to mutually agree on a mediator within 30 days from the written request. The parties shall mediate the dispute within 60 days from the written request unless a different date is agreed upon due to the availability of the mediator, the availability of the parties and their counsel, or upon the mutual agreement of the parties. If the parties are unable to agree on a mediator (and the Owner has not elected to waive mediation), the parties, subject to Paragraph 16.01.C below, agree to allow the court to unilaterally select the mediator and any litigation will be stayed pending the outcome of such mediation.
- B. *N/A.*
1. *N/A.*
- C. Any litigation arising out of or relating to the Contract shall be brought in the exclusive venue of Volusia County, Florida. The prevailing party shall be entitled to all attorneys' fees and court costs at the trial and appellate level. **CONTRACTOR VOLUNTARILY AND KNOWINGLY WAIVES IT RIGHT TO A TRIAL BY JURY.**

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
2. delivered at or sent by registered or certified mail, postage prepaid, or an overnight carrier (such as UPS or FedEx) to the last business address known to the giver of the notice.

17.02 *Computation of Times*

- A. When any period of time is referred to in the Contract Documents 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.

17.03 *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 Documents. 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.

17.04 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

- A. This Contract is to be governed by the law of the state of Florida.

17.06 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

Supplemental Conditions

Consisting of 7 Pages

SUPPLEMENTARY CONDITIONS

TABLE OF CONTENTS

SC-4.02	Subsurface and Physical Conditions
SC-4.06	Hazardous Environmental Conditions
SC-5.04	Contractor's Liability Insurance
SC-5.06	Property Insurance
SC-6.06	Concerning Subcontractors, Suppliers, and Others
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SC-17-08	Examination of Records
SC-17-09	Sovereign Immunity

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC C-700 (2007 Edition). All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

SC-4.02 *Subsurface and Physical Conditions*

SC-4.02 Delete Paragraphs 4.02.A and 4.02.B in their entirety and insert the following:

A. No reports of explorations or tests of subsurface conditions at or contiguous to the Site, or drawings of physical conditions relating to existing surface or subsurface structures at the Site, are known to Owner.

SC-4.06 *Hazardous Environmental Conditions*

SC-4.06 Delete Paragraphs 4.06.A and 4.06.B in their entirety and insert the following:

A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.

B. Not Used.

SC-5.04 *Contractor's Liability Insurance*

SC-5.04 Add the following new paragraph immediately after Paragraph 5.04.B:

C. The limits of liability for the insurance required by Paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under Paragraphs 5.04.A.1 and A.2 of the General Conditions:

- | | |
|--|-----------------------|
| a. State: | Statutory |
| b. Applicable Federal
(e.g., Longshoreman's): | Statutory |
| c. Employer's Liability: | \$1,000,000.00 |

2. Contractor's General Liability under Paragraphs 5.04.A.3 through A.6 of the General Conditions which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of Contractor:

- | | |
|---|----------------|
| a. General Aggregate | \$1,000,000.00 |
| b. Products - Completed Operations Aggregate | N/A |
| c. Personal and Advertising Injury | \$1,000,000.00 |
| d. Each Occurrence (Bodily Injury and Property Damage) | \$1,000,000.00 |
| e. Property Damage liability insurance will provide Explosion, Collapse, and Under-ground coverages where applicable. | |
| f. Excess or Umbrella Liability | |
| ☒ General Aggregate | \$1,000,000.00 |
| ☒ Each Occurrence | \$500,000.00 |

3. Automobile Liability under Paragraph 5.04.A.6 of the General Conditions:

SC-5.06 *Property Insurance*

SC-5.06.A. Delete Paragraph 5.06.A in its entirety and insert the following in its place:

- A. Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof. Contractor shall be responsible for any deductible or self-insured retention. This insurance shall:
1. include the interests of Owner, Contractor, Subcontractors, Engineer, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or loss payee;

2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss and damage to the Work, temporary buildings, falsework, and materials and equipment in transit and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by these Supplementary Conditions.
3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
5. allow for partial utilization of the Work by Owner;
6. include testing and startup;
7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued; and
8. comply with the requirements of Paragraph 5.06.C of the General Conditions.

-SC-6.06 *Concerning Subcontractors, Suppliers, and Others*

SC-6.06 Add a new paragraph immediately after Paragraph 6.06.G:

H. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by a particular Subcontractor or Supplier.

SC-12.01 *Change of Contract Price*

SC-12.01.C *Contractor's Fee.* Delete the semicolon at the end of GC 12.01.C.2.c, and add the following language:

, provided, however, that on any subcontracted work the total maximum fee to be paid by Owner under this subparagraph shall be

no greater than 27 percent of the costs incurred by the Subcontractor who actually performs the work;

SC-17-07 *Public Records Compliance*

SC-17-07 Add the following new paragraph immediately after Paragraph 17.06:

A. *Public Records Compliance.* Contractor 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 Contractor does not transfer the records to the City.

(d) Upon completion of the Contract, Contractor shall transfer to the City, at no cost, all public records in possession of the Contractor 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 Contractor does not comply with a public records request, the City shall deem the non-compliance a breach of this Contract, and the Contractor may be subject to penalties under Section 119.10, Florida Statutes.

**CONTRACTOR QUESTIONS RELATING TO
CONTRACTOR'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**

SC-17-08 *Examination of Records*

SC-17-08 Add the following new paragraph immediately after Paragraph 17.07:

A. *Examination of Records.*

(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.

SC-17-09 *Sovereign Immunity*

SC-17-09 Add the following new paragraph immediately after Paragraph 17.08:

A. *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.

Supplemental Conditions

Consisting of 7 Pages

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These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC C-700 (2007 Edition). All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

SC-4.02 *Subsurface and Physical Conditions*

SC-4.02 Delete Paragraphs 4.02.A and 4.02.B in their entirety and insert the following:

A. No reports of explorations or tests of subsurface conditions at or contiguous to the Site, or drawings of physical conditions relating to existing surface or subsurface structures at the Site, are known to Owner.

SC-4.06 *Hazardous Environmental Conditions*

SC-4.06 Delete Paragraphs 4.06.A and 4.06.B in their entirety and insert the following:

A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.

B. Not Used.

SC-5.04 *Contractor's Liability Insurance*

SC-5.04 Add the following new paragraph immediately after Paragraph 5.04.B:

C. The limits of liability for the insurance required by Paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under Paragraphs 5.04.A.1 and A.2 of the General Conditions:

- | | |
|--|-----------------------|
| a. State: | Statutory |
| b. Applicable Federal
(e.g., Longshoreman's): | Statutory |
| c. Employer's Liability: | \$1,000,000.00 |

2. Contractor's General Liability under Paragraphs 5.04.A.3 through A.6 of the General Conditions which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of Contractor:

- | | |
|---|----------------|
| a. General Aggregate | \$1,000,000.00 |
| b. Products - Completed Operations Aggregate | N/A |
| c. Personal and Advertising Injury | \$1,000,000.00 |
| d. Each Occurrence (Bodily Injury and Property Damage) | \$1,000,000.00 |
| e. Property Damage liability insurance will provide Explosion, Collapse, and Under-ground coverages where applicable. | |
| f. Excess or Umbrella Liability | |
| ☒ General Aggregate | \$1,000,000.00 |
| ☒ Each Occurrence | \$500,000.00 |

3. Automobile Liability under Paragraph 5.04.A.6 of the General Conditions:

SC-5.06 *Property Insurance*

SC-5.06.A. Delete Paragraph 5.06.A in its entirety and insert the following in its place:

- A. Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof. Contractor shall be responsible for any deductible or self-insured retention. This insurance shall:
- include the interests of Owner, Contractor, Subcontractors, Engineer, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or loss payee;

2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss and damage to the Work, temporary buildings, falsework, and materials and equipment in transit and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by these Supplementary Conditions.
3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
5. allow for partial utilization of the Work by Owner;
6. include testing and startup;
7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued; and
8. comply with the requirements of Paragraph 5.06.C of the General Conditions.

-SC-6.06 *Concerning Subcontractors, Suppliers, and Others*

SC-6.06 Add a new paragraph immediately after Paragraph 6.06.G:

H. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by a particular Subcontractor or Supplier.

SC-12.01 *Change of Contract Price*

SC-12.01.C *Contractor's Fee.* Delete the semicolon at the end of GC 12.01.C.2.c, and add the following language:

, provided, however, that on any subcontracted work the total maximum fee to be paid by Owner under this subparagraph shall be

no greater than 27 percent of the costs incurred by the Subcontractor who actually performs the work;

SC-17-07 *Public Records Compliance*

SC-17-07 Add the following new paragraph immediately after Paragraph 17.06:

A. *Public Records Compliance.* Contractor 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 Contractor does not transfer the records to the City.

(d) Upon completion of the Contract, Contractor shall transfer to the City, at no cost, all public records in possession of the Contractor 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 Contractor does not comply with a public records request, the City shall deem the non-compliance a breach of this Contract, and the Contractor may be subject to penalties under Section 119.10, Florida Statutes.

**CONTRACTOR QUESTIONS RELATING TO
CONTRACTOR'S DUTIES TO PROVIDE PUBLIC
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E-MAIL: CITYCLERK@PORT-ORANGE.ORG**

SC-17-08 *Examination of Records*

SC-17-08 Add the following new paragraph immediately after Paragraph 17.07:

A. *Examination of Records.*

(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.

SC-17-09 *Sovereign Immunity*

SC-17-09 Add the following new paragraph immediately after Paragraph 17.08:

A. *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.

Technical Specifications

Consisting of 391 Pages

Not attached, on file with Junos Reed, P.E, City Engineering and Construction Manager

BID Set Drawings

Consisting of 19 Pages

Not attached, on file with Junos Reed, P.E, City Engineering and Construction Manager

Addendum No. 1

Consisting of 14 Pages



CITY OF PORT ORANGE

PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5704
purchdiv@port-orange.org

ADDENDUM NO. #1

April 5, 2021

ITB #21-09 Herbert and Nova Master Lift Station Rehabilitation

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 8, 2021 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. CLARIFICATIONS

Per Specification 26 32 13 Engine Generators Section 2.1 the approved manufacturers for the generator in this project are Caterpillar: Engine Div. and MTU/Detroit Diesel.

Per Specification 33 09 00 Instrumentation and Controls for Utilities Section 1.01 E the PICS for this project is Sanders Company Inc.

Per Specification 33 01 30.83 Wetwell Lining Systems Section 3.02 A the lining manufacturer for this project is Raven Lining Systems.

B. CHANGES TO SPECIFICATIONS

Revise the first sentence of Specification 01 22 00 Unit Prices Item 2.07 DIP Fittings (Add or Delete) to state, "Payment shall be made at the contract unit price per ton for all ductile iron/cast iron fittings installed by the CONTRACTOR as directed by the Owner's Representative."

Page 249, Section 2.4, "Fuel Oil Storage", "Day Tank" Items B1 through B7 are now hereby removed from the solicitation.

C. QUESTIONS AND ANSWERS

Question 1: What is the Engineer's estimate for this project?

Answer: The Engineer's estimate is \$890,000.00.

Question 2: Will the City be conducting a site visit?

Answer: The City will not be conducting a site visit for this project. However, we have provided pictures of the project facility which are attached to this addendum.

Question 3: All electrical enclosures on the Riser Diagram #E-701 are specified as NEMA4X but the ATS is specified as NEMA3R per 2.2 K on Page 260. Can the City verify NEMA 3R as the correct ATS enclosure material?

Answer: Provide NEMA 4X.

Question 4: What source will the AcuPanel be monitoring from NOTE #7 on Riser Diagram #E-701?

Answer: The AcuPanel will monitor the utility source.

Question 5: Can battery charger specified be installed and mounted with the generator set?

Answer: This is acceptable.

Question 6: Are automatic dampeners, 2.8 B 2 on Page 253, a must for cold weather protection due as the generator would be fitted with engine heaters and located in coastal Florida?

Answer: This is not necessary due to the location of the project.

Question 7: Are we able to visit the wet well?

Answer: See response to question 2.

Question 8: If we are unable to visit the wet well, what is the inside currently lined with?

Answer: Wet well is lined with Agru HDPE liner.

Question 9: What are the dimensions of the wet well? I see one dimension as 12' but I do not see what it is the other way. Is this a square or rectangle wet well? I know the depth is 25'.

Answer: The dimensions of the wet well are as follows: 12' W x 14.5' L x 25' D.

Question 10: What is the dimension of the top slab of the lift station?

Answer: 14' W x 16.5' L.

Question 11: Is an outside disconnect required by the electric meter and if so, what is the size?

Answer: The automatic transfer switch is service entrance rated so a separated disconnect next to the meter should not be necessary.

Question 12: What does POC, CPT, CFT, PFT, Pressure XMTR, CLE, CLSH, PUT, and CRG, stand for on the blueprints (electric)?

Answer: POC, CPT, CFT, PFT, CLE, CLSH, PUT and CRG are cabling naming conventions to help coordinate the riser diagrams with the plan views.

Question 13: Are the enclosures for the electric equipment required to be stainless steel or not? If so, 304 or 316?

Answer: Enclosures shall be white powder coated 316SS.

Question 14: Can the City provide a specification or list of acceptable manufactures/model for the sluice gates?

Answer: See revised Table of Contents and specification 40 05 59 Hydraulic Gates which is included as part of this addendum.

**REVISED TABLE OF CONTENTS CITY OF PORT ORANGE
HERBERT & NOVA ROAD LIFT STATION IMPROVEMENTS AND UPGRADES BID NO. 21-09**

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END OF TABLE OF CONTENTS

REVISED SECTION 40 05 59
HYDRAULIC GATES

PART 1 - GENERAL

1.01 SCOPE OF WORK:

The work to be performed under this Section shall include furnishing all labor, materials, tools and equipment necessary to install and test all sluice gates, consisting of, but not limited to frames, discs, seals, stems, operators, floor stands, stem guides, anchorage, and all other appurtenances, in place and complete, as manufactured by Alfa Laval Ashbrook Simon-Hartley, Houston, Texas, or approved equal.

1.02 SUBMITTALS:

A. Materials and Shop Drawings:

1. Copies of all materials required to establish compliance with the specifications shall be submitted to the Engineer. Submittals shall include the following:
 - a. Certified shop and erection drawings and data regarding sluice gates.
 - b. Literature on drawings describing the equipment and showing all important details of construction and dimensions.

B. Operating Instructions: Operating and maintenance instructions for each type of sluice gate shall be furnished to the Engineer.

C. Installation: The manufacturer shall provide installation instructions. The installation and adjustment of gates, operators and all accessories shall be in full accordance with these instructions. The sluice gates shall be installed by the best practices and methods.

1.03 PRODUCT DELIVERY, STORAGE, AND HANDLING:

- A. All equipment shall be delivered in suitable packaging, cases, or crates and stored or placed in the appropriate manner. Each package shall have an identifying mark and a complete list showing contents.

1.04 APPLICABLE PUBLICATIONS:

The following publications listed below form a part of this Specification to the extent referenced. The publications are referred to in the text by basic designation only.

- A. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) PUBLICATIONS.
D635-81 Test Method for Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position D648-82 Test Method for Deflection Temperature of Plastics Under Flexural Load NASA CR-1457, "Manual for Structural Stability Analysis of Sandwiched Plates and Shells" et al.
- B. AMERICAN WATER WORKS ASSOCIATION (AWWA) C563 Standard for Composite Sluice Gates.

1.05 WARRANTY AND GUARANTEE:

The Manufacturer shall guarantee the sluice gates, when installed and operated as recommended by the Manufacturer with a documented maintenance program, trouble-free operation for a period of ten (10) years. If the Owner or Engineer is not completely satisfied with the performance of the product, the Manufacturer shall remedy the problem at no cost or refund the materials and installation cost upon the return of the equipment The Manufacturer shall guarantee the following:

- A. Leakage shall be no more than that allowed by the AWWA C563 Standard during the guarantee period.
- B. Door (disc) shall be free of sticking or binding as judged by the Engineer (move freely via operator provided) with no exercising required. Gate operators are to be warranted by the operator manufacturer.

1.06 OTHER:

- A. All gates shall be fully assembled in their frames except for operators, guides, stem-extension, and stem covers or concrete-mounted pedestals. Where shipping constraints require it, frame may be partially assembled such that the top may be easily mounted to the bottom containing the disc.
- B. Where square-to-circular or bell-lip conversion is required the Contractor shall provide a bell-end pipe insert of suitable diameter and water stop.

- C. P-Bulb or J-Bulb type seals attached to the Disc / mounted to the frame, or any seal that needs replacement in less than 20 years shall not be acceptable. No part of the seal shall protrude into the clear opening.
- D. All sluice gates shall be supplied by the same manufacturer, who shall be fully experienced, reputable and qualified in the manufacturing of the equipment furnished and who has been building said equipment for a minimum period of ten (10) years.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS:

Sluice gates shall be designed for the seating and unseating heads as listed in the gate schedule. Sluice gates shall exceed the standard of AWWA C563. Exceeding the conformance to AWWA C563 applies to discs and frames with a safety factor of five (5) with regard to tensile, compressive and shear strength and with the requirement that all gates will yield no more leakage than shown in Section 6.8 (AWWA) Field Leakage Test. Materials of construction shall be suitable for the environment in which the sluice gates shall be installed and operated.

- A. Frames – 316LSS with a 5/16" minimum metal thickness for all items. Frames are wall mounted against a 1" nominal grout base; no thimbles or flanges are needed or included. Gate shall be supplied in accordance with Table #11295.
- B. Slide (Disc): Shall be constructed with a reinforced rigid composite skin, having a minimum thickness of 1/8-inch on the outside. Slide (disc) shall have an internal matrix of carbon steel of suitable strength for the specified service. The total minimum slide thickness should not be less than 2". The slide (disc) outer surface skins shall be a homogeneous plastic material having extremely high tensile and impact strength, be nontoxic and shall be stabilized against ultraviolet light. The plastic material shall be an Aramid fiber from the KEVLAR family of fibers and shall have the following minimum properties and shall be designed to limit the deflection to a maximum of 1/1000 of the span under design head conditions based upon horizontal support members only. Manufacturer shall submit drawings and comprehensive design criteria to substantiate that the required deflection figure for each door has been achieved. Safety factors shall be calculated for the disc under maximum head, and shear at the disc/seal interface. No substitute of fiber type will be acceptable.

FRP, GRP, plastic coated steel or externally reinforced slide (disc) shall not be acceptable. All welds on the slide shall be continuously welded and no stitch welding to be allowed.

PROPERTIES TABLE

Tensile Strength	15,400
Young's Modulus	1,756,000 psi
Flexural Strength	28,000 psi
Flexural Modulus	1,497,000 psi
Compressive Strength	30,200 psi
Impact Strength	9.65 ft-lb/in
Water Absorption	0.09 %
Specific Gravity	1.72
Coefficient of Thermal Expansion	1.6 x 10 ⁻⁵ per C
Heat Distortion Point	80 degrees C ASTM D648
Low Temperature Impact Strength	93% @ -20 C
Notch Sensitivity	Not notch sensitive
Weathering Properties	Excellent
Fire Resistance	Class 1 Spread of Flame, Rating BS476: Part 1: 1953 self-extinguishing, ASTM D635 - 56R Organics, Alkaline, Ozone (2 to 3 PPM)
Chemical Resistance	

Rigid Polyurethane foam shall be used as filler between the steel grid reinforcing system and shall be a min. of 7 LB density/cu.ft.

- C. Seals: The sealing arrangement for the reinforced plastic sluice gates shall comprise of sealing faces and side guides constructed of ultra high molecular weight polyolefin having an extremely low coefficient of friction and a backing constructed of highly resilient expanded neoprene. Guides and seating of the gate shall be easily adjustable (min. 5/8-inch). All moving contact surfaces shall be compatible to each other there by minimizing sticking / jamming and making the operation easy. Leakage rates shall be one-half (½) that allowed by AWWA C563.

2.03 FASTENERS:

- A. Shall be 316 stainless steel. All anchor bolts, assembly bolts, screws, nuts, etc. shall be of ample section to safely withstand the forces created by operation of the gate while subjected to the heads specified.

2.04 STEMS:

- A. All stems shall be the rising types. The entire stem, including extension stem, shall be Type 316 Stainless Steel solid bar. The sections of extension stems shall be joined

together by solid couplings, threaded and keyed to the stems. All couplings of the same size shall be interchangeable. Stems shall be furnished with adjustable, stem guides, spaced as necessary to maintain a slenderness ratio L/R of less than 200. Stems shall be of ample cross section to prevent distortion and shall have stub acme threads. Stems shall be designed to withstand tensile and compressive loads that occur under maximum operating conditions. Design for compressive loading shall meet AISC code where $K=1$ with a minimum safety Factor of 2 to 1. These requirements exceed AWWA standards. Stems shall be cold rolled or cut with a double start stub acme thread and a finish of 32 microns or less.

- B. Stems shall be fixed to the disc by a threaded and keyed assembly into a lifting nut attached to the disc in a lifting bracket, which is bolted to the disc. The bolts securing the bracket shall be in tension and not shear. Bolts in shear will not be acceptable as they will bind against the outer material causing stress.

PART 3 – EXECUTION

3.01 INSTALLATION

Installation of all gates and guides shall be done by the Contractor in a manner acceptable to the Manufacturer and Owner. It shall be the responsibility of the Contractor to handle, store, and install the equipment specified in this Section in strict accordance with the Manufacturer's drawings and recommendations. Frames and guides shall be installed in a true vertical plane with 90-degree corners.

3.02 INSPECTION AND TESTING

- A. Furnish the services of a factory representative for one (1) day who has complete knowledge of proper operation and maintenance to inspect the final installation and supervise a test run of the equipment.
- B. Maximum gate leakage shall be as defined in the General Design Criteria of this Specification, herein. If gates, operators, and appurtenances do not meet specified requirements, corrective measures shall be taken by the Contractor, or the equipment shall be removed and replaced with equipment that satisfies the conditions specified.

TABLE #40 05 59-1

SLUICE GATE SCHEDULE							
I.D.	Description	Width (In.)	Height (In.)	Max Head (Ft.)	Mounting / Opening	Frame Material/Gate Material	Operator Type/Stand
SG-1	WET WELL	24" (Existing 24" Diameter Pipe)	24" (Existing 24" Diameter Pipe)	20'	Channel/ upward	316 S.S./ 316 S.S. & Formulated Composite	14" Handwheel
SG-2	WET WELL	8" (Existing 8" Diameter Pipe)	8" (Existing 8" Diameter Pipe)	20'	Channel/ upward	316 S.S./ 316 S.S. & Formulated Composite	14" Handwheel

END OF SECTION

Question 15: What is the intent of the materials to be used for the two, double swing gates? Plan sheet C-101 calls for double swing entry gate and the specification 32-31-13 calls for chain link fence gates. However, the elevation shown on C-103 indicates these gates to be HD 12" aluminum frame swing gates with louvered panels per spec. Please clarify the materials and specification of these gates to be included in the bid.

Answer: Gates shall be Heavy Duty Aluminum Frame swing gates with louvered panels. Gates shall be manufactured by Ideal Aluminum or engineer approved equal and have the following:

- 2" x 3" x .125" Gate Frame
- 2 ¼" x 1.40" Louver Top & Bot Member
- 2" x 0.375" Louver Blades
- 2" x 3" x .125" Uprights
- Double Drive Gate Latch
- 2 ¼" x 1 ¼" Louver Side Frame
- 316SS 180° Hinge
- 2" x 3" x .125" Bottom Member

Question 16: What are all materials the City will provide along with the submersible pumps? Will the base elbows, guiderails, hatches and other accessories that are often included with a Flygt submersible pump package be provided by the owner, or is the contractor to purchase and install these materials?

Answer: City will provide the pump only. Contractor to purchase and install all other necessary accessories.

Question 17: What is the wall thickness of the lift station?

Answer: The wet well wall thickness is 1'.

Question 18: What are the specs of the 20" high tie beam?

Answer: The precast top slab with perimeter beams shall be nominally 8" thick. Contractor shall provide signed and sealed shop drawings for the top slab and perimeter beam. Engineered drawings shall be signed and sealed by a Florida registered professional engineer.

Question 19: What is the placement of the rebar in the wet well top slab?

Answer: See response to question 18.

Question 20: Can you please provide clarification on the service tie in?

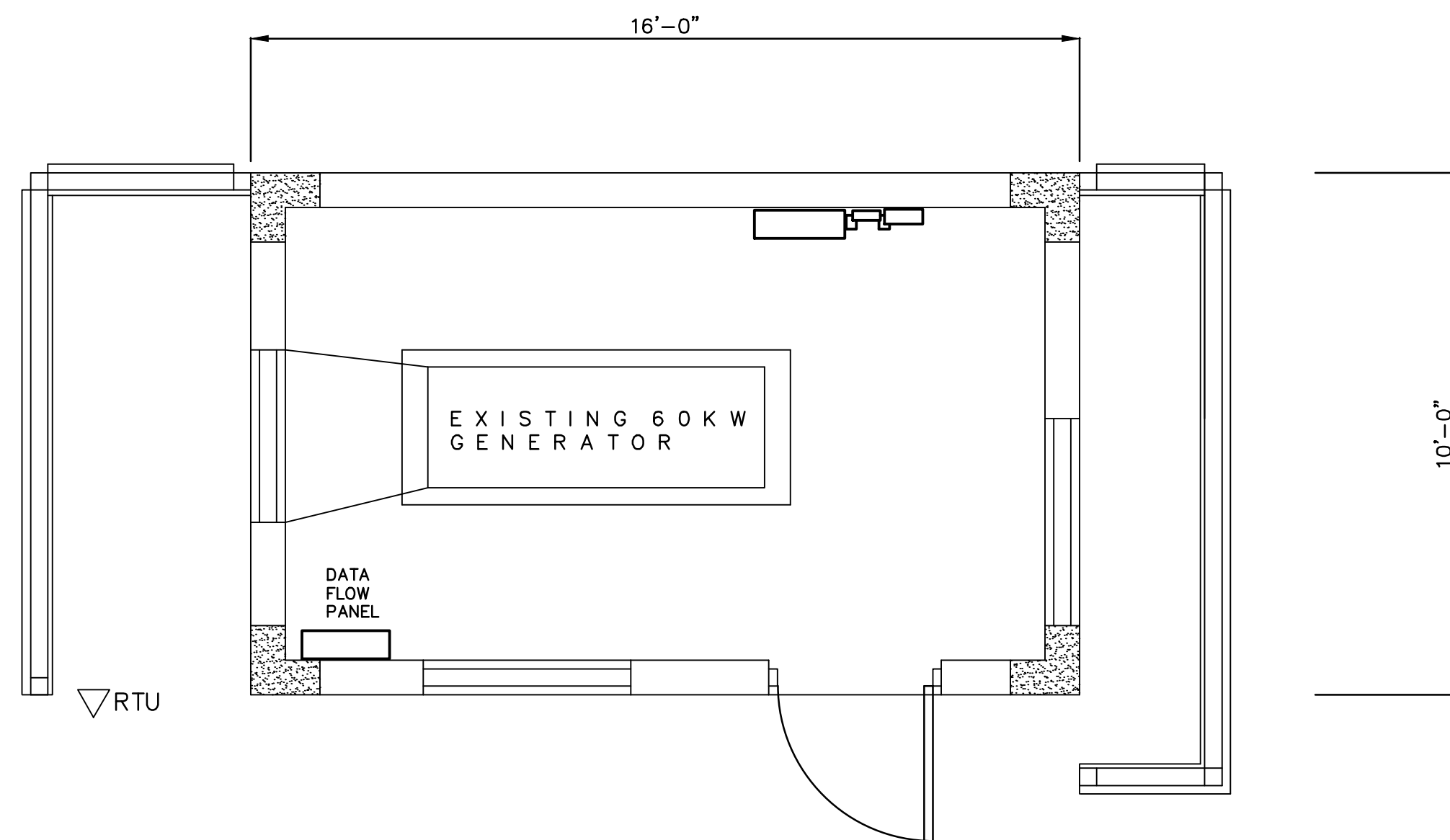
Answer: See Detail 7 Sheet C-502.

Question 21: Do you have as-builts for existing building to be demolished?

Answer: See architectural record drawing included with this addendum.

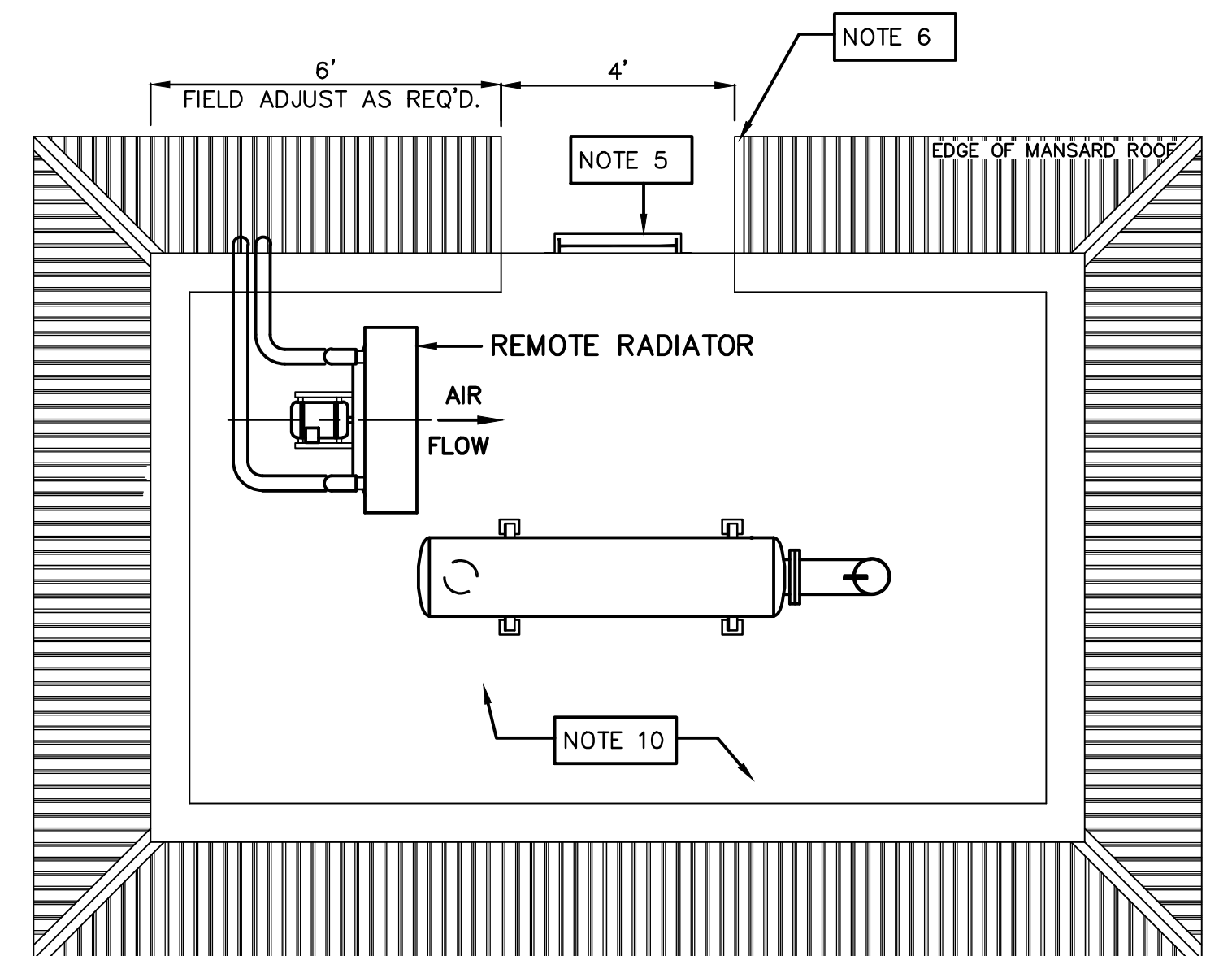
Question 22: Are there as-builts on the existing generating and generator pad to be removed?

Answer: See response to question 21.

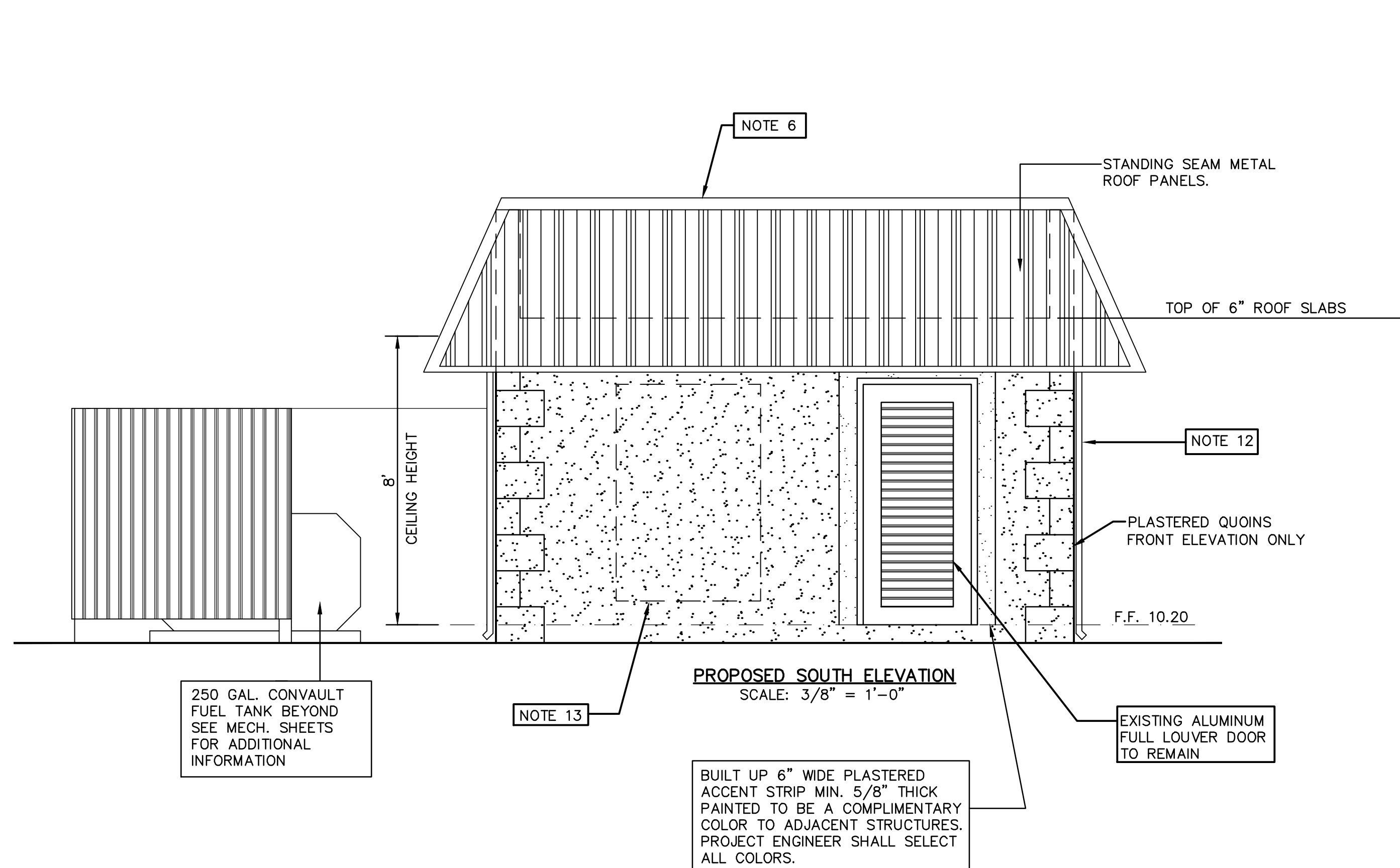


EXISTING FLOOR PLAN
SCALE: 3/8" = 1'-0"

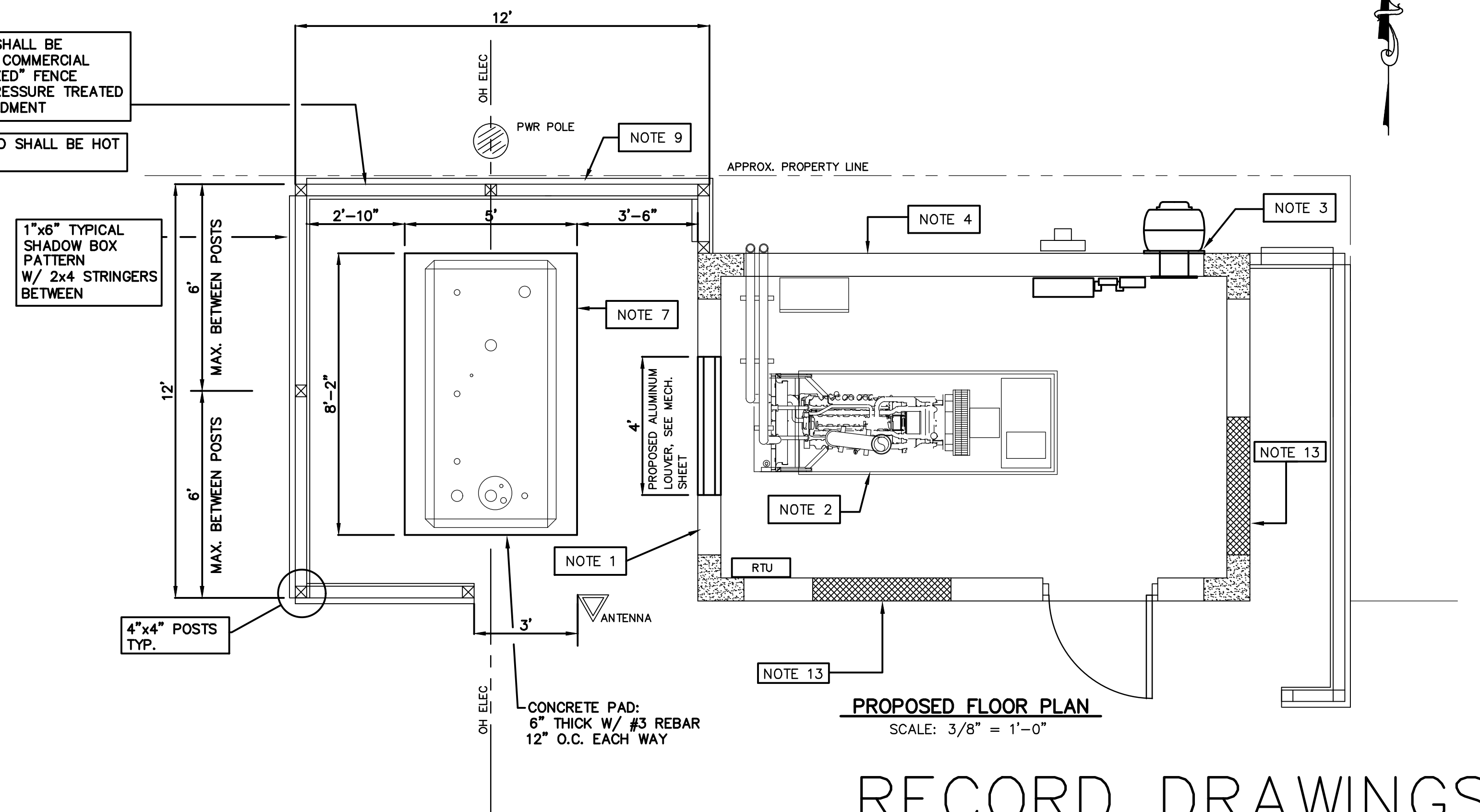
- GENERAL PROJECT NOTES:**
1. REMOVE EXISTING 8" CMU WALL AS REQUIRED TO PROVIDE ACCESS FOR PROPOSED EMERGENCY GENERATOR SWITCH OUT AND GENERATOR PAD MODIFICATIONS. RECONSTRUCT WALL AS REQUIRED FOR THE INSTALLATION OF A NEW 4'-0"x6'-0" ALUMINUM LOUVER.
 2. RECONSTRUCT CONCRETE GENERATOR PAD AS REQUIRED. SEE MECHANICAL SHEETS FOR GENERATOR DIMENSIONAL INFORMATION.
 3. PROVIDE "CUT-IN" OF NEW OPENING FOR INSTALLATION OF PROPOSED EXHAUST FAN. PROVIDE ROUGH OPENING AS PER MANUFACTURERS RECOMMENDATIONS.
 4. ALL EXISTING EXTERIOR WALL SURFACES TO RECEIVE EXPANDED METAL LATH AND (2) COATS PORTLAND CEMENT STUCCO. TEXTURE SHALL BE SMOOTH SAND FINISH. PAINT IN ACCORD WITH PROJECT SPECIFICATIONS. PROVIDE ADEQUATE PROTECTION TO EXISTING DOORS, LOUVERS, ETC. FROM SPLATTER, OVERSPRAY, ETC.
 5. FURNISH AND INSTALL ALUMINUM ACCESS LADDER SIMILAR TO OKEEFE'S, INC. NUMBER 501 HEAVY DUTY WITH SECURITY DOOR AND SAFETY POST. OKEEFE'S, INC. 1-800-227-3305.
 6. EXISTING MANSARD ROOF SHALL BE MODIFIED TO PROVIDE ACCESS TO ROOF TOP AS INDICATED. CONTRACTOR SHALL STRIP EXISTING SHINGLES TO EXPOSE DECKING. CAREFULLY REMOVE (1) ROOF TRUSS AND BRACE EXISTING TRUSSES AS REQUIRED. REFRAME AND INSTALL DECKING, FLASH AND COUNTERFLASH TO PROVIDE WEATHERPROOF AND WATERTIGHT CONSTRUCTION. DRY IN ENTIRELY WITH (2) LAYERS 15# FELT AND INSTALL NEW ALUMINUM STANDING SEAM ROOF PANELS. COLOR SHALL BE BLUE AS SELECTED FROM MANUFACTURER'S STANDARD COLOR CHART. ALL EXPOSED FLASHING, TRIM, FASCIA, ETC. TO MATCH. INSTALL NEW VENTED ALUMINUM SOFFIT MATERIAL, COLOR TO BE WHITE.
 7. CONTRACTOR SHALL CONSTRUCT REINFORCED CONCRETE PAD FOR CONCRETE FUEL TANK. SEE MECHANICAL PLAN FOR SPECIFICATIONS.
 8. EXISTING FULL LOUVER ALUMINUM DOOR TO REMAIN. INSPECT ALL HARDWARE FOR WORN OR DAMAGED PARTS, REPLACE OR REPAIR AS REQUIRED. CLEAN AND LUBRICATE ALL HINGES AND LOCK SETS UPON COMPLETION OF JOB.
 9. CONSTRUCT APPROX. 36 LIN. FT. OF P.T. SHADOW BOX FENCE. HEIGHT TO MATCH EXISTING. CONSTRUCT AS PER NOTES BELOW.
 10. SPUD BACK EXISTING B.U.R. AS REQUIRED FOR INSTALLATION OF NEW ROOFTOP MOUNTED EQUIPMENT AND ACCESSORIES. CONTRACTOR SHALL REPLACE ANY DAMAGED FLASHING, ETC. AND REROOF WITH NEW HOT-MOPPED B.U.R. SYSTEM.
 11. FURNISH AND INSTALL REMOTE GENERATOR RADIATOR AND SILENCER AS PER MECHANICAL PLANS. ALL ROOF PENETRATIONS SHALL BE FLASHED AND SLEEVED. ALL ROOF MOUNTED EQUIPMENT SHALL BE MOUNTED ON PREFABRICATED EQUIPMENT MOUNTING RAILS 18 GA. GALVANIZED STEEL SIMILAR TO MODEL NO. ER-2A AS MANUFACTURED BY ROOF PRODUCTS AND SYSTEMS CORPORATION. 484 N. THOMAS DRIVE, BENSVILLE, IL. 60106. PH. 1-800-624-8642.
 12. REMOVE AND REPLACE ALL DOWNSPOUTS AND THRU-ROOF DRAINAGE COMPONENTS.
 13. REMOVE EXISTING LOUVER. FILL IN OPENING WITH 8" CMU's AND STUCCO PER NOTE 4. INTERIOR BLOCK JOINTS SHALL BE STRUCK TO MATCH EXISTING AND ENTIRE BUILDING INTERIOR SHALL BE PAINTED.



PROPOSED ROOF PLAN
SCALE: 3/8" = 1'-0"



PROPOSED SOUTH ELEVATION
SCALE: 3/8" = 1'-0"



PROPOSED FLOOR PLAN
SCALE: 3/8" = 1'-0"

RECORD DRAWINGS

DATED FEBRUARY 06,2002

NOTE: THIS SHEET SUPERSEDED BY THE DEVELOPMENT OF SHEET 8A. THIS SHEET EFFECTIVELY DOES THE FOLLOWING: RELOCATES GENERATOR TO THE EXTERIOR OF THE BUILDING INTO A WEATHERPROOF ENCLOSURE. REFER TO SHEET 8A FOR ADDITIONAL INFORMATION

QUENTIN L. HAMPTON ASSOCIATES, INC.
CONSULTING ENGINEERS

CITY OF
PORT ORANGE
VOLUSIA COUNTY, FLORIDA

HERBERT & NOVA PUMP STATION
MODIFICATIONS

PUMP STATION
ARCHITECTURAL
MODIFICATIONS

DESIGNED	RWF	DATE		SCALE	SHEET NO.
DRAWN	DLB	DATE	9/99	AS SHOWN	8
CHECKED		DATE		JOB NO.	OF 10
APPROVED		DATE			

P.O. DRAWER 290247 PORT ORANGE, FLORIDA 32129-0247 904 761-6810

NO	BY	REVISIONS	DATE

Question 23: Please confirm the discharge header from the flow meter, downstream, is to be DIP? If the FLxPE header pipe is SS most manufacturers (EBAA) will not warrant a mega flange connection to SS pipe or SS to a MJ connection underground.

Answer:

Refer to solicitation page 547 (Drawing C101) and page 548 (Drawing C-102)

1. Legend Item 'T' shall be epoxy coated DIP in lieu of 316SS.
2. Legend Item 'F' shall be replaced with Items 'F', 'F-1' and 'F-2', further described as follows:
 - a. Item 'F' shall be a 12" FL x FL 316 SS spool piece.
 - b. Items F-1 & F-2 shall be a 12" FL x PE spool pieces with a 316 SS dresser coupling joining both. 316 SS all-thread shall provide restraint from F-1 back to the flow meter.

In all other respects, except as specifically stated herein, the subject ITB #21-09 Herbertand Nova Master Lift Station Rehabilitation remains unchanged.

END OF ADDENDUM NO. #1

Joseph Castro
Buyer
jcastro@port-orange.org

Addendum No. 2

Consisting of 2 Pages



CITY OF PORT ORANGE

PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5717
purchdiv@port-orange.org

ADDENDUM NO. # 2

April 8, 2021

ITB #21-09 Herbert and Nova Master Lift Station Rehabilitation

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 8, 2021 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. New Bid Opening Date: Bids will now be accepted in the City Clerk's Office, Port Orange City Hall, 1000 City Center Circle, Port Orange, Florida 32129 until **2:30 P.M. on April 15, 2021.**

B. CLARIFICATIONS:

1. Specification Section 33 01 30.83 Wetwell Lining Systems.

1.02 SCOPE OF WORK

A. The major elements of the proposed project work are summarized as follows: furnish all labor, materials, and equipment necessary to rehabilitate the interior surface areas of an existing sewer lift station structure using a structural composite liner system. The composite liner system shall consist of both a high strength structural cementitious build-up layer and a corrosion resistant 100 percent (100%) solids epoxy coating system. The work includes mobilization, bypass pumping (as Additional Pricing), **removal of any existing deteriorated coating**, preparation of lift station structure to be lined, furnishing, and applying the specified cementitious and epoxy coating materials to the interior surface areas of the lift station, applicable QA/QC testing, clean-up, and demobilization.

C. CHANGES TO SPECIFICATIONS:

None

D. QUESTIONS AND ANSWERS:

Question 1: Will you be accepting bids from Integrators other than Sanders?

Answer: No, Saunders is the single pre-qualified system integrator for this project per Section 33 09 00 Instrumentation and Controls for Utilities.

Question 2: Regarding Addendum No.1, Question & Answer 13:

"Are the enclosures for the electric equipment required to be stainless steel or not? If so, 304 or 316?"

Answer: Enclosures shall be white powder coated 316SS".

Does this ATS and AccuPanel need to be powder coated white?

Answer: Yes, the ATS & AccuPanel need to be powder coated white also.

[Remainder of page left intentionally blank]

In all other respects, except as specifically stated herein, the subject **ITB #21-09 Herbert and Nova Master Lift Station Rehabilitation** remains unchanged.

END OF ADDENDUM NO. #2

Joseph Castro

Buyer

jcastro@port-orange.org

Addendum No. 2

Consisting of 2 Pages



CITY OF PORT ORANGE

PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5717
purchdiv@port-orange.org

ADDENDUM NO. # 2

April 8, 2021

ITB #21-09 Herbert and Nova Master Lift Station Rehabilitation

To All Bidders:

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C. CHANGES TO SPECIFICATIONS:

None

D. QUESTIONS AND ANSWERS:

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Does this ATS and AccuPanel need to be powder coated white?

Answer: Yes, the ATS & AccuPanel need to be powder coated white also.

[Remainder of page left intentionally blank]

In all other respects, except as specifically stated herein, the subject **ITB #21-09 Herbert and Nova Master Lift Station Rehabilitation** remains unchanged.

END OF ADDENDUM NO. #2

Joseph Castro

Buyer

jcastro@port-orange.org

Addendum No. 3

Consisting of 1 Page



CITY OF PORT ORANGE

PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5704
purchdiv@port-orange.org

ADDENDUM NO. #3

April 13, 2021

ITB #21-09 Herbert and Nova Master Lift Station Rehabilitation

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 8, 2021 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. NEW BID OPENING DATE

Bids will now be accepted in the City Clerk's Office, Port Orange City Hall, 1000 City Center Circle, Port Orange, Florida 32129 until **2:30 P.M. on April 29, 2021.**

B. CLARIFICATIONS

A fourth addendum will be posted at a date to be determined for additional information relating to the wetwell lining.

C. CHANGES TO SPECIFICATIONS

N/A

D. QUESTIONS AND ANSWERS

N/A

Michael Hall
Purchasing Agent
mhall@port-orange.org

In all other respects, except as specifically stated herein, the subject ITB #21-09 Herbert and Nova Master Lift Station Rehabilitation remains unchanged.

END OF ADDENDUM NO. #3

Addendum No. 4

Consisting of 1 Page



CITY OF PORT ORANGE

PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5704
purchdiv@port-orange.org

ADDENDUM NO. #4

April 15, 2021

ITB #21-09 Herbert and Nova Master Lift Station Rehabilitation

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 8, 2021 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. CLARIFICATIONS

Sheet C-102 Revisions:

1. Existing Note 4 shall be revised as follows, *“Repair existing Agruliner at existing 8” influent pipe on east wall and (3) 2” conduit penetrations on west wall. Repair shall be performed with the existing liner manufacturer’s recommendations.”*
2. Existing Note 4 shall retain the requirement to line the upstream manhole with a Raven lining system.
3. The existing top slab shall be replaced, per the existing plan and notes. The top slab shall have an integral Agruliner constructed with the top slab by the pre-cast manufacturer. The seam between the new top slab and existing wall liner shall be welded and sealed in accordance with the manufacturer’s recommendations.

B. CHANGES TO SPECIFICATIONS

N/A

C. QUESTIONS AND ANSWERS

N/A

Michael Hall
Purchasing Agent
mhall@port-orange.org

In all other respects, except as specifically stated herein, the subject ITB #21-09 Herbert and Nova Master Lift Station Rehabilitation remains unchanged.

END OF ADDENDUM NO. #4

EXHIBIT No. 1

Contractor's Bid Schedule of Unit Prices

Consisting of 1 Page

BID COST/FEE PROPOSAL



"ATTACHMENT 1" SCHEDULE OF UNIT PRICING

BID FORM

CITY OF PORT ORANGE

ITB # 21-09

HERBERT & NOVA MASTER LIFT STATION IMPROVEMENTS AND UPGRADE

Completed Attachment 1 Bid Proposal form MUST be included with Bid Submission

Instruction to save Attachment from DemandStar website:

Perform "File Save As" and save spreadsheet to your computer. Fill in pricing in highlighted cells, preferably electronically.

Bidders are required to complete all fields shaded in green. All other fields will be automatically calculated.

NAME OF BUSINESS:	U.S. Water Services Corporation
CONTACT PERSON:	Christina Crego
EMAIL ADDRESS:	CCREGO@USWATERCORP.NET
AUTHORIZED SIGNATURE:	Gary Deremer, President

PROPOSAL PRICING

ITEM #	DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL COST
A	BASE BID				
1	Pre-Construction Video	LS	1	\$ 2,500.00 -	\$ 2,500.00 -
2	Demolition of Existing Lift Station	LS	1	\$ 36,838.00 -	\$ 36,838.00 -
3	Bypass Pumping	LS	1	\$ 24,572.00 -	\$ 24,572.00 -
4	Complete Lift Station	LS	1	\$ 315,638.00 -	\$ 315,638.00 -
5	Electrical (Includes Generator)	LS	1	\$ 380,640.00 -	\$ 380,640.00 -
6	Tie Into Existing Force Main	LS	1	\$ 21,292.00 -	\$ 21,292.00 -
7	DIP Fittings	TN	0.5	\$ 13,000.00 -	\$ 6,500.00 -
8	Installation of Decorative Wall	LS	1	\$ 44,654.00 -	\$ 44,654.00 -
9	Odor Control	LS	1	\$ 127,310.00 -	\$ 127,310.00 -
10	Permit Allowance	LS	1	\$ 5,000.00 -	\$ 5,000.00 -
11	As-Built Plans	LS	1	\$ 9,828.00 -	\$ 9,828.00 -
12	Restoration	LS	1	\$ 22,764.00 -	\$ 22,764.00 -
				TOTAL BASE BID:	\$ 997,536.00 -
1	Confirm the number of calendar days to complete upon receipt of PO:			DAYS	300
2	Warranty for Labor:			YEARS	1
3	Warranty for Materials:			YEARS	1

AWARD: THIS BID WILL BE AWARDED TO THE LOWEST, RESPONSIVE, RESPONSIBLE BIDDER

This document must be completed and returned with your Submittal

ITB 21-09 Herbert and Nova Master Lift Station Rehabilitation

Page 443 of 558

Leased Employee Affidavit Exhibit

Consisting of 1 Page

LEASED EMPLOYEE AFFIDAVIT EXHIBIT

CONTRACT # 21-09

☒ I hereby certify that I do not utilize an employee leasing company or employee 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 arrangement. 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: U.S. Water Services Corporation

Signature of Owner/Officer: _____

Title: President Date: 5/10/2021

Leased Employee Affidavit Exhibit

Consisting of 1 Page

LEASED EMPLOYEE AFFIDAVIT EXHIBIT

CONTRACT # 21-09

☒ I hereby certify that I do not utilize an employee leasing company or employee 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 arrangement. 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: U.S. Water Services Corporation

Signature of Owner/Officer: _____

Title: President Date: 5/10/2021

EXHIBIT No. 2

Contractor's Proposal

Consisting of 49 Pages

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/Tie Preference Statement
- X Form 7.5 – Public Entity Crimes Statement
- X Form 7.6 – Affidavit of Anti-Collusion
- X Form 7.7 – Statement of Bidder’s Qualifications
- X Form 7.8 – Professional References for Previous Experience
- X Form 7.9 – Listing of Subcontractors
- X Form 7.10 – Certificate as to Corporate Principal
- X Form 7.11 – Local Business Affidavit of Eligibility
- X Attachment H – CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION
- X Attachment 1 – Bid Proposal
- X Copy of License (Contractor, Sunbiz, etc.)
- X Bid Bond
- X Submission of one (1) original marked “ORIGINAL” and one (1) digital (CD or flash drive) version in PDF format.

BY:

U.S. Water Services Corporation

Name of Business


Authorized Signature Gary Deremer, President

4/29/2021

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 Invitation to Bid at the prices or rates as finally negotiated. I agree that my bid will remain firm for a period of up to ninety (90) 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 Invitation to Bid.

I certify that all information contained in this Bid is truthful to the best of my knowledge and belief. I further certify that I am a 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 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):

U.S. Water Services Corporation
NAME OF BUSINESS

4939 Cross Bayou Boulevard

MAILING ADDRESS

New Port Richey FL 34652

Gary Deremer
AUTHORIZED SIGNATURE

CITY, STATE & ZIP CODE

Gary Deremer, President

727 848 8292 / 727 849 8860

NAME, TITLE, TYPED

TELEPHONE NUMBER / FAX NUMBER

20-0008821

CCREGO@USWATERCORP.NET

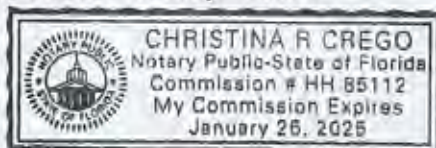
FEDERAL IDENTIFICATION #

E-MAIL ADDRESS

STATE OF FLORIDA
COUNTY OF PASCO

The foregoing instrument was acknowledged before me by means of X physical presence or _____ online notarization, this 29th day of April, 2021 by Gary Deremer as President of *USWSC, a Florida Corporation. He or she is X personally known or _____ produced as identification.

*U.S. Water Services Corporation



Christina R. Crego
Notary Public, State of FLORIDA

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, Specifications, and any other documents accompanying or made a part of this invitation to Bid.

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: 4/5/2021 Addendum # 3 Date: 4/13/2021
Addendum # 2 Date: 4/8/2021 Addendum # 4 Date: 4/15/2021

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 orders 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 following statement regarding Change Orders to the awarded Contract:

U.S. Water Services Corporation
Name of Business

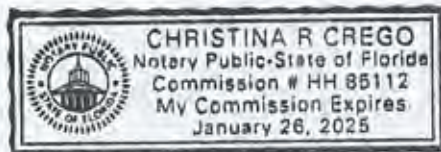
By: [Signature]
Printed Name: Gary Deremer
Title: President

STATE OF FLORIDA
COUNTY OF PASCO

The foregoing instrument was acknowledged before me by means of X physical presence or
online notarization, this 29th day of April, 2021, by Gary Deremer who
is personally known to me or who produced _____ as identification.

My Commission Expires: January 26, 2025

[Signature]
Notary Public, State of FLORIDA
Printed, typed or stamped name, commission and
expiration:



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 that are equal with respect to price, quality, and service are received by the city for the 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 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 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 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 any 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.

U.S. Water Services Corporation

Name of Business

By: [Signature]

Printed Name: Gary Deremer

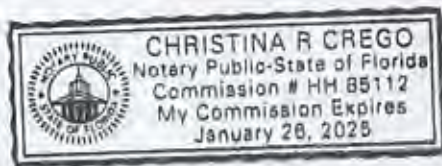
Title: President

STATE OF FLORIDA

COUNTY OF PASCO

The foregoing instrument was acknowledged before me by means of X physical presence or
online notarization, this 29th day of April, 2021, by Gary Deremer who
is personally known to me or who produced as identification.

My Commission Expires: January 26, 2025



[Signature]

Notary Public, State of FLORIDA

Printed, typed or stamped name, commission and expiration:

FORM 7.5 – SWORN STATEMENT UNDER SECTION 287.133(3)(A), FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES
(To be signed in the presence of notary public or other officer authorized to administer oaths.)

Before me, the undersigned Authority, personally appeared affiant Gary Deremer, who, being by me first duly sworn, made the following statement:

1. The business address of U.S. Water Services Corporation (name of Offeror or business) is 4939 Cross Bayou Blvd., New Port Richey FL 34652.
2. My relationship to U.S. Water Services Corporation (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 an 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 of Administrative Hearings is attached to this statement. (Draw a line through paragraph 7 if paragraph 6 above applies.)~~

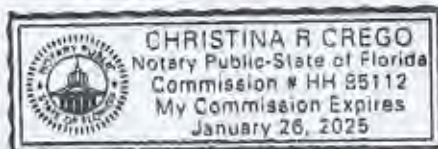
U.S. Water Services Corporation
Name of Business

By: _____
Printed Name: Gary Deremer
Title: President

STATE OF FLORIDA
COUNTY OF PASCO

The foregoing instrument was acknowledged before me by means of X physical presence or
online notarization, this 29th day of April, 2021, by Gary Deremer who
is personally known to me or who produced _____ as identification.

My Commission Expires: January 26, 2025



Christina R. Crego
Notary Public, State of FLORIDA
Printed, typed or stamped name, commission and
expiration:

FORM 7.6 – ANTI-COLLUSION FORM

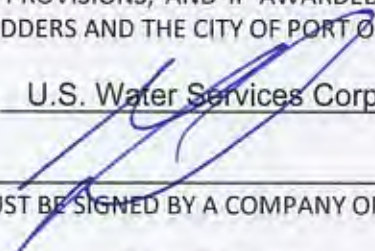
ANTI-COLLUSION STATEMENT BID FORM:

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 BIDDERS ACCEPTANCE OF THE TERMS AND CONDITIONS OF THE FOREGOING SPECIFICATIONS, CONTRACT AND PROVISIONS, AND IF AWARDED, THIS CONTRACT WILL REPRESENT THE AGREEMENT BETWEEN THE BIDDERS AND THE CITY OF PORT ORANGE.

NAME OF FIRM: U.S. Water Services Corporation

SIGNED BY: 
(MUST BE SIGNED BY A COMPANY OFFICER OR AUTHORIZED AGENT)

PRINTED SIGNATURE: Gary Deremer

TITLE: President

ADDRESS: 4939 Cross Bayou Blvd.,

CITY: * STATE: FL ZIP CODE: 34652
*New Port Richey

TELEPHONE: ** 727 849 8860
** 727 848 8292

COMPLETION TIME: 365 Days

F.E.I.N. NUMBER: 20-0008821

NO Bid may be withdrawn for a period of ninety (90) days subsequent to the submittal of the Bids, without the consent of the City of Port Orange.

NO BID (REASON): _____

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 7.8 is complete, true, and correct to the best of their knowledge and belief. If necessary, questions 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 contracting business under your present firm or trade name?
- F. Contracts on hand: (Schedule these, showing amount of each contract and the appropriate anticipated dates of completion.)
- 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.
- K. List your major equipment currently owned or leased.
- L. Experience in work similar to this type of project.
- M. Background and experience of the principal members of your organization, including the officers.
- N. Credit currently available: \$ _____
- O. Give bank reference: _____
- P. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the Owner?
- Q. The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the Owner in verification of the recitals comprising this Statement of Bidder's Qualifications.

U.S. Water Services Corporation
Name of Business
By: _____
Printed Name: Gary Deremer
Title: President

STATE OF FLORIDA
COUNTY OF PASCO

The foregoing instrument was acknowledged before me by means of X physical presence or
online notarization, this 29th day of April, 2021, by Gary Deremer who
is personally known to me or who produced as identification.

My Commission Expires: January 26, 2025



Christina R. Crego
Notary Public, State of FLORIDA
Printed, typed or stamped name, commission and
expiration:

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 7.8 is complete, true, and correct to the best of their knowledge and belief. If necessary, questions may be answered on separate paper and attached, with any additional information that may be pertinent.

- A. **Name of Bidder.** *U.S. Water Services Corporation*
- B. **Permanent main office address.** *4939 Cross Bayou Blvd., New Port Richey FL 34652*
- C. **Date organized.** *April 28, 2003*
- D. **If a corporation, where incorporated.** *Florida*
- E. **How many years have you been engaged in the contracting business under your present firm or trade name?** *17+ Years*
- F. **Contracts on hand: (Schedule these, showing amount of each contract and the appropriate anticipated dates of completion.)**

CONTRACT NAME	CONTRACT AMOUNT	ANTICIPATED DATE OF COMPLETION
Manatee County Satellite Lift Station R&R 2020, Group 2	\$659,947.30	11/21/21
Collier County NCWRF Aeration Basin 5#6 Diffuser System	\$545,915.05	11/13/21
Hernando County Quality Drive Lift Station Rehabilitation	\$876,394.29	5/28/21
Flagler Beach Potable Water Well 14	\$253,425.00	5/28/21

- G. **General character of work performed by your company.** *Underground utility construction, rehabilitation, replacement, and repair. Routine Maintenance for Water/Wastewater Treatment Plant/ Facilities, lift stations and pump stations.*
- 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.**

CONTRACT NAME	CONTRACT AMOUNT	DATE OF COMPLETION
Charlotte County BOCC Lift Station 815 Rehabilitation	\$573,376.88	05/2020
FGUA Seven Springs WWTF Improvements	\$2,105,835.28	06/2019
Lee County BOCC Pine Island WWTP Effluent Pump Station Replacement	\$437,159.59	05/2019
Town of Cross City WWTP 2017 WW Improvements CDBG	\$596,171.87	05/2019
City of Wildwood Ashley Parcel Water Treatment Plant	\$825,395.44	06/2016

- K. **List your major equipment currently owned or leased.** Attached
- L. **Experience in work similar to this type of project.**

CONTRACT NAME	CONTRACT AMOUNT	DATE OF COMPLETION
City of Cape Coral Refurbishment of Lift Station 106, 112, 114, 124, 214 & 304	\$1,078,348.67	03/22/2018
City of North Port Lift Station Rehabilitation Project 2017 Phase 1	\$176,389.66	08/14/2017
City of Starke Lift Station Upgrades	\$452,702.00	06/25/2017
St Johns County BOCC Lift Station Improvements Fish Island, Bartram Oaks & Bermuda Run	\$409,342.71	08/31/2016
Manatee County Satellite Lift Station R&R 2014, Group 3	\$279,637.44	01/8/2016

M. Background and experience of the principal members of your organization, including the officers. Resumes attached

N. Credit currently available: \$ 7,500,000.00

O. Give bank reference:

Wells Fargo Bank – Commercial Banking Division

Ryan Booher Account Manager

100 South Ashley Drive, Suite 1000, Tampa, FL 33602

Phone: (813) 225 4318

P. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the Owner? Yes

Q. The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the Owner in verification of the recitals comprising this Statement of Bidder's Qualifications.

Make Name	VIN Model	Status	Model Year	Asset Type
CHEVROLET	3500 W CRANE	Active	2012	Truck LD
FORD	F-550	Active	2003	Truck LD
FORD	F-550	Active	2012	Truck LD
BOBCAT	SKIDSTEER	Active	2012	Equipment
JOHN DEERE	544D LOADER	Active	1986	Equipment
JOHN DEERE	BACKHOE	Active	1986	Equipment
EQUIPMENT	DITCH WITCH TRENC	Active	1984	Equipment
EQUIPMENT	OBRIEN JET RODDER	Active	2010	Equipment
EQUIPMENT	ONAN PORT GENER	Active	1995	Equipment
EQUIPMENT	TRADEWIND PORT GEN	Active	2013	Equipment
EQUIPMENT	AKSA PORT GENERATOR	Active	2018	Equipment
TRAILER	TRAILER	Active	2007	Trailer
EMERSON	XSPORT ENCL TRL	Active	2004	Trailer
GOODWIN	4IN BYPASS PUMP	Active	2012	Equipment
BOBCAT	331	Active	2008	Equipment
GATOR MADE	EQUIPMENT	Active	2015	Trailer
GOODWIN	BYPASS PUMP	Active	2013	Equipment
TRAILER	FREEDMON 16FT ENCL	Active	2017	Trailer
GOODWIN	BYPASS PUMP	Active	2017	Equipment
GOODWIN	BYPASS PUMP	Active	2017	Equipment

CECIL DELCHER, CGC
Vice President, U.S. Water Services Corporation

Background and Present Responsibilities

Mr. Delcher is a Vice President and a cofounder of U.S. Water Services Corporation, a firm initiated by a group of water and wastewater utility professionals. He is joined by other individuals with high levels of expertise in relation to the business and technical aspects particular to the government regulated water and wastewater industry. While Mr. Delcher has led a diverse professional career, in his role as a State of Florida Certified General Contractor, Mr. Delcher has been responsible for bidding, planning and quality control on major construction projects for many firms over the past several years. From 2003 to present Mr. Delcher has provided General Contractor Services covering a value of projects totaling \$24,000,000.00 regarding jobs completed and currently in progress. From 1997 to 2002, he performed as the sole General Contractor Qualifier for H2O Utility Services, Inc. and American Water Services. During that period of time, the company's construction divisions were responsible for up to \$10,000,000 of construction annually. Services performed under his supervision included building construction, major water and wastewater plant rehabilitation and reconstruction, new plant construction, water distribution and wastewater collection line installation, as well as wastewater lift station and force main construction. He has participated in the construction of a wide range of utility and major public works projects in Florida. He has extensive knowledge of the construction process particularly related to water utility systems, and the management of large construction projects. Mr. Delcher's attention to detail and excellent client communication have resulted in many repeat projects, based on long term successful relationships he has established, both with public and private clients.

The knowledge and insight gathered from his extensive utility construction experience, building experience and past business and finance management bring a crucial component to the overall operations of our company.

Professional Experience

Azurix North America

11/00 – 05/03 General Contractor Qualifier. In his role as a General Contractor, Mr. Delcher was responsible for quality control on major construction projects. During this period of time, the company's construction divisions were responsible for revenues up to \$10,000,000.00 annually.

Services performed under his supervision included building construction, major water and wastewater plant rehabilitation and reconstruction, new plant construction, water distribution and wastewater collection line installation, as well as wastewater lift station and force main construction.

H2O Utility Services, Inc.

01/97 - 11/00 General Contractor Qualifier. Responsibilities included building construction, major water and wastewater plant rehabilitation and reconstruction, new plant construction, water distribution and wastewater collection line installation, as well as wastewater lift station and force main construction and advisement on general business matters. Mr. Delcher's knowledge and insight gathered from his extensive utility construction experience proved invaluable assisting the company successfully construct a wide range of water and wastewater facilities within the State of Florida.

Island Trader Marine

02/88 – 01/97 President and Owner. Performed and qualified the company as a General Contractor in Hillsborough and Pasco Counties, specializing in concrete work.

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Beacon Land Associates, Inc.

03/85 – 02/88 Vice President. Responsible for land development for home building division, managing assets and the home building division yearly business plan.

Real Estate Investor

05/84 – 03/95 Included purchasing and selling.

Lindrick Corporation

01/78 – 05/84 President. Developer/builder of residential homes, Lindrick Utilities, and real estate sales company in Gulf Harbors – Pasco County, Florida.

Beacon Homes, Inc.

12/76 – 01/78 Vice President. Responsible for land acquisitions and product development. Managed design and drafting departments.

US Homes, Inc.

12/69 – 10/76 Vice President. Responsible for community development, community planning, income properties and general management of numerous communities.

Eugene Knight, Inc.

10/63 – 12/69 Vice President. Managed commercial mortgage department, placing end loans with Metropolitan Life Insurance Company, Northwestern Mutual, Gulf Life and Massachusetts Mutual.

Project Experience

- Constructed 30,000 sf corporate office building – 2000-2001
- Constructed 150,000 gallon elevated storage tank and other water system improvements for the City of Mascotte – 1999
- Constructed master lift station for 1,000,000 gpd tie in of Gulf Harbors WWTP to City of New Port Richey system - 1999
- Constructed Chapel Avenue wastewater pumping station improvements for the City of Port Richey – 1999
- Constructed wastewater pumping station and fire service line for Evangel Assembly of God – Orlando, Florida – 1999
- Constructed duplex submersible wastewater Pumping station for Manatee County – 1999
- Constructed wastewater lift station for Lecanto Middle School – Citrus County School Board - 1999
- Demolition of 150,000 gpd Tarpon Lake wastewater treatment plant and restoration of site for Pinellas County – 1998
- Constructed tertiary filter and flow equalization system modifications to Country Meadows 300,000 gpd wastewater treatment facility, Plant City - 1998
- Constructed new aerobic digester and other plant modifications for 0.36 mgd Jasmine Lakes wastewater treatment facility - 1998
- Constructed hydropneumatic tank and water system improvements for Florida Church of God, Wimauma - 1998
- Constructed ground storage tank modifications for the City of Port Richey water treatment plant – 1994
- Constructed sedimentation basin modifications for the City of Port Richey water treatment plant – 1994
- Relocated the City of Port Richey water treatment and storage facility – 1992
- Constructed the Clay Shake Bridge for the City of Port Richey - 1991

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-
- Constructed the Cross Bayou Bridge for Pasco County – 1983
 - Constructed upgrades and modifications to the Lindrick Service Corporation Gulf Harbors to 1,000,000 gpd wastewater treatment plant - 1982
 - Constructed three miles of canal in Sea Forest subdivision in Pasco County – 1982
 - Constructed 60,000 gpd Highland Lakes potable water treatment plant – Pinellas County – 1973

Education

University of Florida, Bachelor of Science, Business Administration – 1960

Professional Certifications and Licenses

- Licensed General Contractor – State of Florida, 1972, Certificate # CGC-003307
- Florida Wastewater Treatment Certificate, “C”, #5902
- Commercial Pilot’s License, Instrument Rating

Military

- Patrol Plane Commander, Pacific Fleet
- Retired Lieutenant Commander, USNR

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Dennis Muldoon
5151 SE 180th Terrace
Ocklawaha, FL 32179

(PH) 803-465-1196
DMuldoon@ueswatercorp.net

Resume

Friday, May 27, 2016

Prepared by: Dennis Muldoon
Regional Manager
US Water Services Corporation Region 6
Citrus, Sumter, Lake, Orange, Volusia, Seminole, Brevard, and Osceola
Counties

Licenses and certificates:

Florida A – Wastewater Treatment License # 0006452
Florida C – Water Treatment License # 0005982
Florida C - Water Distribution Certificate. #3996
Florida C – Wastewater Collections Certificate # 3722

I was awarded the F.W.P.C.O.A. Region 4 Facility Excellence Award in 2002.

I was awarded the F.D.E.P. State Award for Operations and Maintenance Excellence in 2003.

I have 32 years of Water & Wastewater treatment training and experience.

8-1-14 to Present

US Water Services Corporation

I hold the position of Regional Manager

2-11-10 TO 7-31-14

FLORIDA UTILITY GROUP, LLC.

I help the position of Compliance & Operations Manager.

4-11-96 to 2-11-10

Aqua Utilities Florida

I held the position of South Florida Area Coordinator.

After coming home from overseas contract employment from Feb. 95 to April 96 I took a hiatus.

7-9-93 to 2-15-95

Johnson Controls World Services Inc.

I held the position of Operator II

Contract ended

8-9-90 to 5-31-93

Holmes & Narver Services Inc.

I held the position of Operator II

Contract ended

4-11-84 to 7-31-90

Hernando County Utilities

I held the position of Lead Operator

I left to accept working on overseas contracts.

Sincerely,
Dennis Muldoon

References upon request.

EDWARD MITCHELL
General Manager

Professional Experience

US WATER SERVICE CORPORATION, NEW PORT RICHEY, FL 34652

General Manager/Senior Vice President

10/13- Present

Maintains corporate margins for 77 million dollar utility company with 470 employees which specializes in water and wastewater operations, engineering, maintenance and construction management within the states of Florida, Texas, Iowa and Oklahoma. Develops business efficiencies for cost savings; organizational development; primary client management for 400 clients; corporate marketing and media relations. Direct report to the President/CEO.

CITY OF WEST PALM BEACH, FLORIDA

Population: 110,000

1,500 Employees

\$500 Million Budget

Daytime service population: 300,000

56 square miles

Two CRA Districts

City Administrator

09/1999 - 10/2013

Interim CRA Executive Director

12/1999 - 04/2001

05/2003 - 12/2004

Acting City Administrator

04/1999 - 09/1999

- Manage full service City operations - supervise department directors, including Police, Fire, Finance, including Community Events, Housing & Community Development, Library, Human Resources, Parking, Public Utilities, including Water and Sewer, Public Works, Engineering, Grounds Maintenance, Sanitation and Street Lighting, Support Services, including MIS, Fleet Maintenance, Downtown Maintenance and Facility Maintenance. Supervision includes directing departmental work assignments, personnel activities and budgetary controls. Coordinate \$70 Million General Fund Capital Improvement Programs.
- Developed Parks and Recreation Master Plan - organized and coordinated successful \$20 million Parks Bond referendum passed by voters in March 2000, improving, renovating and building new community centers and parks; initiated and supervised management studies for operational efficiency in Police Department, Fire Department, Human Resources, Construction Services, Parking Operations and the Water Plant; restructured the City's budget process for goal-oriented and Commission priority focus, condensing process to approximately two months with greater public input.
- Developed Voluntary Separation Program exiting approximately 150 employees avoiding layoffs. Initiated classification and compensation salary study consolidating over 120 job classifications and addressing salary inequities; redesigned annual management appraisal system to be goal and performance expectation driven; developed employee recognition program recognizing

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outstanding individual and team performances (STAR), Employee Development Promote Yourself First, and Supervisor and Manager Resource Training (SMART).

- Coordinated the development of the First City Employee Health Clinic in July 2011, serving 3,000 employees and dependents receiving services including primary and urgent care, prescription drugs, wellness services and health risk assessments.
- Initiated and coordinated first Mayor/Commission strategic planning budget retreat which resulted in streamlining the Mayor/Commission budget process to two months, revision of budget forecasting policies, and the development of a five-year strategic plan.
- Solicited development proposals from private sector for public/private redevelopment partnerships, including CityPlace, urban infill programs, downtown residential district, library/City Hall complex, waterfront, etc.
- Presented topics and issues at monthly neighborhood forum for over fifty neighborhood associations; represented City before business groups, developers, homeowners associations, advisory boards, the School District and outside government agencies.
- Initiated community outreach programs including City-wide weekly email newsletter, department open houses, Citizens' Education Program, City web site, Mayor's Response Team, complaint resolution line, and government television channel.
- Developed and implemented hurricane Comprehensive Emergency Management Plan. Coordinated hurricane emergency response team for Hurricane Frances, Hurricane Jeanne and Hurricane Wilma and developed City-wide relief effort to include debris clean-up, the distribution of food, water and ice, and the resource and recovery center deployment of emergency services.
- Conducted daily hurricane briefings with senior management staff; coordinated FEMA, State, Palm Beach County and City emergency response teams to ensure accurate and immediate service delivery; conducted pre-hurricane and post-hurricane assessment meetings.
- Negotiated contracts to provide water and fire services to adjoining municipalities.
- Coordinated and monitored the City's State and Federal lobbying efforts resulting in the City receiving more than \$40 million in grants for Public Utilities, Library Services, Transportation , Community Development , Recreation programs, Police, etc.
- Developed emergency reserve fund policy maintaining a fund balance reservation equivalent to 15% of operating revenues. Funding is reserved for emergencies such as natural disasters, unanticipated economic downturns, etc and totaled approximately \$38 million as of September 30, 2012. The City's 15% designation is strong compared to Cities of similar size and makeup. This practice represents an integral part of the Rating Agency criteria. The City's financial

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management practices include monthly revenue and expenditure financial management reports, long-term financial planning (i.e. five-year financial forecasts), and a formal Emergency Fund Balance Policy.

- Exercised oversight responsibility for the coordination and development of several major initiatives: the rebirth of the city's historic downtown linking CityPlace through streetscape improvements; free trolley services between the two shopping and entertainment districts, and a discount parking program; CityCenter [the new City Hall and Library projects]; the Banyan Waterfront Project; the establishment of the Residential Incentive District to encourage housing in the downtown; and the implementation of the \$30 million neighborhood improvement program.

Assistant City Administrator

01/1993 - 09/1999

- Facilitated City through a mid-year \$10 Million budget shortfall; achieved a balanced budget with program budgeting analysis, union concessions and downsizing of over 200 positions. Directed City-wide assessment of revenue sources resulting in an increase in development, occupational licensing, and other user fees and created a fire inspection fee.
- Chief negotiator in an environment of 1,200 represented employees, including two Police unions, Fire, General employees, and a Professional Managers and Supervisors Unit. Coordinate recruitment for executive-level positions. Evaluate department director's annual performance including goal setting and performance measurement.
- Coordinated privatization of auditorium, sanitation services, landscape maintenance, and parking systems, including development of Requests for Proposals, proposals evaluations and reviews of existing City service levels and costs. Coordinated benchmarking of Wastewater Plant operation for a \$2 million savings.
- Direct preparation of City Commission agenda items, including support materials such as ordinances, resolutions, contracts and interlocal agreements. Draft weekly information memorandum for Mayor and City Commission.
- City liaison with private management firms for City-owned Auditorium and City-owned Stadium, parking facility management, recycling services and roll-off container services.

CITY OF PALM BEACH GARDENS, FLORIDA

Population: 30,000

225 Employees

\$15 million budget

Assistant City Manager

06/1987 - 01/1993

- Served as Acting City Manager in City Manager's absence. Served as liaison to City Manager with Department directors, municipal and county officials. Employees, City advisory boards, and the

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public. Developed and coordinated the City's \$15 Million annual budget. Supervised departmental work assignments; analyzed department responses to manager's directives. Managed the Code Enforcement Division.

- Negotiated Fire, General Employees, and two Police union labor contracts affecting over 175 employees. Responsible for personnel administration of over 225 employees, investigated and resolved employee grievances, hired management employees, and developed new personnel policies; modernized City's personnel and accounting systems. Organized the installation and monitored usage of Employee Assistance Program.
- Project Manager Comprehensive Growth Management Plan update. Coordinated annexation of 5,000 undeveloped acres and produced service delivery studies, economic forecasts, and population projects for the area.
- Prepared RFP's and served as liaison with professional consultants. Negotiated agreements and City Contract s. Researched special projects and prepared recommendations for City Manager. Produced weekly City Council agenda, reports and items.

CITY OF WEST PALM BEACH, FLORIDA

Population 70,000

07/1986 - 06/1987

Management Intern - City Manager's Office

- Functioned as Administrative Assistant. Coordinated resolution of citizen complaints and City Commission agenda reports and items. Assisted budget preparation.
- Researched information for City informational profile for Planning and Community Development Department. Assisted in City advisory board and committee appointments.
- Revised employee orientation manual, reviewed and edited job descriptions. Organized employee community involvement programs. Designed and coordinated City's first citizen satisfaction survey.
- Conducted a rate comparison and supervision survey of municipal sanitation for Public Works Department. Developed administrative policies for a City vehicle preventative maintenance program, producing a cost savings of approximately \$500,000.

GRADUATE AND UNDERGRADUATE LEVEL WORK EXPERIENCE:

Town of Northwood, Massachusetts

Administrative Intern - Office of the General Manager

09/1985 – 12/1985

Commonwealth of Massachusetts

Public Policy Intern - Executive Office of Communities and Development

06/1985 – 08/1985

Division of Municipal Development, Boston Massachusetts

01/1986 – 05/1986

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City of Burlington, Vermont Student Intern - Community and Economic Development Office	09/1983 – 12/1983
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Education

Master's in Public Administration Suffolk University, School of Management, Boston, Massachusetts	1986
Bachelor of Arts in Political Service St. Michael's College, Winooski, Vermont	1984
Dale Carnegie Leadership Training Certification	1999
ICMA Credential Manager	2003

Professional Affiliations

International City/County Management Association	1985 to present
ICMA 25 Year Service Award	2012
Florida City I County Management Association	1987 to present
FCCMA Board of Directors	2004 - 2006
Secretary Treasurer	2006 - 2007
Vice President	2007 - 2008
President	2008 - 2009
FCCMA Mike Roberto Award for Career Development	2011
Florida League of Cities Director	2009 - 2010
West Palm Beach Audit Committee	2001 - 2004
West Palm Beach Police Pension Board	1996 - present
West Palm Beach Chair of Police Pension Board	2002 - present
Florida Public Pension Trustee Association Certification	2005

Civic Affiliations

Palm Beach Day Academy Board of Directors	2002 - 2008
Palm Beach County Big Brothers/Big Sisters Board of Directors	1986 - 1993
Board of Governors	1993 - 2008
President	1992 - 1993
Big Brother/Little Brother Volunteer	1987 - 1995
Leadership Palm Beach County	1989
Roger Dean Sports Stadium Advisory Board	2005 to present
American Heart Association Heart Walk - Executive Cabinet	2005 - 2007

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GARY DEREMER, CUC
Chief Executive Officer
President

Background and Present Responsibilities

Mr. Deremer brings more than 25 years of progressive, successful experience in all phases of water and wastewater services including management of municipal and private systems, professional consulting, engineering, technical diagnostics, complete utility operations, environmental laboratory services, maintenance, management and construction. His diverse career has allowed him the opportunity to provide technical guidance to specialized engineering groups which has enabled him to facilitate improved operational designs. He is well known for maintaining the highest level of integrity in business activities and field services. Mr. Deremer is respected at all levels within the regulatory agencies, including local Health Agencies, the Florida Department of Environmental Protection, the various Water Management Districts, and the Florida Public Service Commission.

U.S. Water Services Corporation (USWSC) 2003 to Present: Principal Founder, CEO and President, Mr. Deremer is responsible for overall strategic growth, management, business development and quality control of utility design, construction, operation and maintenance. A licensed water and wastewater operator and underground utility contractor, his oversight impacts more than 450 clients in the United States with an aggregate 150 MGD of water treatment plant capacity from 200+ individual water treatment sites - with potable water provided to over 1,000,000 consumers daily - and oversight provided in relation to wastewater treatment affects an aggregate of 70 MGD.

Professional Experience

First hand knowledge of all aspects of water and wastewater utility operation, design, regulatory requirements, engineering, maintenance, construction, laboratory services, distribution and collection systems, operation of excavation equipment, vacuum and closed circuit televising trucks, sealing & grouting equipment, pipeline installation, lift station repair and rehabilitation, and overall business management. Additionally, extensive experience related to reverse osmosis, lime softening, ion exchange filtration, activated carbon, pressure and gravity filtration, iron removal, extended aeration, contact stabilization, nitrogen and phosphorus removal, high level disinfection, advanced waste treatment, sequential batch reactors, rotating biological contactors, trickling filters, rapid infiltration basins, spray fields, wetland treatment & disposal systems, reuse and reclaim systems and surface water discharges. Responsibilities include preparation of various technical reports, policies and plans relating to water conservation, water distribution cross connection control, emergency operation procedures, auxiliary power generation, disaster preparedness, capacity analysis for water and wastewater systems, unaccounted water studies, safety programs and oversight of all other regulatory reports. Provide contract negotiations for private and public utilities relating to bulk water and wastewater agreements, service territories and associated fee and rate schedules.

American Water Services, Inc.

- 11/00 – 04/03 General Manager and Vice President for the State of Florida and Caribbean Operation and Maintenance Division of American Water Services, Inc., formerly known as Azurix North America, H₂O Utility Services and Culligan Operating Services; responsibilities included planning, budgeting, staffing, business development, training, and provision of overall management, leadership and direction for the Division. The division consisted of more than 150 employees with estimated annual sales in excess of \$24,000,000.00 for the year 2002.
- Prepared and implemented a merger plan to amalgamate H₂O Utility Services, Inc., & Culligan Operating Services into a Florida Operations and Maintenance Group. The merger plan provided the foundation and blueprint for the Florida Operations and accurately identified areas of administrative consolidation including office locations, equipment and staffing resources, the cross marketing of business lines within and outside of the Florida group, the creation of geographical regions to enhance customer service and increase profitability, and future markets. The plan was successfully implemented in January 2001 as demonstrated by achieving target margins, staffing stability, increased market share and notable growth.
- Secured in excess of \$160,000,000.00 in aggregate value of new business in the areas of utility operation, maintenance and construction during the year of 2001. This included selection by the Florida Governmental Utility Authority as preferred operating company for their pending purchase of the Florida Water Utility System. Mr. Deremer led the proposal team and negotiations on a proposal that totaled approximately \$40,000,000.00 per year in value.
- In late 2001 expanded to create an additional region in the US Virgin Islands. Initial presence in the market was established, the region became self-supportive in regard to revenue, and high levels of growth were obtained.

Founder H2O Utility Services, Inc. 1993

- President from inception to 2000 when this company was sold to Azurix/American Water Services, Inc. As a utility operations and maintenance company, the company primarily provided utility related services within the State of Florida. In 1998 the company was expanded to provide Engineering, General Contracting and Laboratory Services. The company experienced progressive growth and substantial profitability and became part of a national company at the time of sale.

City of Port Richey, Florida 1993 – 2005

- Maintained the appointed public position of Consulting Director of the utility system serving over 9000 residents. Responsibilities included all aspects of the Utility System, including strategic growth planning, rate studies, regulatory monitoring and enforcement, preventative and emergency maintenance oversight, attendance and representation of the Utility Department at City Council meetings, budgeting and staff oversight.

Utility Manager - City of Port Richey - May 1989-October 1993 (as direct city employee):

- Managed a twenty million dollar water and wastewater utility system. Utility system services approximately 9,000 residents in West Pasco County, Florida. Developed and implemented plans and procedure for the efficient operation and maintenance of the City's utility system.
- Conducted feasibility studies for private utility systems acquisition.
- Supervised personnel engaged in utility billing, inspection, water and wastewater operation, and maintenance.
- Made recommendations to City Council regarding sufficiency of rates, capital improvements, budgeting, staffing and utility related contracts.
- Prepared curriculum and taught Backflow/Cross Connection on behalf of Region 4 of the Florida Water and Pollution Control Operators Association.
- Instructed students during an annual Short School in the subjects of mathematics and lime softening.
- Conducted numerous oral presentations on water conservation to various civic associations in West Pasco County.

Most Recent Project Experience

Specialized Technical Support Services: Ongoing provision of technical support to a number of large national engineering firms relating to system design, process control, facility operations, troubleshooting, facility commissioning, and cost estimating for both construction and operations.

FGUA – Florida Governmental Utility Services: Pasco County Systems – Operation and Maintenance of Water, Wastewater, Reclaim and additional Customer Service

In conjunction with the planning of the Pasco County Government, The Aloha Utility System was purchased by the FGUA in February 2009. U.S. Water Services Corporation was selected by the FGUA as the preferred provider to operate and maintain the water, wastewater and reclaimed facilities, associated infrastructure and provide billing/collection services. Now known as the FGUA Pasco System - the Aloha Utility System previously existed as the second largest privately held utility system in the State of Florida while serving 17,400 connections and a population of approximately 45,000. Mr. Deremer and U.S. Water Services are assisting the FGUA and the County of Pasco in resolving publicized water quality problems that have plagued the system over many years. U.S. Water provides the entire operational and management staff which totals 38 staff members to the FGUA through utility contract services. The total system consists of 11 individual Water Treatment Plants with combined production of 4.0 MGD. The WWTF capacity totals 2.1 MGD with separate flow received direct by Pasco County totaling 0.48 MGD. The WWTF is an extended air treatment facility with mechanical screening and grit removal, effluent

traveling bridge filter, 2.3 million gallons of reject effluent storage and 17.1 million gallons of total reclaimed water storage.

City of Lauderdale: In March, 2009 and continuously since that time, U.S. Water Services began providing relief operations and maintenance services to the City's 16 MGD lime softening WTP. At the request of the City of Lauderdale, and under the lead of Mr. Deremer, U.S. Water Services Corporation (USWSC) was retained under an emergency work authorization to provide an assessment of the possible cause(s) of a decrease in water production through City's water treatment plant (WTP) and to also perform an evaluation of the City's water treatment plant and operating practices. Mr. Deremer continues to oversee services required for effective operations of the City facility.

City of West Palm Beach, Florida: U.S. Water Services is providing on-site professional services at the City Water Utility on an ongoing basis. Mr. Deremer's responsibilities include evaluation of the City's 44.7 MGD surface water treatment facility, 8 distribution pump stations and source water system. U.S. Water initially became engaged in assisting the City in late October 2007, when requested to troubleshoot bacteriological contamination events; the contamination source was identified and remedied. Mr. Deremer is currently engaged in assisting the City with a utility related capital improvements program to upgrade the existing water treatment system and also long term planning relating to water supply and treatment. U.S. Water Services continues to provide daily oversight of utility operations at the water treatment facility which Mr. Deremer is routinely directing.

City of North Lauderdale, Florida:

The 7.5 MGD Lime Softening Water Treatment Facility treats water from three (3) groundwater wells. Raw water is first treated to remove hydrogen sulfide and carbon dioxide prior to lime softening. Softening occurs in two (2) accelerators (solids contact basins) rated at 2,500 GPM each. USWSC provides complete Operations and Maintenance of the treatment facility including twenty four (24) hour a day staffing, purchasing of all chemicals, preventive, predictive and corrective maintenance, and facility management. Additionally, Mr. Deremer performed a facilities condition assessment, which will be used by the City for Capital Planning and Improvements purposes.

St. Luce West Utility District - Florida: Project Manager assigned to resolve lead exceedance issues for 4.0 mgd Reverse Osmosis (RO) Treatment System; utilizing calcite reactors for stabilization. Project involved quick turn-around design/build solution in which USWSC performed both the engineering and construction service to resolve corrosive water issue.

City of Port Richey – Florida: Provision of ongoing technical support, serving approximately 9,000 residents on gulf coast. USWSC provides engineering services including system expansion for the WTF and WW Collection systems, plan reviews, storm water utility management, impact fee rate studies and other related services. Additionally, USWSC provides complete contract operations for the City's 2MGD filtration water treatment facility.

St. Johns County School Board: Startup and commissioning at new RO treatment system in St. Johns County.

Everglades City - Florida: Evaluated the water and wastewater treatment systems of the City of Everglades City. Project included recommendations to restore wastewater treatment facility (WWTF) to advanced wastewater treatment (AWT) standards and the construction of new chloramine disinfection system for the water treatment facility (WTF).

Florida Keys Aqueduct Authority: Provision of ongoing technical support relative to best available treatment (BAT) and advanced wastewater treatment (AWT) treatment in the Florida Keys at the Bay Pointe, Layton and Little Venice facilities.

Key Largo Wastewater Treatment District – Florida: Technical review of proposed wastewater treatment system expansion to 2.0 mgd for advanced wastewater treatment (AWT) facility. Provides technical review of plans, specifications, on-site chemical optimization, reviews system operations and maintenance procedures and make recommendations of utility policies and procedures.

Sioux City, Iowa: Technical support provided to develop treatment design alternatives for nutrient removal system for 23.0 mgd wastewater treatment facility. Review process designs and planning documents, perform cost estimates for various treatment and design alternatives.

Islamorada, Village of the Islands: Coordinated the commissioning of a new advanced wastewater treatment membrane wastewater treatment facility. Project included the startup of an extremely complex .35 mgd membrane treatment facility along with a vacuum collection system.

FDEP – John Pennekamp State Park: Project manager for the design of nutrient removal system. Project included the use of a multiple oxic/anoxic design configuration to treat high ammonia loading generate at the park by low-flow toilets and marine pump outs. After implementation of design, system was capable of reliable TN reduction from 150 to 200 mg/L to less than 10 mg/L TN.

Education

California State University, Sacramento. Advanced Waste Treatment Course. January 1994.

- Pinellas County Technical Institute. Florida Water and Pollution Control Operators Association. Wastewater Collection. Technology training Course. September 1993
- Pinellas County Technical Institute. Florida Water and Pollution Control Operators Association. Water Distribution B Technology Training Course. April 1993.
- Florida Chamber of Commerce Environmental Permitting Summer School. July 1991, August 1990.
- Santa Fe Community College. Florida Water and Pollution Control Operators Association. Wastewater Collection Class C Technology Training Course. August 1991.
- California State Univ. Sacramento. Operation of Wastewater Treatment Plants. Volume I: July 1991. Volume II: August 1991.
- Pinellas Vocational Technical Institute. Florida Water and Pollution Control Operators Association. Backflow Prevention Assembly Tester Training Course. September 1990.

- Santa Fe Community College. Florida Water and Pollution Control Operators Association. Water Distribution Class C Technology Training Course. August 1990.
- California State University Sacramento. Operation and Maintenance of Wastewater Collection Systems. Volume I: June 1990. Volume II: September 1990.
- California State University, Sacramento. Operation and Maintenance of a Water Distribution System. February 1990.
- Michigan State University. Supervisory Management in the Water/Wastewater Field. November 1990.
- University of Florida. Water Treatment Plant Operations Course. December 1988.
- California State University, Sacramento. Water Treatment Plant Operation. Volume I: January 1988. Volume II: July 1988.
- Pinellas Vocational Technical Institute. Water Operations Training Program Class C. December 1986.
- Florida Water and Pollution Control Operators Association. Water and Wastewater Treatment. Annual Short School. December 1986. October 1987. February 1988.

Professional Certifications

- State of Florida, Department of Business and Professional Regulation: Certified Underground Utility Contractor – CUC 1223914
- State of Florida, Department of Business and Professional Regulation: Licensed Water Treatment Plant Operator, Certification (#COA5894)
 - **Class A** February 1989
 - **Class B** August 1988
 - **Class C** February 1987
 - **Class D** November 1986
- State of Florida, Department of Business and Professional Regulation; Licensed Wastewater Treatment Plant Operator. Certification (#COB8727).
 - **Class B** July 1994
 - **Class C** May 1993
 - Wastewater Collection Technician.
Class A Certification #358 July 1997
 - Wastewater Collection Technician.
Class B Certification #563. October 1993.
 - Wastewater Collection Technician.
Class C Certification #1351. August 1991.

- Backflow Prevention Assembly Tester. Certification #7.

- Water Distribution Technician.

Class A Certification #285 July 1997

- Water Distribution Technician.

Class B Certification #371, April 1993.

- Water Distribution Technician.

Class C Certification #996. August 1990

Professional Memberships

American Water Works Association
Florida Water and Pollution Control
Operators Association
National Rural Water Association

Tony Perez
Maintenance Supervisor

Background and Present Responsibilities

Currently oversees Region 6 maintenance department for scheduling and contract completion. Responsible for the management and oversight of 14 employees.

Professional Experience.

U.S. Water Services Corporation

2013 to current

- Day to day scheduling and contract completion
- Responsible for ordering parts
- Responsible for all maintenance quotes in 8 counties
- Assist the area managers and regional manager is compliance with maintenance issues.

2008-2013 Oxford Pipeline

- Responsible for oversight of all projects within the area
- Responsible for day to day scheduling and contract compliance
- Responsible for maintenance troubleshooting.

Education/Licenses

- Confined Space Certified
- RPZ certified



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: Charlotte County BOCC
Contact Person: Mike Nixon, P.E., McKim & Creed
City, State: 551 North Cattlemen Rd. Suite 106 Sarasota FL 34232
Telephone Number: 941 379 3404
Email Address: mnixon@mckimcreed.com
Description of goods or
Services provided: Lift Station 815 Rehabilitation
Contract Amount: \$573,376.88
Start/End Date of Contract: 6/2019 - 5/2020
2. Company Name: DeSoto County BOCC
Contact Person: Tom Helt, P.E., Weiler Engineering Corporation
City, State: 201 West Marion Ave., Suite 1306 Punta Gorda FL 33950
Telephone Number: 941 505 1700
Email Address: thelt@weilerengineering.org
Description of goods or
Services provided: DeSoto County Lake Suzy Pumping System LS 7 Upgrade & Booster LS 15
Contract Amount: \$556,353.38
Start/End Date of Contract: 6/2018 - 7/2019
3. Company Name: Lee County BOCC
Contact Person: Elaine Capps, P.E., Lee County Utilities Dept.
City, State: 1500 Monroe Street Fort Myers FL 33901
Telephone Number: 239 533 8673
Email Address: ecapps@leegov.com
Description of goods or
Services provided: Pine Island WWTP Effluent Pump Station Replacement
Contract Amount: \$437,159.59
Start/End Date of Contract: 10/2018 - 5/2019

This document must be completed and returned with your Submittal.

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 to those required under the City's contract and 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.

	Contact Name	Phone	Current Client? Y or N	Number of years service provided	Description of service
1	Pasco County BOCC, Ivan Martinez, P.E.	(813) 235 6189	Y	3+ Years	Miscellaneous PS Rehab
2	Hillsborough County BOCC Angel Concepcion	(813) 824 6819	Y	3+ Years	Miscellaneous PS / WTP / LS Rehab
3	St Johns County BOCC Jim Overton	(904) 209 0158	Y	3+ Years	Miscellaneous PS/ LS Rehab

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 Engineer.** Bidder shall attach additional sheets as necessary.

Subcontractor No. 1

Name: Heyward Florida Incorporated

Description of Work: Odor Control System

Percent of Contract Price: 9.5 %

Previous Experience Together: Yes/No No

Subcontractor No. 2

Name: Shine and Company Inc.

Description of Work: Electrical

Percent of Contract Price: 10 %

Previous Experience Together: Yes/No No

Subcontractor No. 3

Name: Sanders Company Inc.

Description of Work: PICS

Percent of Contract Price: 10 %

Previous Experience Together: Yes/No Yes

Subcontractor No. 4

Name: _____

Description of Work: _____

Percent of Contract Price: _____

Previous Experience Together: Yes/No _____

Subcontractor No. 5

Name: _____

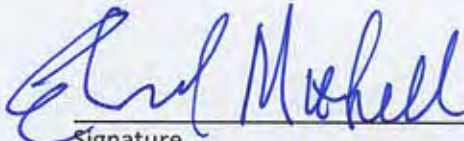
Description of Work: _____

Percent of Contract Price: _____

Previous Experience Together: Yes/No _____

FORM 7.10 – CERTIFICATE AS TO CORPORATE PRINCIPAL

I, Edward Mitchell, certify that I am the _____ secretary of the corporation named as Principal in the within Bid Bond; that Gary Deremer _____, who signed the said Bid Bond on behalf of the Principal, was then* of said corporation; that I know his signature, and his signature thereto is genuine; and that said Bid Bond was duly signed, sealed and attested for in behalf of said corporation by authority of its governing body.
*President



Signature



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 State of Florida***THIS AFFIDAVIT IS SUBMITTED IN REFERENCE TO THE FOLLOWING SOLICITATION:**RFSQ/RFP/ITN/BID/CONTRACT/PROJECT #(as applicable): 21-09BUSINESS NAME: *USWSC CONTACT PERSON/TITLE: ** MAILING ADDRESS: 4939 Cross Bayou Blvd.,CITY-STATE-ZIP: New Port Richey FL 34652Length of Time at Address Provided: 15 Year

*U.S. Water Services Corporation

**Christina Crego, Admin

Physical Presence of Business: ☒ Headquarters, ☐ Manufacturing Facility, or ☐ Locally Owned Franchise

And within Legal Boundaries:

☐ The City of Port Orange☐ Volusia County☒ The State of FLORIDAFlorida FEIN (Federal Employer Identification Number): 20-0008821BUSINESS STRUCTURE: ☒ Corporation ☐ LLC ☐ Partnership ☐ Sole Proprietorship☐ Other (Specify): _____PHONE NUMBER: 727 848 8292FAX: 727 849 8860EMAIL: CCREGO@USWATERCORP.NET****Please attach a valid business tax receipt, or other such documentation******ATTESTATION – I understand that:**

- In accordance with City Of Port Orange City Code 2-275, local businesses shall have five (5) business days from bid/proposal opening to submit a best and final bid for evaluation. To qualify: A Port Orange business initial bid must be within (8%) of the lowest and best responsible bid from a non-Port Orange business; A Volusia County business initial bid must be within (5%) of the lowest and best responsible bid from a non-Volusia County business; A State of Florida business initial bid must be within (3%) of the lowest and best responsible bid from a non-State of Florida business.
- A local business must have its headquarters, manufacturing facility, or locally owned franchise located within the legal boundaries of the City of Port Orange, Volusia County, or the State of Florida, as indicated herein, for at least twelve (12) months prior to the bid or proposal opening date and a valid business license, issued by the corresponding government agency. Post office boxes are not verifiable and shall not be used for the purpose of establishing said physical address. Bidders shall attach to this affidavit of eligibility with a bid or proposal, a copy of a valid business tax receipt or such other documentation, to the city's satisfaction, demonstrating the physical business presence of the firm within corresponding local limits.
- The preference does not apply to goods or services exempted by statute or prohibited by Federal law, State law, or other funding source restrictions.
- The preference established in this policy does not prohibit the right of the City, or other authorized purchasing authority, to compare quality or fitness for use of supplies, materials, equipment and services proposed for purchase and compare qualifications, character, responsibility and fitness of all persons, firms or corporations submitting bids or proposals.
- The information contained herein may be subject to verification.
- A bidder who misrepresents the local preference status of its firm in a proposal or bid submitted to the City of Port Orange will lose the privilege to claim local preference status, and shall lose eligibility to claim local preference for a period of one (1) year. The City Manager may also recommend that the firm be referred for debarment.

As an authorized representative of the firm, I certify that this firm complies fully with the above requirements.

U.S. Water Services Corporation

Name of Business

By: _____

Printed Name: Gary DeremerTitle: PresidentSTATE OF FLORIDACOUNTY OF PASCO

The foregoing instrument was acknowledged before me by means of ☒ physical presence or _____ online notarization; this
29th day of April, 2021 by Gary Deremer as President of
*USWSC a Florida corporation, (He or she is ☒ personally known or _____ produced
 _____ as identification.

*U.S. Water Services CorporationChristina R. Crego
Notary Public, State of FLORIDA

Printed, typed or stamped name, commission and expiration:

***This document must be completed and returned with your Submittal***

PASCO COUNTY BUSINESS TAX RECEIPT

Issued pursuant and subject to Florida Statutes and Pasco County Ordinances. Issuance does not certify compliance with zoning or other laws. This receipt must be posted conspicuously in place of business.

2021

Expires September 30th



ACCOUNT #:: 50521

SIC CODE: 7389.06

MIKE FASANO
TAX COLLECTOR
PASCO COUNTY FLORIDA

TYPE OF BUSINESS
CONSULTANT / ADVISOR
STATE LICENSE #

U S WATER SERVICES CORPORATION

4939 CROSS BAYOU BLVD
NEW PORT RICHEY, FL 34652-3434

OWNER/QUALIFYING AGENT
DEREMER GARY

LOCATION ADDRESS:
4939 CROSS BAYOU BLVD
NEW PORT RICHEY, FL 34652-3434

DATE	RECEIPT	AMOUNT
08/26/2020	20-1-116686	93.75

Dear Business Owner:

Your **2021** Pasco County Business Tax Receipt is printed above. Please detach the receipt and display it in a place that is visible to the public and available for inspection.

The Pasco County Business Tax Receipt is in addition to any other license or certificate that may be required by law and does not signify compliance with zoning, health, or regulatory requirements. The Pasco County Business Tax Receipt is non-regulatory and is not meant to be a certification of the holder's ability to perform the service for which it is registered.

Business Tax Receipts expire September 30th. Annual renewals are mailed in June to the address of record at that time. Please contact our office if there are any changes to your business name, ownership, physical address, or closing of your business.

Thank you for allowing us to serve you!

MIKE FASANO
PASCO COUNTY TAX COLLECTOR

EAST PASCO GOVERNMENT CENTER
DADE CITY

WEST PASCO GOVERNMENT CENTER
NEW PORT RICHEY

TAX COLLECTOR BUILDING
GULF HARBORS

CENTRAL PASCO GOVERNMENT CENTER
LAND O' LAKES

COMPARK 75 BUSINESS PARK
WESLEY CHAPEL

CALL CENTER: MONDAY - FRIDAY 8:30 AM - 5:00 PM (352) 521-4338 • (727) 847-8032 • (813) 235-6076

PASCO COUNTY BUSINESS TAX RECEIPT

Issued pursuant and subject to Florida Statutes and Pasco County Ordinances. Issuance does not certify compliance with zoning or other laws. This receipt must be posted conspicuously in place of business.

2021

Expires September 30th



ACCOUNT #:: 70098

SIC CODE: 1522.00

MIKE FASANO
TAX COLLECTOR
PASCO COUNTY FLORIDA

TYPE OF BUSINESS
GENERAL CONTRACTOR

STATE LICENSE #
CGC003307

OWNER/QUALIFYING AGENT
DEREMER GARY

LOCATION ADDRESS:
4939 CROSS BAYOU BLVD
NEW PORT RICHEY, FL 34652-3434

US WATER SERVICES CORPORATION

4939 CROSS BAYOU BLVD
NEW PORT RICHEY, FL 34652-3434

DATE	RECEIPT	AMOUNT
08/26/2020	20-1-116695	207.50

Dear Business Owner:

Your **2021** Pasco County Business Tax Receipt is printed above. Please detach the receipt and display it in a place that is visible to the public and available for inspection.

The Pasco County Business Tax Receipt is in addition to any other license or certificate that may be required by law and does not signify compliance with zoning, health, or regulatory requirements. The Pasco County Business Tax Receipt is non-regulatory and is not meant to be a certification of the holder's ability to perform the service for which it is registered.

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Thank you for allowing us to serve you!

MIKE FASANO
PASCO COUNTY TAX COLLECTOR

EAST PASCO GOVERNMENT CENTER
DADE CITY

WEST PASCO GOVERNMENT CENTER
NEW PORT RICHEY

TAX COLLECTOR BUILDING
GULF HARBORS

CENTRAL PASCO GOVERNMENT CENTER
LAND O' LAKES

COMPARK 75 BUSINESS PARK
WESLEY CHAPEL

CALL CENTER: MONDAY - FRIDAY 8:30 AM - 5:00 PM (352) 521-4338 • (727) 847-8032 • (813) 235-6076

PASCO COUNTY BUSINESS TAX RECEIPT

Issued pursuant and subject to Florida Statutes and Pasco County Ordinances. Issuance does not certify compliance with zoning or other laws. This receipt must be posted conspicuously in place of business.

2021

Expires September 30th



ACCOUNT #:: 70096

SIC CODE: 1623.00

MIKE FASANO
TAX COLLECTOR
PASCO COUNTY FLORIDA

TYPE OF BUSINESS
EXCAVATING & UNDERGROUND UTILITY CONTR

STATE LICENSE #
CUC1223914

OWNER/QUALIFYING AGENT
DEREMER GARY

LOCATION ADDRESS:
4939 CROSS BAYOU BLVD
NEW PORT RICHEY, FL 34652-3434

US WATER SERVICES CORPORATION

4939 CROSS BAYOU BLVD
NEW PORT RICHEY, FL 34652-3434

DATE	RECEIPT	AMOUNT
08/26/2020	20-1-116690	76.25

Dear Business Owner:

Your **2021** Pasco County Business Tax Receipt is printed above. Please detach the receipt and display it in a place that is visible to the public and available for inspection.

The Pasco County Business Tax Receipt is in addition to any other license or certificate that may be required by law and does not signify compliance with zoning, health, or regulatory requirements. The Pasco County Business Tax Receipt is non-regulatory and is not meant to be a certification of the holder's ability to perform the service for which it is registered.

Business Tax Receipts expire September 30th. Annual renewals are mailed in June to the address of record at that time. Please contact our office if there are any changes to your business name, ownership, physical address, or closing of your business.

Thank you for allowing us to serve you!

MIKE FASANO
PASCO COUNTY TAX COLLECTOR

EAST PASCO GOVERNMENT CENTER
DADE CITY

WEST PASCO GOVERNMENT CENTER
NEW PORT RICHEY

TAX COLLECTOR BUILDING
GULF HARBORS

CENTRAL PASCO GOVERNMENT CENTER
LAND O' LAKES

COMPARK 75 BUSINESS PARK
WESLEY CHAPEL

CALL CENTER: MONDAY - FRIDAY 8:30 AM - 5:00 PM (352) 521-4338 • (727) 847-8032 • (813) 235-6076

Attachment H

Certification Regarding Debarment, Suspension, Ineligibility And Voluntary Exclusion

Subcontractor Covered Transactions

- (1) The prospective subcontractor, U.S. Water Services Corporation, of the Sub-Recipient certifies, by submission of this document, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the Sub-Recipient's subcontractor is unable to certify to the above statement, the prospective subcontractor shall attach an explanation to this form.

SUBCONTRACTOR

U.S. Water Services Corporation (Prime Contractor)

By: 

Signature

Gary Deremer, President

Name and Title

4939 Cross Bayou Blvd.,

Street Address

New Port Richey FL 34652

City, State, Zip

4/29/2021

Date

Note: Before contract is executed: Debarment Form – Attachment H Must be complete by each proposed Bidder/Contractor

This document must be completed and returned with your Submittal

BID COST/FEE PROPOSAL



"ATTACHMENT 1" SCHEDULE OF UNIT PRICING

BID FORM

CITY OF PORT ORANGE

ITB # 21-09

HERBERT & NOVA MASTER LIFT STATION IMPROVEMENTS AND UPGRADE

Completed Attachment 1 Bid Proposal form MUST be included with Bid Submission

Instruction to save Attachment from DemandStar website:

Perform "File Save As" and save spreadsheet to your computer. Fill in pricing in highlighted cells, preferably electronically.

Bidders are required to complete all fields shaded in green. All other fields will be automatically calculated.

NAME OF BUSINESS:	U.S. Water Services Corporation
CONTACT PERSON:	Christina Crego
EMAIL ADDRESS:	CCREGO@USWATERCORP.NET
AUTHORIZED SIGNATURE:	Gary Deremer, President

PROPOSAL PRICING

ITEM #	DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL COST
A	BASE BID				
1	Pre-Construction Video	LS	1	\$ 2,500.00 -	\$ 2,500.00 -
2	Demolition of Existing Lift Station	LS	1	\$ 36,838.00 -	\$ 36,838.00 -
3	Bypass Pumping	LS	1	\$ 24,572.00 -	\$ 24,572.00 -
4	Complete Lift Station	LS	1	\$ 315,638.00 -	\$ 315,638.00 -
5	Electrical (Includes Generator)	LS	1	\$ 380,640.00 -	\$ 380,640.00 -
6	Tie Into Existing Force Main	LS	1	\$ 21,292.00 -	\$ 21,292.00 -
7	DIP Fittings	TN	0.5	\$ 13,000.00 -	\$ 6,500.00 -
8	Installation of Decorative Wall	LS	1	\$ 44,654.00 -	\$ 44,654.00 -
9	Odor Control	LS	1	\$ 127,310.00 -	\$ 127,310.00 -
10	Permit Allowance	LS	1	\$ 5,000.00 -	\$ 5,000.00 -
11	As-Built Plans	LS	1	\$ 9,828.00 -	\$ 9,828.00 -
12	Restoration	LS	1	\$ 22,764.00 -	\$ 22,764.00 -
				TOTAL BASE BID:	\$ 997,536.00 -
1	Confirm the number of calendar days to complete upon receipt of PO:			DAYS	300
2	Warranty for Labor:			YEARS	1
3	Warranty for Materials:			YEARS	1

AWARD: THIS BID WILL BE AWARDED TO THE LOWEST, RESPONSIVE, RESPONSIBLE BIDDER

This document must be completed and returned with your Submittal

ITB 21-09 Herbert and Nova Master Lift Station Rehabilitation

Page 443 of 558



Ron DeSantis, Governor

Halsey Beshears, 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

DELCHER, CECIL R

U S WATER SERVICES CORPORATION
4939 CROSS BAYOU BOULEVARD
NEW PORT RICHEY FL 34652

LICENSE NUMBER: CGC003307

EXPIRATION DATE: AUGUST 31, 2022

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.



Ron DeSantis, Governor

Halsey Beshears, Secretary



STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

THE UNDERGROUND UTILITY & EXCAVATION CO HEREIN IS CERTIFIED UNDER THE
PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

DEREMER, GARY ANDREW

US WATER SERVICES CORPORATION
4821 US HWY 19 STE 2
NEW PORT RICHEY FL 34652

LICENSE NUMBER: CUC1223914

EXPIRATION DATE: AUGUST 31, 2022

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.

State of Florida

Department of State

I certify from the records of this office that U.S. WATER SERVICES CORPORATION is a corporation organized under the laws of the State of Florida, filed on April 30, 2003, effective April 28, 2003.

The document number of this corporation is P03000047833.

I further certify that said corporation has paid all fees due this office through December 31, 2021, that its most recent annual report/uniform business report was filed on January 20, 2021, and that its status is active.

I further certify that said corporation has not filed Articles of Dissolution.

*Given under my hand and the
Great Seal of the State of Florida
at Tallahassee, the Capital, this
the Twentieth day of January,
2021*



Randy R. Lee
Secretary of State

Tracking Number: 6767048680CC

To authenticate this certificate, visit the following site, enter this number, and then follow the instructions displayed.

<https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication>



[Department of State](#) / [Division of Corporations](#) / [Search Records](#) / [Search by FEI/EIN Number](#) /

[Previous On List](#) [Next On List](#) [Return to List](#)

[Events](#) **No Name History**

Detail by FEI/EIN Number

Florida Profit Corporation

U.S. WATER SERVICES CORPORATION

Filing Information

Document Number	P03000047833
FEI/EIN Number	20-0008821
Date Filed	04/30/2003
Effective Date	04/28/2003
State	FL
Status	ACTIVE
Last Event	AMENDED AND RESTATED ARTICLES
Event Date Filed	03/31/2020
Event Effective Date	NONE

Principal Address

4939 CROSS BAYOU BOULEVARD
NEW PORT RICHEY, FL 34652

Changed: 03/31/2004

Mailing Address

4939 CROSS BAYOU BOULEVARD
NEW PORT RICHEY, FL 34652

Changed: 05/09/2005

Registered Agent Name & Address

DEREMER, GARY A
4939 CROSS BAYOU BOULEVARD

NEW PORT RICHEY, FL 34652

Name Changed: 03/31/2020

Address Changed: 03/31/2020

Officer/Director Detail

Name & Address

Title CEO

DEREMER, GARY
4939 CROSS BAYOU BLVD.
NEW PORT RICHEY, FL 34652

Title VP

DELCHER, CECIL
4939 CROSS BAYOU BLVD.
NEW PORT RICHEY, FL 34652

Title VP

AMIOTT, RALPH
4939 CROSS BAYOU BOULEVARD
NEW PORT RICHEY, FL 34652

Title VP

KADER, MOHAMMED
4939 CROSS BAYOU BOULEVARD
NEW PORT RICHEY, FL 34652

Title VP, Secretary

Mitchell, Edward
4939 CROSS BAYOU BOULEVARD
NEW PORT RICHEY, FL 34652

Title CFO

RUPE, KAYCEE
4939 CROSS BAYOU BOULEVARD
NEW PORT RICHEY, FL 34652

Title VP

SALIBA, CHRIS
4939 CROSS BAYOU BOULEVARD

NEW PORT RICHEY, FL 34652

Title VP

RENDELL, WILLIAM TROY
 4939 CROSS BAYOU BOULEVARD
 NEW PORT RICHEY, FL 34652

Title VP

DUPONT, JEFFREY
 4939 CROSS BAYOU BOULEVARD
 NEW PORT RICHEY, FL 34652

Title VP

VOSS, AARON
 4939 CROSS BAYOU BOULEVARD
 NEW PORT RICHEY, FL 34652

Title VP

SMITH, CARL
 4939 CROSS BAYOU BOULEVARD
 NEW PORT RICHEY, FL 34652

Annual Reports

Report Year	Filed Date
2019	04/04/2019
2020	01/16/2020
2021	01/20/2021

Document Images

01/20/2021 -- ANNUAL REPORT	View image in PDF format
03/31/2020 -- Amended and Restated Articles	View image in PDF format
01/16/2020 -- ANNUAL REPORT	View image in PDF format
09/25/2019 -- Amendment	View image in PDF format
04/04/2019 -- ANNUAL REPORT	View image in PDF format
03/02/2018 -- ANNUAL REPORT	View image in PDF format
04/24/2017 -- ANNUAL REPORT	View image in PDF format
04/15/2016 -- ANNUAL REPORT	View image in PDF format
02/19/2015 -- ANNUAL REPORT	View image in PDF format
02/26/2014 -- ANNUAL REPORT	View image in PDF format
	View image in PDF format

[03/18/2013 -- ANNUAL REPORT](#)[04/19/2012 -- ANNUAL REPORT](#)[04/13/2011 -- ANNUAL REPORT](#)[04/02/2010 -- ANNUAL REPORT](#)[04/29/2009 -- ANNUAL REPORT](#)[03/31/2008 -- ANNUAL REPORT](#)[04/30/2007 -- ANNUAL REPORT](#)[04/30/2006 -- ANNUAL REPORT](#)[05/09/2005 -- ANNUAL REPORT](#)[03/31/2004 -- ANNUAL REPORT](#)[08/07/2003 -- Amendment](#)[06/09/2003 -- Off/Dir Resignation](#)[04/30/2003 -- Domestic Profit](#)[View image in PDF format](#)[View image in PDF format](#)[View image in PDF format](#)[View image in PDF format](#)[View image in PDF format](#)[View image in PDF format](#)[View image in PDF format](#)[View image in PDF format](#)[View image in PDF format](#)[View image in PDF format](#)[View image in PDF format](#)[View image in PDF format](#)[Previous On List](#)[Next On List](#)[Return to List](#)[Events](#)**No Name History**

BID BOND

BID BOND

Bond No.: N/A

KNOW ALL MEN BY THESE PRESENTS that U. S. Water Services Corporation, as Contractor, duly authorized to conduct business in the State of Florida, whose principal place of business is located at 4939 Cross Bayou Blvd., New Port Richey, FL 34652, Tel.: (727) 848-8292 (hereinafter called "PRINCIPAL"), and North American Specialty Insurance Company, as SURETY, duly authorized to conduct business in the State of Florida, whose principal place of business is located at 1200 Main Street, Ste 800, Kansas City, MO 64105, Tel.: (847) 273-1251 (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 AMOUNT BID *** dollars and (00)/100 (\$ 5% of Bid), 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 12, 2021, for:

Project Name / Bid No.: ITB 21-09 Herbert and Nova Master Lift Station Rehabilitation

Project Address: NE Corner of S Nova Rd and Herbert Street

Legal Description: Herbert and Nova Master Lift Station Rehabilitation

Description of Work: Demolition of the existing building and generator, installation of a new generator and automatic transfer switch, wetwell coating system, top slab, piping, valves, valve vault and decorative wall at the Herbert Street and Nova Road Master Lift Station.

NOW, THEREFORE,

A. If the principal shall not withdraw said bid within 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 within 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 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 12th day of April, A.D. 2021, 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 original bid bond and financial statement of Surety Company).

PRINCIPAL: U. S. Water Services Corporation

Signature [Signature]
Corporate Officer & Title Barry Deremer, President

ATTEST:
Signature [Signature]
Corporate Secretary Edward Mitchell (Affix Corporate Seal)



WITNESSES:

SURETY: North American Specialty Insurance Company

Attorney-in-Fact (signature) [Signature]
Name & Title Allyson Foss Wing, Attorney-in-Fact
Name of Local Resident Agent Allyson Foss Wing, FL Licensed Resident Agent
City, State, Zip Longwood, FL 32750
Telephone: (407) 834-0022
A.M. Best No.: A+, XV NAIC No.: 29874

ATTEST:
N/A
Signature _____
Corporate Secretary (Affix Corporate Seal)

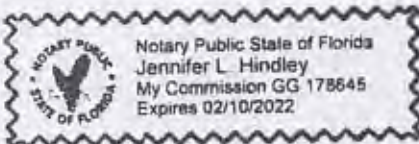
STATE OF Florida

COUNTY OF Seminole

by means of ☒ physical presence or ☐ online notarization
Before me this day personally appeared Allyson Foss Wing (affiant), who, being duly sworn, deposes and says that he/she is the Attorney-in-Fact for the North American Specialty Insurance Company (corporate surety) and that this person has been authorized by North American Specialty 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 [Signature]

Sworn to / Affirmed and subscribed before me this 12th day of April, 2021, by Allyson Foss Wing who is personally known to me or who produced N/A as identification.



NOTARY PUBLIC - STATE OF Florida
Type or print name: Jennifer L. Hindley
Commission No.: GG 178645
Commission Expires: 02/10/2022

(Seal)

END OF BID BOND

This document must be completed and returned with your Submittal



**NORTH AMERICAN
SPECIALTY INSURANCE COMPANY**

1450 American Lane, Suite 1100, SCHAUMBURG, ILLINOIS 60173
847-273-1231, FAX: 847-273-6408, 800/338-0753

NORTH AMERICAN SPECIALTY INSURANCE COMPANY
A New Hampshire Corporation

BALANCE SHEET AS OF DECEMBER 31, 2019
(Statutory Basis)

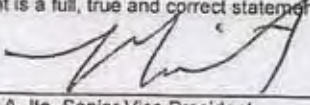
Valuation of securities on National Association of Insurance Commissioner Basis

ASSETS

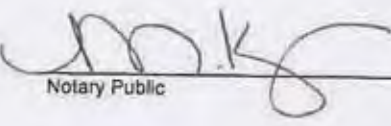
LIABILITIES

Cash	107,599,514	Reserve for Unearned Premiums	1,263
Bonds	205,726,476	Reserve for Losses and Loss Adjustment Expenses	21,145,528
Other Invested Assets	64,161,844	Funds Withheld	7,577,476
Other Admitted Assets	118,474,935	Taxes and Other Liabilities	143,938,110
		Surplus	323,300,392
TOTAL ADMITTED ASSETS	495,962,769	TOTAL LIABILITIES & POLICYHOLDERS' SURPLUS	495,962,769

The undersigned, being duly sworn, says: That he is Senior Vice President of North American Specialty Insurance Company, Kansas City, Missouri; that said company is a corporation duly organized, existing by virtue of the Laws of the State of New Hampshire and that said Company has also complied with and is duly qualified to act as Surety under the Act of Congress approved; July 1947 6 U.S.C. sec. 6-13; and that to the best of his knowledge and belief the above statement is a full, true and correct statement of the financial condition of the said Company on the 31st day of December, 2019.


Michael A. Ito, Senior Vice President
North American Specialty Insurance Company

Subscribed and sworn before me,
this 6th day of March, 2020


Notary Public



SWISS RE CORPORATE SOLUTIONS

**NORTH AMERICAN SPECIALTY INSURANCE COMPANY
WASHINGTON INTERNATIONAL INSURANCE COMPANY
WESTPORT INSURANCE CORPORATION**

GENERAL POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT North American Specialty Insurance Company, a corporation duly organized and existing under laws of the State of New Hampshire, and having its principal office in the City of Kansas City, Missouri and Washington International Insurance Company a corporation organized and existing under the laws of the State of New Hampshire and having its principal office in the City of Kansas City, Missouri, and Westport Insurance Corporation, organized under the laws of the State of Missouri, and having its principal office in the City of Kansas City, Missouri does hereby make, constitute and appoint:

J.W. GUIGNARD, BRYCE R. GUIGNARD, PAUL J. CIAMBRIELLO, APRIL L. LIVELY, JENNIFER L. HINDLEY, MARGIE L. MORRIS,

DEBORAH ANN MURRAY, M. GARY FRANCIS, CHRISTINE MORTON, KELLY PHELAN and ALLYSON FUSS WING JOINTLY OR SEVERALLY

Its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its act and deed, bonds or other writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of:

ONE HUNDRED TWENTY FIVE MILLION (\$125,000,000.00) DOLLARS

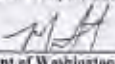
This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of North American Specialty Insurance Company and Washington International Insurance Company at meetings duly called and held on March 24, 2000 and Westport Insurance Corporation by written consent of its Executive Committee dated July 18, 2011.

"RESOLVED, that any two of the President, any Senior Vice President, any Vice President, any Assistant Vice President, the Secretary or any Assistant Secretary be, and each or any of them hereby is authorized to execute a Power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings and all contracts of surety, and that each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be binding upon the Company when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached."



By 
Steven P. Anderson, Senior Vice President of Washington International Insurance Company
& Senior Vice President of North American Specialty Insurance Company
& Senior Vice President of Westport Insurance Corporation

By 
Mike A. Ito, Senior Vice President of Washington International Insurance Company
& Senior Vice President of North American Specialty Insurance Company
& Senior Vice President of Westport Insurance Corporation



IN WITNESS WHEREOF, North American Specialty Insurance Company, Washington International Insurance Company and Westport Insurance Corporation have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers this 21st day of OCTOBER, 20 19.

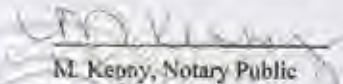
**North American Specialty Insurance Company
Washington International Insurance Company
Westport Insurance Corporation**

State of Illinois ss:
County of Cook

On this 21st day of OCTOBER, 20 19, before me, a Notary Public personally appeared Steven P. Anderson, Senior Vice President of

Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company and Senior Vice President of Westport Insurance Corporation and Michael A. Ito, Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company and Senior Vice President of Westport Insurance Corporation, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.




M. Renny, Notary Public

I, Jeffrey Goldberg, the duly elected Vice President and Assistant Secretary of North American Specialty Insurance Company, Washington International Insurance Company and Westport Insurance Corporation do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney given by said North American Specialty Insurance Company, Washington International Insurance Company and Westport Insurance Corporation which is still in full force and effect.

IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this 12th day of April, 20 21.

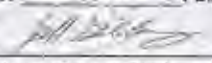

Jeffrey Goldberg, Vice President & Assistant Secretary of Washington International Insurance Company &
North American Specialty Insurance Company & Vice President & Assistant Secretary of Westport Insurance Corporation

EXHIBIT No. 3

ITB 21-09

**Herbert Street and Nova Road
Master Lift Station Rehabilitation**

Not attached, on file with City Clerk

Consisting of 558 Pages



City of Port Orange Public Works and Utilities Department

TO: Wayne Clark, City Manager

THRU: Lynn Stevens, Public Works and Utilities Director
Julia Wiggins, Public Works and Utilities Business Manager

FROM: Junos Reed P.E., Engineering and Construction Manager

DATE: May 10, 2021

SUBJECT: Award of ITB 21-09 Herbert & Nova Master Lift Station Rehabilitation to US Water Services Corporation

REQUEST:

The Public Works & Utilities Department is requesting the City Council to approve awarding ITB 21-09 Herbert & Nova Master Lift Station Rehabilitation to US Water Services Corporation in the amount of \$997,536.00 plus an additional \$50,000 for unforeseen conditions for a total amount not to exceed \$1,047,536.00.

PURPOSE:

This project is part of Public Works & Utilities continued effort to maintain/upgrade the wastewater collection and transmission system to ensure safe and effective collection and transmission of wastewater.

CONSIDERATION:

The Herbert & Nova Master Lift Station (LS 39) is a regional wastewater pumping facility that collects and conveys flows from over 6,000 connections (residential & commercial) in the northwest portion of the City's wastewater collection system. The lift station was originally constructed in 1987 and modified to its current configuration in 2001. The existing site is made up of the below-ground wet well and valve vault, as well as a small building housing the electrical switch gear, control panel, and back-up generator. The lift station needs modifications and improvements based on its current condition. The modifications needed to improved efficiency and reliability include new piping, valves, electrical/controls equipment, telemetry, emergency power, odor control, and architectural improvements. This infrastructure improvement project involves the complete rehabilitation of the Master Lift Station located at 3655 South Nova Road.

The project was bid in accordance with City Purchasing Policy. Six bids were received:

1	US Water Services Corporation	New Port Richey, FL	\$997,536.00
2	SGS Contracting Services, Inc.	High Springs, FL	\$1,023,700.00
3	Prime Construction Group, Inc.	Orlando, FL	\$1,492,775.00
4	Cain Enterprises, LLC	Ocala, FL	\$1,125,825.00
5	Danus Utilities, Inc.	Sanford, FL	\$1,177,000.00
6	McMahan Construction Co., Inc.	DeLand, FL	\$1,130,000.00

This project requires work be performed on an existing lift station in an older part of the City where there is limited availability of accurate as-built information. The station is a master station, which means it must remain in service during construction. There exists a great possibility of unforeseen/unanticipated conflicts and conditions in this work area. Therefore, staff is asking for an additional \$50,000 for unforeseen conditions that may arise as part of this construction project. All additional unforeseen work must be justified and approved in writing by City staff prior to authorization to the contractor. Any unused unforeseen conditions money would revert to the appropriate Fund Balance.

FUNDING:

This project is part of the Public Works & Utilities Department Capital Improvement Program for aging infrastructure replacement and approved in the FY21 budget.

Water Sewer R&R

Fund: 403

Name: Water and Sewer R&R

Cost Center: Water and Sewer

Program: Wastewater Treatment

Spend Category: Lift Stations

Tag: SLS004

Budget: \$325,000.00

Actual: 267,944.00

Water Sewer R&R - UNFORSEEN CONDITION REQUEST

Fund: 403

Name: Water and Sewer R&R

Cost Center: Water and Sewer

Program: Wastewater Treatment

Spend Category: Lift Stations

Tag: SLS004

Budget: \$325,000.00

Actual: \$50,000

Fund: 401

Name: Water and Sewer Services

Cost Center: Water and Sewer

Program: Wastewater Treatment

Spend Category: Lift Stations

Tag: SLS004
Budget: \$729,592.00
Actual: \$729,592.00

RECOMMENDATION:

The Public Utilities Department recommends City Council approve awarding ITB 21-09 Herbert & Nova Master Lift Station Rehabilitation to US Water Services Corporation in the amount of \$997,536.00 plus an additional \$50,000 for unforeseen conditions for a total amount not to exceed \$1,047,536.00.

ANTICIPATED SCHEDULE:

- a) June 15, 2021 Council Approval
- b) Notice to Proceed for construction, approximately 60 days after Council Approval
- c) The project will be substantially complete 330 days from the Notice to Proceed date and final completion 365 days from Notice to Proceed.

ATTACHMENTS:

- 1. ITB 21-09 Herbert & Nova Master Lift Station Rehabilitation Bid Documents
- 2. Mead & Hunt Letter of Recommendation of Award
- 3. Notice of Intent to Award
- 4. U.S. Water Services Corporation, Inc. Bid Submission



NOTICE OF INTENT TO AWARD

**ITB 21-09 Herbert and Nova Master
Lift Station Rehabilitation
May 10, 2021**

On April 29, 2021, the Purchasing Division of the City of Port Orange received six (6) bids for ITB 21-09 Herbert and Nova Master Lift Station Rehabilitation.

After review of the responses, City Staff has made a recommendation to award to the lowest responsive and responsible bidder, US Water Services Corporation.

This recommendation to award will be presented to City Council for approval on an upcoming agenda. Interested parties may review the City Council agenda at <https://www.port-orange.org/776/Agendas-and-Minutes>.

**Michael Hall
Purchasing Agent**



May 6, 2021

Junos Reed, PE
Engineering & Construction Manager
City of Port Orange
1000 City Center Drive
Port Orange, FL 32129

Email: jureed@port-orange.org

**RE: HERBERT AND NOVA LIFT STATION IMPROVEMENTS AND UPGRADES
BID NO. 21-09**

Dear Junos,

The City received six (6) bids on the above referenced project on April 29, 2021. U.S. Water Services Corporation of New Port Richey, Florida was the low bidder with a bid totaling \$997,536.00. U.S. Water Services Corporation's bid was found to be complete and responsive.

We have worked with U.S. Water Services Corporation on several projects of a similar nature in the past and they have performed satisfactorily. Therefore, we recommend that the City award this project, in its entirety, to U.S. Water Services Corporation in the total amount of \$997,536.00.

Do not hesitate to contact the office if you have questions. Thank you.

Sincerely,

A handwritten signature in blue ink, appearing to read "Brad T. Blais".

Brad T. Blais, P.E.
Vice President/Market Leader

BTB:bf

Attachment: Bid Tabulation

cc: Steve Parnell – City of Port Orange
Brad Blais, PE, Cassandra 'Casey' Cissell, PE – Mead & Hunt



OPENING DATE/TIME: April 29, 2021 @ 2:30PM
Bid Tabulation
ITB 21-09 Herbert and Nova Master Lift Station Rehabilitation

ITEM #	DESCRIPTION	Quantity	Unit of Measure	U.S. Water Services Corporation		SGS Contracting Services, Inc.		Prime Construction Group, Inc.		Cain Enterprises LLC	
				New Port Richey, FL		High Springs, FL		Orlando, FL		Ocala, FL	
				Total Unit Cost	Extended Cost	Total Unit Cost	Extended Cost	Total Unit Cost	Extended Cost	Total Unit Cost	Extended Cost
1	Pre-Construction Video	1	LS	\$ 2,500.00	\$ 2,500.00	\$ 500.00	\$ 500.00	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00
2	Demolition of Existing Lift Station	1	LS	\$ 36,838.00	\$ 36,838.00	\$ 25,000.00	\$ 25,000.00	\$ 75,000.00	\$ 75,000.00	\$ 194,612.00	\$ 194,612.00
3	Bypass Pumping	1	LS	\$ 24,572.00	\$ 24,572.00	\$ 75,000.00	\$ 75,000.00	\$ 164,000.00	\$ 164,000.00	\$ 61,196.00	\$ 61,196.00
4	Complete Lift Station	1	LS	\$ 315,638.00	\$ 315,638.00	\$ 418,700.00	\$ 418,700.00	\$ 819,089.00	\$ 819,089.00	\$ 318,570.00	\$ 318,570.00
5	Electrical (Includes Generator)	1	LS	\$ 380,640.00	\$ 380,640.00	\$ 300,000.00	\$ 300,000.00	\$ 242,000.00	\$ 242,000.00	\$ 326,864.00	\$ 326,864.00
6	Tie Into Existing Force Main	1	LS	\$ 21,292.00	\$ 21,292.00	\$ 35,000.00	\$ 35,000.00	\$ 6,000.00	\$ 6,000.00	\$ 20,500.00	\$ 20,500.00
7	DIP Fittings	0.5	TN	\$ 13,000.00	\$ 6,500.00	\$ 5,000.00	\$ 2,500.00	\$ 9,000.00	\$ 4,500.00	\$ 6,186.00	\$ 3,093.00
8	Installation of Decorative Wall	1	LS	\$ 44,654.00	\$ 44,654.00	\$ 35,000.00	\$ 35,000.00	\$ 46,200.00	\$ 46,200.00	\$ 52,652.00	\$ 52,652.00
9	Odor Control	1	LS	\$ 127,310.00	\$ 127,310.00	\$ 125,000.00	\$ 125,000.00	\$ 117,986.00	\$ 117,986.00	\$ 129,624.00	\$ 129,624.00
10	Permit Allowance	1	LS	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00
11	As-Built Plans	1	LS	\$ 9,828.00	\$ 9,828.00	\$ 1,000.00	\$ 1,000.00	\$ 6,500.00	\$ 6,500.00	\$ 4,260.00	\$ 4,260.00
12	Restoration	1	LS	\$ 22,764.00	\$ 22,764.00	\$ 1,000.00	\$ 1,000.00	\$ 5,000.00	\$ 5,000.00	\$ 7,958.00	\$ 7,958.00
				TOTAL BID	\$ 997,536.00	TOTAL BID	\$ 1,023,700.00	TOTAL BID	\$ 1,492,775.00	TOTAL BID	\$ 1,125,829.00
				Confirm the number of calendar days to complete upon receipt of PO:	<u>300</u> DAYS	Confirm the number of calendar days to complete upon receipt of PO:	<u>365</u> DAYS	Confirm the number of calendar days to complete upon receipt of PO:	<u>300</u> DAYS	Confirm the number of calendar days to complete upon receipt of PO:	<u>300</u> DAYS
				Shall warrant all materials for the minimum period of:	<u>1</u> YEAR	Shall warrant all materials for the minimum period of:	<u>1</u> YEAR	Shall warrant all materials for the minimum period of:	<u>1</u> YEAR	Shall warrant all materials for the minimum period of:	<u>1</u> YEAR
				Shall warrant all labor for the minimum period of:	<u>1</u> YEAR	Shall warrant all labor for the minimum period of:	<u>1</u> YEAR	Shall warrant all labor for the minimum period of:	<u>1</u> YEAR	Shall warrant all labor for the minimum period of:	<u>1</u> YEAR
Required Forms Submitted:				YES		YES		YES		YES	
Bid Bond Submitted:				YES		YES		YES		YES	
Responsive & Responsible Bidder:				YES		YES		YES		YES	

DISCLAIMER: THIS BID TABULATION INDICATES ONLY THE BIDS AS RECEIVED. ALL BIDS ARE SUBJECT TO VERIFICATION FOR ACCURACY, AND FOR SPECIFICATION AND CONTRACT COMPLIANCE. NO CONCLUSIONS ABOUT CONTRACT AWARDS SHOULD BE DRAWN FROM THESE PRELIMINARY TABULATIONS.

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/Tie Preference Statement
- X Form 7.5 – Public Entity Crimes Statement
- X Form 7.6 – Affidavit of Anti-Collusion
- X Form 7.7 – Statement of Bidder’s Qualifications
- X Form 7.8 – Professional References for Previous Experience
- X Form 7.9 – Listing of Subcontractors
- X Form 7.10 – Certificate as to Corporate Principal
- X Form 7.11 – Local Business Affidavit of Eligibility
- X Attachment H – CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION
- X Attachment 1 – Bid Proposal
- X Copy of License (Contractor, Sunbiz, etc.)
- X Bid Bond
- X Submission of one (1) original marked “ORIGINAL” and one (1) digital (CD or flash drive) version in PDF format.

BY:

U.S. Water Services Corporation

Name of Business


Authorized Signature Gary Deremer, President

4/29/2021

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 Invitation to Bid at the prices or rates as finally negotiated. I agree that my bid will remain firm for a period of up to ninety (90) 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 Invitation to Bid.

I certify that all information contained in this Bid is truthful to the best of my knowledge and belief. I further certify that I am a 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 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):

U.S. Water Services Corporation
NAME OF BUSINESS

4939 Cross Bayou Boulevard

MAILING ADDRESS

New Port Richey FL 34652

Gary Deremer
AUTHORIZED SIGNATURE

CITY, STATE & ZIP CODE

Gary Deremer, President

727 848 8292 / 727 849 8860

NAME, TITLE, TYPED

TELEPHONE NUMBER / FAX NUMBER

20-0008821

CCREGO@USWATERCORP.NET

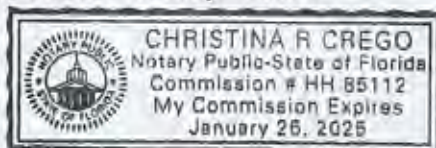
FEDERAL IDENTIFICATION #

E-MAIL ADDRESS

STATE OF FLORIDA
COUNTY OF PASCO

The foregoing instrument was acknowledged before me by means of X physical presence or _____ online notarization, this 29th day of April, 2021 by Gary Deremer as President of *USWSC, a Florida Corporation. He or she is X personally known or _____ produced as identification.

*U.S. Water Services Corporation



Christina R. Crego
Notary Public, State of FLORIDA

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, Specifications, and any other documents accompanying or made a part of this invitation to Bid.

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: 4/5/2021 Addendum # 3 Date: 4/13/2021
Addendum # 2 Date: 4/8/2021 Addendum # 4 Date: 4/15/2021

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 orders 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 following statement regarding Change Orders to the awarded Contract:

U.S. Water Services Corporation
Name of Business

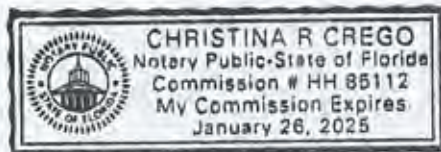
By: [Signature]
Printed Name: Gary Deremer
Title: President

STATE OF FLORIDA
COUNTY OF PASCO

The foregoing instrument was acknowledged before me by means of X physical presence or
online notarization, this 29th day of April, 2021, by Gary Deremer who
is personally known to me or who produced _____ as identification.

My Commission Expires: January 26, 2025

[Signature]
Notary Public, State of FLORIDA
Printed, typed or stamped name, commission and
expiration:



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 that are equal with respect to price, quality, and service are received by the city for the 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 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 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 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 any 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.

U.S. Water Services Corporation

Name of Business

By: [Signature]

Printed Name: Gary Deremer

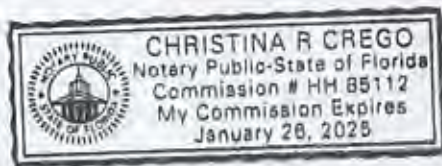
Title: President

STATE OF FLORIDA

COUNTY OF PASCO

The foregoing instrument was acknowledged before me by means of X physical presence or
online notarization, this 29th day of April, 2021, by Gary Deremer who
is personally known to me or who produced as identification.

My Commission Expires: January 26, 2025



[Signature]

Notary Public, State of FLORIDA

Printed, typed or stamped name, commission and expiration:

FORM 7.5 – SWORN STATEMENT UNDER SECTION 287.133(3)(A), FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES
(To be signed in the presence of notary public or other officer authorized to administer oaths.)

Before me, the undersigned Authority, personally appeared affiant Gary Deremer, who, being by me first duly sworn, made the following statement:

1. The business address of U.S. Water Services Corporation (name of Offeror or business) is 4939 Cross Bayou Blvd., New Port Richey FL 34652.
2. My relationship to U.S. Water Services Corporation (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 an 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 of Administrative Hearings is attached to this statement. (Draw a line through paragraph 7 if paragraph 6 above applies.)~~

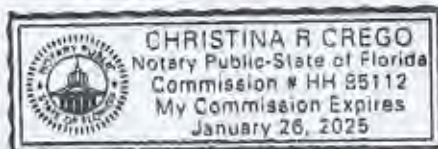
U.S. Water Services Corporation
Name of Business

By: _____
Printed Name: Gary Deremer
Title: President

STATE OF FLORIDA
COUNTY OF PASCO

The foregoing instrument was acknowledged before me by means of X physical presence or
online notarization, this 29th day of April, 2021, by Gary Deremer who
is personally known to me or who produced _____ as identification.

My Commission Expires: January 26, 2025



Christina R. Crego
Notary Public, State of FLORIDA
Printed, typed or stamped name, commission and
expiration:

FORM 7.6 – ANTI-COLLUSION FORM

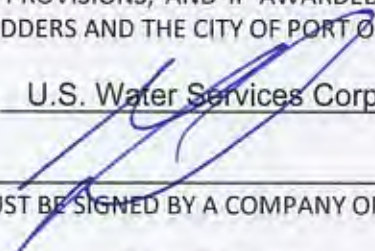
ANTI-COLLUSION STATEMENT BID FORM:

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 BIDDERS ACCEPTANCE OF THE TERMS AND CONDITIONS OF THE FOREGOING SPECIFICATIONS, CONTRACT AND PROVISIONS, AND IF AWARDED, THIS CONTRACT WILL REPRESENT THE AGREEMENT BETWEEN THE BIDDERS AND THE CITY OF PORT ORANGE.

NAME OF FIRM: U.S. Water Services Corporation

SIGNED BY: 
(MUST BE SIGNED BY A COMPANY OFFICER OR AUTHORIZED AGENT)

PRINTED SIGNATURE: Gary Deremer

TITLE: President

ADDRESS: 4939 Cross Bayou Blvd.,

CITY: * STATE: FL ZIP CODE: 34652
*New Port Richey

TELEPHONE: ** 727 849 8860
** 727 848 8292

COMPLETION TIME: 365 Days

F.E.I.N. NUMBER: 20-0008821

NO Bid may be withdrawn for a period of ninety (90) days subsequent to the submittal of the Bids, without the consent of the City of Port Orange.

NO BID (REASON): _____

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 7.8 is complete, true, and correct to the best of their knowledge and belief. If necessary, questions 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 contracting business under your present firm or trade name?
- F. Contracts on hand: (Schedule these, showing amount of each contract and the appropriate anticipated dates of completion.)
- 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.
- K. List your major equipment currently owned or leased.
- L. Experience in work similar to this type of project.
- M. Background and experience of the principal members of your organization, including the officers.
- N. Credit currently available: \$ _____
- O. Give bank reference: _____
- P. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the Owner?
- Q. The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the Owner in verification of the recitals comprising this Statement of Bidder's Qualifications.

U.S. Water Services Corporation
Name of Business
By: _____
Printed Name: Gary Deremer
Title: President

STATE OF FLORIDA
COUNTY OF PASCO

The foregoing instrument was acknowledged before me by means of X physical presence or
online notarization, this 29th day of April, 2021, by Gary Deremer who
is personally known to me or who produced as identification.

My Commission Expires: January 26, 2025



Christina R. Crego
Notary Public, State of FLORIDA
Printed, typed or stamped name, commission and
expiration:

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 7.8 is complete, true, and correct to the best of their knowledge and belief. If necessary, questions may be answered on separate paper and attached, with any additional information that may be pertinent.

- A. Name of Bidder.** *U.S. Water Services Corporation*
B. Permanent main office address. *4939 Cross Bayou Blvd., New Port Richey FL 34652*
C. Date organized. *April 28, 2003*
D. If a corporation, where incorporated. *Florida*
E. How many years have you been engaged in the contracting business under your present firm or trade name? *17+ Years*
F. Contracts on hand: (Schedule these, showing amount of each contract and the appropriate anticipated dates of completion.)

CONTRACT NAME	CONTRACT AMOUNT	ANTICIPATED DATE OF COMPLETION
Manatee County Satellite Lift Station R&R 2020, Group 2	\$659,947.30	11/21/21
Collier County NCWRF Aeration Basin 5#6 Diffuser System	\$545,915.05	11/13/21
Hernando County Quality Drive Lift Station Rehabilitation	\$876,394.29	5/28/21
Flagler Beach Potable Water Well 14	\$253,425.00	5/28/21

- G. General character of work performed by your company.** *Underground utility construction, rehabilitation, replacement, and repair. Routine Maintenance for Water/Wastewater Treatment Plant/ Facilities, lift stations and pump stations.*
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.

CONTRACT NAME	CONTRACT AMOUNT	DATE OF COMPLETION
Charlotte County BOCC Lift Station 815 Rehabilitation	\$573,376.88	05/2020
FGUA Seven Springs WWTF Improvements	\$2,105,835.28	06/2019
Lee County BOCC Pine Island WWTP Effluent Pump Station Replacement	\$437,159.59	05/2019
Town of Cross City WWTP 2017 WW Improvements CDBG	\$596,171.87	05/2019
City of Wildwood Ashley Parcel Water Treatment Plant	\$825,395.44	06/2016

- K. List your major equipment currently owned or leased.** Attached
L. Experience in work similar to this type of project.

CONTRACT NAME	CONTRACT AMOUNT	DATE OF COMPLETION
City of Cape Coral Refurbishment of Lift Station 106, 112, 114, 124, 214 & 304	\$1,078,348.67	03/22/2018
City of North Port Lift Station Rehabilitation Project 2017 Phase 1	\$176,389.66	08/14/2017
City of Starke Lift Station Upgrades	\$452,702.00	06/25/2017
St Johns County BOCC Lift Station Improvements Fish Island, Bartram Oaks & Bermuda Run	\$409,342.71	08/31/2016
Manatee County Satellite Lift Station R&R 2014, Group 3	\$279,637.44	01/8/2016

M. Background and experience of the principal members of your organization, including the officers. Resumes attached

N. Credit currently available: \$ 7,500,000.00

O. Give bank reference:

Wells Fargo Bank – Commercial Banking Division

Ryan Booher Account Manager

100 South Ashley Drive, Suite 1000, Tampa, FL 33602

Phone: (813) 225 4318

P. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the Owner? Yes

Q. The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the Owner in verification of the recitals comprising this Statement of Bidder's Qualifications.

Make Name	VIN Model	Status	Model Year	Asset Type
CHEVROLET	3500 W CRANE	Active	2012	Truck LD
FORD	F-550	Active	2003	Truck LD
FORD	F-550	Active	2012	Truck LD
BOBCAT	SKIDSTEER	Active	2012	Equipment
JOHN DEERE	544D LOADER	Active	1986	Equipment
JOHN DEERE	BACKHOE	Active	1986	Equipment
EQUIPMENT	DITCH WITCH TRENC	Active	1984	Equipment
EQUIPMENT	OBRIEN JET RODDER	Active	2010	Equipment
EQUIPMENT	ONAN PORT GENER	Active	1995	Equipment
EQUIPMENT	TRADEWIND PORT GEN	Active	2013	Equipment
EQUIPMENT	AKSA PORT GENERATOR	Active	2018	Equipment
TRAILER	TRAILER	Active	2007	Trailer
EMERSON	XSPORT ENCL TRL	Active	2004	Trailer
GOODWIN	4IN BYPASS PUMP	Active	2012	Equipment
BOBCAT	331	Active	2008	Equipment
GATOR MADE	EQUIPMENT	Active	2015	Trailer
GOODWIN	BYPASS PUMP	Active	2013	Equipment
TRAILER	FREEDMON 16FT ENCL	Active	2017	Trailer
GOODWIN	BYPASS PUMP	Active	2017	Equipment
GOODWIN	BYPASS PUMP	Active	2017	Equipment

CECIL DELCHER, CGC
Vice President, U.S. Water Services Corporation

Background and Present Responsibilities

Mr. Delcher is a Vice President and a cofounder of U.S. Water Services Corporation, a firm initiated by a group of water and wastewater utility professionals. He is joined by other individuals with high levels of expertise in relation to the business and technical aspects particular to the government regulated water and wastewater industry. While Mr. Delcher has led a diverse professional career, in his role as a State of Florida Certified General Contractor, Mr. Delcher has been responsible for bidding, planning and quality control on major construction projects for many firms over the past several years. From 2003 to present Mr. Delcher has provided General Contractor Services covering a value of projects totaling \$24,000,000.00 regarding jobs completed and currently in progress. From 1997 to 2002, he performed as the sole General Contractor Qualifier for H2O Utility Services, Inc. and American Water Services. During that period of time, the company's construction divisions were responsible for up to \$10,000,000 of construction annually. Services performed under his supervision included building construction, major water and wastewater plant rehabilitation and reconstruction, new plant construction, water distribution and wastewater collection line installation, as well as wastewater lift station and force main construction. He has participated in the construction of a wide range of utility and major public works projects in Florida. He has extensive knowledge of the construction process particularly related to water utility systems, and the management of large construction projects. Mr. Delcher's attention to detail and excellent client communication have resulted in many repeat projects, based on long term successful relationships he has established, both with public and private clients.

The knowledge and insight gathered from his extensive utility construction experience, building experience and past business and finance management bring a crucial component to the overall operations of our company.

Professional Experience

Azurix North America

11/00 – 05/03 General Contractor Qualifier. In his role as a General Contractor, Mr. Delcher was responsible for quality control on major construction projects. During this period of time, the company's construction divisions were responsible for revenues up to \$10,000,000.00 annually.

Services performed under his supervision included building construction, major water and wastewater plant rehabilitation and reconstruction, new plant construction, water distribution and wastewater collection line installation, as well as wastewater lift station and force main construction.

H2O Utility Services, Inc.

01/97 - 11/00 General Contractor Qualifier. Responsibilities included building construction, major water and wastewater plant rehabilitation and reconstruction, new plant construction, water distribution and wastewater collection line installation, as well as wastewater lift station and force main construction and advisement on general business matters. Mr. Delcher's knowledge and insight gathered from his extensive utility construction experience proved invaluable assisting the company successfully construct a wide range of water and wastewater facilities within the State of Florida.

Island Trader Marine

02/88 – 01/97 President and Owner. Performed and qualified the company as a General Contractor in Hillsborough and Pasco Counties, specializing in concrete work.

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Beacon Land Associates, Inc.

03/85 – 02/88 Vice President. Responsible for land development for home building division, managing assets and the home building division yearly business plan.

Real Estate Investor

05/84 – 03/95 Included purchasing and selling.

Lindrick Corporation

01/78 – 05/84 President. Developer/builder of residential homes, Lindrick Utilities, and real estate sales company in Gulf Harbors – Pasco County, Florida.

Beacon Homes, Inc.

12/76 – 01/78 Vice President. Responsible for land acquisitions and product development. Managed design and drafting departments.

US Homes, Inc.

12/69 – 10/76 Vice President. Responsible for community development, community planning, income properties and general management of numerous communities.

Eugene Knight, Inc.

10/63 – 12/69 Vice President. Managed commercial mortgage department, placing end loans with Metropolitan Life Insurance Company, Northwestern Mutual, Gulf Life and Massachusetts Mutual.

Project Experience

- Constructed 30,000 sf corporate office building – 2000-2001
- Constructed 150,000 gallon elevated storage tank and other water system improvements for the City of Mascotte – 1999
- Constructed master lift station for 1,000,000 gpd tie in of Gulf Harbors WWTP to City of New Port Richey system - 1999
- Constructed Chapel Avenue wastewater pumping station improvements for the City of Port Richey – 1999
- Constructed wastewater pumping station and fire service line for Evangel Assembly of God – Orlando, Florida – 1999
- Constructed duplex submersible wastewater Pumping station for Manatee County – 1999
- Constructed wastewater lift station for Lecanto Middle School – Citrus County School Board - 1999
- Demolition of 150,000 gpd Tarpon Lake wastewater treatment plant and restoration of site for Pinellas County – 1998
- Constructed tertiary filter and flow equalization system modifications to Country Meadows 300,000 gpd wastewater treatment facility, Plant City - 1998
- Constructed new aerobic digester and other plant modifications for 0.36 mgd Jasmine Lakes wastewater treatment facility - 1998
- Constructed hydropneumatic tank and water system improvements for Florida Church of God, Wimauma - 1998
- Constructed ground storage tank modifications for the City of Port Richey water treatment plant – 1994
- Constructed sedimentation basin modifications for the City of Port Richey water treatment plant – 1994
- Relocated the City of Port Richey water treatment and storage facility – 1992
- Constructed the Clay Shake Bridge for the City of Port Richey - 1991

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-
- Constructed the Cross Bayou Bridge for Pasco County – 1983
 - Constructed upgrades and modifications to the Lindrick Service Corporation Gulf Harbors to 1,000,000 gpd wastewater treatment plant - 1982
 - Constructed three miles of canal in Sea Forest subdivision in Pasco County – 1982
 - Constructed 60,000 gpd Highland Lakes potable water treatment plant – Pinellas County – 1973

Education

University of Florida, Bachelor of Science, Business Administration – 1960

Professional Certifications and Licenses

- Licensed General Contractor – State of Florida, 1972, Certificate # CGC-003307
- Florida Wastewater Treatment Certificate, “C”, #5902
- Commercial Pilot’s License, Instrument Rating

Military

- Patrol Plane Commander, Pacific Fleet
- Retired Lieutenant Commander, USNR

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Dennis Muldoon
5151 SE 180th Terrace
Ocklawaha, FL 32179

(PH) 803-465-1196
DMuldoon@ueswatercorp.net

Resume

Friday, May 27, 2016

Prepared by: Dennis Muldoon
Regional Manager
US Water Services Corporation Region 6
Citrus, Sumter, Lake, Orange, Volusia, Seminole, Brevard, and Osceola
Counties

Licenses and certificates:

Florida A – Wastewater Treatment License # 0006452
Florida C – Water Treatment License # 0005982
Florida C - Water Distribution Certificate. #3996
Florida C – Wastewater Collections Certificate # 3722

I was awarded the F.W.P.C.O.A. Region 4 Facility Excellence Award in 2002.

I was awarded the F.D.E.P. State Award for Operations and Maintenance Excellence in 2003.

I have 32 years of Water & Wastewater treatment training and experience.

8-1-14 to Present

US Water Services Corporation

I hold the position of Regional Manager

2-11-10 TO 7-31-14

FLORIDA UTILITY GROUP, LLC.

I help the position of Compliance & Operations Manager.

4-11-96 to 2-11-10

Aqua Utilities Florida

I held the position of South Florida Area Coordinator.

After coming home from overseas contract employment from Feb. 95 to April 96 I took a hiatus.

7-9-93 to 2-15-95

Johnson Controls World Services Inc.

I held the position of Operator II

Contract ended

8-9-90 to 5-31-93

Holmes & Narver Services Inc.

I held the position of Operator II

Contract ended

4-11-84 to 7-31-90

Hernando County Utilities

I held the position of Lead Operator

I left to accept working on overseas contracts.

Sincerely,
Dennis Muldoon

References upon request.

EDWARD MITCHELL
General Manager

Professional Experience

US WATER SERVICE CORPORATION, NEW PORT RICHEY, FL 34652

General Manager/Senior Vice President

10/13- Present

Maintains corporate margins for 77 million dollar utility company with 470 employees which specializes in water and wastewater operations, engineering, maintenance and construction management within the states of Florida, Texas, Iowa and Oklahoma. Develops business efficiencies for cost savings; organizational development; primary client management for 400 clients; corporate marketing and media relations. Direct report to the President/CEO.

CITY OF WEST PALM BEACH, FLORIDA

Population: 110,000

1,500 Employees

\$500 Million Budget

Daytime service population: 300,000

56 square miles

Two CRA Districts

City Administrator

09/1999 - 10/2013

Interim CRA Executive Director

12/1999 - 04/2001

05/2003 - 12/2004

Acting City Administrator

04/1999 - 09/1999

- Manage full service City operations - supervise department directors, including Police, Fire, Finance, including Community Events, Housing & Community Development, Library, Human Resources, Parking, Public Utilities, including Water and Sewer, Public Works, Engineering, Grounds Maintenance, Sanitation and Street Lighting, Support Services, including MIS, Fleet Maintenance, Downtown Maintenance and Facility Maintenance. Supervision includes directing departmental work assignments, personnel activities and budgetary controls. Coordinate \$70 Million General Fund Capital Improvement Programs.
- Developed Parks and Recreation Master Plan - organized and coordinated successful \$20 million Parks Bond referendum passed by voters in March 2000, improving, renovating and building new community centers and parks; initiated and supervised management studies for operational efficiency in Police Department, Fire Department, Human Resources, Construction Services, Parking Operations and the Water Plant; restructured the City's budget process for goal-oriented and Commission priority focus, condensing process to approximately two months with greater public input.
- Developed Voluntary Separation Program exiting approximately 150 employees avoiding layoffs. Initiated classification and compensation salary study consolidating over 120 job classifications and addressing salary inequities; redesigned annual management appraisal system to be goal and performance expectation driven; developed employee recognition program recognizing

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outstanding individual and team performances (STAR), Employee Development Promote Yourself First, and Supervisor and Manager Resource Training (SMART).

- Coordinated the development of the First City Employee Health Clinic in July 2011, serving 3,000 employees and dependents receiving services including primary and urgent care, prescription drugs, wellness services and health risk assessments.
- Initiated and coordinated first Mayor/Commission strategic planning budget retreat which resulted in streamlining the Mayor/Commission budget process to two months, revision of budget forecasting policies, and the development of a five-year strategic plan.
- Solicited development proposals from private sector for public/private redevelopment partnerships, including CityPlace, urban infill programs, downtown residential district, library/City Hall complex, waterfront, etc.
- Presented topics and issues at monthly neighborhood forum for over fifty neighborhood associations; represented City before business groups, developers, homeowners associations, advisory boards, the School District and outside government agencies.
- Initiated community outreach programs including City-wide weekly email newsletter, department open houses, Citizens' Education Program, City web site, Mayor's Response Team, complaint resolution line, and government television channel.
- Developed and implemented hurricane Comprehensive Emergency Management Plan. Coordinated hurricane emergency response team for Hurricane Frances, Hurricane Jeanne and Hurricane Wilma and developed City-wide relief effort to include debris clean-up, the distribution of food, water and ice, and the resource and recovery center deployment of emergency services.
- Conducted daily hurricane briefings with senior management staff; coordinated FEMA, State, Palm Beach County and City emergency response teams to ensure accurate and immediate service delivery; conducted pre-hurricane and post-hurricane assessment meetings.
- Negotiated contracts to provide water and fire services to adjoining municipalities.
- Coordinated and monitored the City's State and Federal lobbying efforts resulting in the City receiving more than \$40 million in grants for Public Utilities, Library Services, Transportation , Community Development , Recreation programs, Police, etc.
- Developed emergency reserve fund policy maintaining a fund balance reservation equivalent to 15% of operating revenues. Funding is reserved for emergencies such as natural disasters, unanticipated economic downturns, etc and totaled approximately \$38 million as of September 30, 2012. The City's 15% designation is strong compared to Cities of similar size and makeup. This practice represents an integral part of the Rating Agency criteria. The City's financial

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management practices include monthly revenue and expenditure financial management reports, long-term financial planning (i.e. five-year financial forecasts), and a formal Emergency Fund Balance Policy.

- Exercised oversight responsibility for the coordination and development of several major initiatives: the rebirth of the city's historic downtown linking CityPlace through streetscape improvements; free trolley services between the two shopping and entertainment districts, and a discount parking program; CityCenter [the new City Hall and Library projects]; the Banyan Waterfront Project; the establishment of the Residential Incentive District to encourage housing in the downtown; and the implementation of the \$30 million neighborhood improvement program.

Assistant City Administrator

01/1993 - 09/1999

- Facilitated City through a mid-year \$10 Million budget shortfall; achieved a balanced budget with program budgeting analysis, union concessions and downsizing of over 200 positions. Directed City-wide assessment of revenue sources resulting in an increase in development, occupational licensing, and other user fees and created a fire inspection fee.
- Chief negotiator in an environment of 1,200 represented employees, including two Police unions, Fire, General employees, and a Professional Managers and Supervisors Unit. Coordinate recruitment for executive-level positions. Evaluate department director's annual performance including goal setting and performance measurement.
- Coordinated privatization of auditorium, sanitation services, landscape maintenance, and parking systems, including development of Requests for Proposals, proposals evaluations and reviews of existing City service levels and costs. Coordinated benchmarking of Wastewater Plant operation for a \$2 million savings.
- Direct preparation of City Commission agenda items, including support materials such as ordinances, resolutions, contracts and interlocal agreements. Draft weekly information memorandum for Mayor and City Commission.
- City liaison with private management firms for City-owned Auditorium and City-owned Stadium, parking facility management, recycling services and roll-off container services.

CITY OF PALM BEACH GARDENS, FLORIDA

Population: 30,000

225 Employees

\$15 million budget

Assistant City Manager

06/1987 - 01/1993

- Served as Acting City Manager in City Manager's absence. Served as liaison to City Manager with Department directors, municipal and county officials. Employees, City advisory boards, and the

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public. Developed and coordinated the City's \$15 Million annual budget. Supervised departmental work assignments; analyzed department responses to manager's directives. Managed the Code Enforcement Division.

- Negotiated Fire, General Employees, and two Police union labor contracts affecting over 175 employees. Responsible for personnel administration of over 225 employees, investigated and resolved employee grievances, hired management employees, and developed new personnel policies; modernized City's personnel and accounting systems. Organized the installation and monitored usage of Employee Assistance Program.
- Project Manager Comprehensive Growth Management Plan update. Coordinated annexation of 5,000 undeveloped acres and produced service delivery studies, economic forecasts, and population projects for the area.
- Prepared RFP's and served as liaison with professional consultants. Negotiated agreements and City Contract s. Researched special projects and prepared recommendations for City Manager. Produced weekly City Council agenda, reports and items.

CITY OF WEST PALM BEACH, FLORIDA

Population 70,000

07/1986 - 06/1987

Management Intern - City Manager's Office

- Functioned as Administrative Assistant. Coordinated resolution of citizen complaints and City Commission agenda reports and items. Assisted budget preparation.
- Researched information for City informational profile for Planning and Community Development Department. Assisted in City advisory board and committee appointments.
- Revised employee orientation manual, reviewed and edited job descriptions. Organized employee community involvement programs. Designed and coordinated City's first citizen satisfaction survey.
- Conducted a rate comparison and supervision survey of municipal sanitation for Public Works Department. Developed administrative policies for a City vehicle preventative maintenance program, producing a cost savings of approximately \$500,000.

GRADUATE AND UNDERGRADUATE LEVEL WORK EXPERIENCE:

Town of Northwood, Massachusetts

Administrative Intern - Office of the General Manager

09/1985 – 12/1985

Commonwealth of Massachusetts

Public Policy Intern - Executive Office of Communities and Development

06/1985 – 08/1985

Division of Municipal Development, Boston Massachusetts

01/1986 – 05/1986

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City of Burlington, Vermont Student Intern - Community and Economic Development Office	09/1983 – 12/1983
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Education

Master's in Public Administration Suffolk University, School of Management, Boston, Massachusetts	1986
Bachelor of Arts in Political Service St. Michael's College, Winooski, Vermont	1984
Dale Carnegie Leadership Training Certification	1999
ICMA Credential Manager	2003

Professional Affiliations

International City/County Management Association	1985 to present
ICMA 25 Year Service Award	2012
Florida City I County Management Association	1987 to present
FCCMA Board of Directors	2004 - 2006
Secretary Treasurer	2006 - 2007
Vice President	2007 - 2008
President	2008 - 2009
FCCMA Mike Roberto Award for Career Development	2011
Florida League of Cities Director	2009 - 2010
West Palm Beach Audit Committee	2001 - 2004
West Palm Beach Police Pension Board	1996 - present
West Palm Beach Chair of Police Pension Board	2002 - present
Florida Public Pension Trustee Association Certification	2005

Civic Affiliations

Palm Beach Day Academy Board of Directors	2002 - 2008
Palm Beach County Big Brothers/Big Sisters Board of Directors	1986 - 1993
Board of Governors	1993 - 2008
President	1992 - 1993
Big Brother/Little Brother Volunteer	1987 - 1995
Leadership Palm Beach County	1989
Roger Dean Sports Stadium Advisory Board	2005 to present
American Heart Association Heart Walk - Executive Cabinet	2005 - 2007

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GARY DEREMER, CUC
Chief Executive Officer
President

Background and Present Responsibilities

Mr. Deremer brings more than 25 years of progressive, successful experience in all phases of water and wastewater services including management of municipal and private systems, professional consulting, engineering, technical diagnostics, complete utility operations, environmental laboratory services, maintenance, management and construction. His diverse career has allowed him the opportunity to provide technical guidance to specialized engineering groups which has enabled him to facilitate improved operational designs. He is well known for maintaining the highest level of integrity in business activities and field services. Mr. Deremer is respected at all levels within the regulatory agencies, including local Health Agencies, the Florida Department of Environmental Protection, the various Water Management Districts, and the Florida Public Service Commission.

U.S. Water Services Corporation (USWSC) 2003 to Present: Principal Founder, CEO and President, Mr. Deremer is responsible for overall strategic growth, management, business development and quality control of utility design, construction, operation and maintenance. A licensed water and wastewater operator and underground utility contractor, his oversight impacts more than 450 clients in the United States with an aggregate 150 MGD of water treatment plant capacity from 200+ individual water treatment sites - with potable water provided to over 1,000,000 consumers daily - and oversight provided in relation to wastewater treatment affects an aggregate of 70 MGD.

Professional Experience

First hand knowledge of all aspects of water and wastewater utility operation, design, regulatory requirements, engineering, maintenance, construction, laboratory services, distribution and collection systems, operation of excavation equipment, vacuum and closed circuit televising trucks, sealing & grouting equipment, pipeline installation, lift station repair and rehabilitation, and overall business management. Additionally, extensive experience related to reverse osmosis, lime softening, ion exchange filtration, activated carbon, pressure and gravity filtration, iron removal, extended aeration, contact stabilization, nitrogen and phosphorus removal, high level disinfection, advanced waste treatment, sequential batch reactors, rotating biological contactors, trickling filters, rapid infiltration basins, spray fields, wetland treatment & disposal systems, reuse and reclaim systems and surface water discharges. Responsibilities include preparation of various technical reports, policies and plans relating to water conservation, water distribution cross connection control, emergency operation procedures, auxiliary power generation, disaster preparedness, capacity analysis for water and wastewater systems, unaccounted water studies, safety programs and oversight of all other regulatory reports. Provide contract negotiations for private and public utilities relating to bulk water and wastewater agreements, service territories and associated fee and rate schedules.

American Water Services, Inc.

- 11/00 – 04/03 General Manager and Vice President for the State of Florida and Caribbean Operation and Maintenance Division of American Water Services, Inc., formerly known as Azurix North America, H₂O Utility Services and Culligan Operating Services; responsibilities included planning, budgeting, staffing, business development, training, and provision of overall management, leadership and direction for the Division. The division consisted of more than 150 employees with estimated annual sales in excess of \$24,000,000.00 for the year 2002.
- Prepared and implemented a merger plan to amalgamate H₂O Utility Services, Inc., & Culligan Operating Services into a Florida Operations and Maintenance Group. The merger plan provided the foundation and blueprint for the Florida Operations and accurately identified areas of administrative consolidation including office locations, equipment and staffing resources, the cross marketing of business lines within and outside of the Florida group, the creation of geographical regions to enhance customer service and increase profitability, and future markets. The plan was successfully implemented in January 2001 as demonstrated by achieving target margins, staffing stability, increased market share and notable growth.
- Secured in excess of \$160,000,000.00 in aggregate value of new business in the areas of utility operation, maintenance and construction during the year of 2001. This included selection by the Florida Governmental Utility Authority as preferred operating company for their pending purchase of the Florida Water Utility System. Mr. Deremer led the proposal team and negotiations on a proposal that totaled approximately \$40,000,000.00 per year in value.
- In late 2001 expanded to create an additional region in the US Virgin Islands. Initial presence in the market was established, the region became self-supportive in regard to revenue, and high levels of growth were obtained.

Founder H2O Utility Services, Inc. 1993

- President from inception to 2000 when this company was sold to Azurix/American Water Services, Inc. As a utility operations and maintenance company, the company primarily provided utility related services within the State of Florida. In 1998 the company was expanded to provide Engineering, General Contracting and Laboratory Services. The company experienced progressive growth and substantial profitability and became part of a national company at the time of sale.

City of Port Richey, Florida 1993 – 2005

- Maintained the appointed public position of Consulting Director of the utility system serving over 9000 residents. Responsibilities included all aspects of the Utility System, including strategic growth planning, rate studies, regulatory monitoring and enforcement, preventative and emergency maintenance oversight, attendance and representation of the Utility Department at City Council meetings, budgeting and staff oversight.

Utility Manager - City of Port Richey - May 1989-October 1993 (as direct city employee):

- Managed a twenty million dollar water and wastewater utility system. Utility system services approximately 9,000 residents in West Pasco County, Florida. Developed and implemented plans and procedure for the efficient operation and maintenance of the City's utility system.
- Conducted feasibility studies for private utility systems acquisition.
- Supervised personnel engaged in utility billing, inspection, water and wastewater operation, and maintenance.
- Made recommendations to City Council regarding sufficiency of rates, capital improvements, budgeting, staffing and utility related contracts.
- Prepared curriculum and taught Backflow/Cross Connection on behalf of Region 4 of the Florida Water and Pollution Control Operators Association.
- Instructed students during an annual Short School in the subjects of mathematics and lime softening.
- Conducted numerous oral presentations on water conservation to various civic associations in West Pasco County.

Most Recent Project Experience

Specialized Technical Support Services: Ongoing provision of technical support to a number of large national engineering firms relating to system design, process control, facility operations, troubleshooting, facility commissioning, and cost estimating for both construction and operations.

FGUA – Florida Governmental Utility Services: Pasco County Systems – Operation and Maintenance of Water, Wastewater, Reclaim and additional Customer Service

In conjunction with the planning of the Pasco County Government, The Aloha Utility System was purchased by the FGUA in February 2009. U.S. Water Services Corporation was selected by the FGUA as the preferred provider to operate and maintain the water, wastewater and reclaimed facilities, associated infrastructure and provide billing/collection services. Now known as the FGUA Pasco System - the Aloha Utility System previously existed as the second largest privately held utility system in the State of Florida while serving 17,400 connections and a population of approximately 45,000. Mr. Deremer and U.S. Water Services are assisting the FGUA and the County of Pasco in resolving publicized water quality problems that have plagued the system over many years. U.S. Water provides the entire operational and management staff which totals 38 staff members to the FGUA through utility contract services. The total system consists of 11 individual Water Treatment Plants with combined production of 4.0 MGD. The WWTF capacity totals 2.1 MGD with separate flow received direct by Pasco County totaling 0.48 MGD. The WWTF is an extended air treatment facility with mechanical screening and grit removal, effluent

traveling bridge filter, 2.3 million gallons of reject effluent storage and 17.1 million gallons of total reclaimed water storage.

City of Lauderdale: In March, 2009 and continuously since that time, U.S. Water Services began providing relief operations and maintenance services to the City's 16 MGD lime softening WTP. At the request of the City of Lauderdale, and under the lead of Mr. Deremer, U.S. Water Services Corporation (USWSC) was retained under an emergency work authorization to provide an assessment of the possible cause(s) of a decrease in water production through City's water treatment plant (WTP) and to also perform an evaluation of the City's water treatment plant and operating practices. Mr. Deremer continues to oversee services required for effective operations of the City facility.

City of West Palm Beach, Florida: U.S. Water Services is providing on-site professional services at the City Water Utility on an ongoing basis. Mr. Deremer's responsibilities include evaluation of the City's 44.7 MGD surface water treatment facility, 8 distribution pump stations and source water system. U.S. Water initially became engaged in assisting the City in late October 2007, when requested to troubleshoot bacteriological contamination events; the contamination source was identified and remedied. Mr. Deremer is currently engaged in assisting the City with a utility related capital improvements program to upgrade the existing water treatment system and also long term planning relating to water supply and treatment. U.S. Water Services continues to provide daily oversight of utility operations at the water treatment facility which Mr. Deremer is routinely directing.

City of North Lauderdale, Florida:

The 7.5 MGD Lime Softening Water Treatment Facility treats water from three (3) groundwater wells. Raw water is first treated to remove hydrogen sulfide and carbon dioxide prior to lime softening. Softening occurs in two (2) accelerators (solids contact basins) rated at 2,500 GPM each. USWSC provides complete Operations and Maintenance of the treatment facility including twenty four (24) hour a day staffing, purchasing of all chemicals, preventive, predictive and corrective maintenance, and facility management. Additionally, Mr. Deremer performed a facilities condition assessment, which will be used by the City for Capital Planning and Improvements purposes.

St. Luce West Utility District - Florida: Project Manager assigned to resolve lead exceedance issues for 4.0 mgd Reverse Osmosis (RO) Treatment System; utilizing calcite reactors for stabilization. Project involved quick turn-around design/build solution in which USWSC performed both the engineering and construction service to resolve corrosive water issue.

City of Port Richey – Florida: Provision of ongoing technical support, serving approximately 9,000 residents on gulf coast. USWSC provides engineering services including system expansion for the WTF and WW Collection systems, plan reviews, storm water utility management, impact fee rate studies and other related services. Additionally, USWSC provides complete contract operations for the City's 2MGD filtration water treatment facility.

St. Johns County School Board: Startup and commissioning at new RO treatment system in St. Johns County.

Everglades City - Florida: Evaluated the water and wastewater treatment systems of the City of Everglades City. Project included recommendations to restore wastewater treatment facility (WWTF) to advanced wastewater treatment (AWT) standards and the construction of new chloramine disinfection system for the water treatment facility (WTF).

Florida Keys Aqueduct Authority: Provision of ongoing technical support relative to best available treatment (BAT) and advanced wastewater treatment (AWT) treatment in the Florida Keys at the Bay Pointe, Layton and Little Venice facilities.

Key Largo Wastewater Treatment District – Florida: Technical review of proposed wastewater treatment system expansion to 2.0 mgd for advanced wastewater treatment (AWT) facility. Provides technical review of plans, specifications, on-site chemical optimization, reviews system operations and maintenance procedures and make recommendations of utility policies and procedures.

Sioux City, Iowa: Technical support provided to develop treatment design alternatives for nutrient removal system for 23.0 mgd wastewater treatment facility. Review process designs and planning documents, perform cost estimates for various treatment and design alternatives.

Islamorada, Village of the Islands: Coordinated the commissioning of a new advanced wastewater treatment membrane wastewater treatment facility. Project included the startup of an extremely complex .35 mgd membrane treatment facility along with a vacuum collection system.

FDEP – John Pennekamp State Park: Project manager for the design of nutrient removal system. Project included the use of a multiple oxic/anoxic design configuration to treat high ammonia loading generate at the park by low-flow toilets and marine pump outs. After implementation of design, system was capable of reliable TN reduction from 150 to 200 mg/L to less than 10 mg/L TN.

Education

California State University, Sacramento. Advanced Waste Treatment Course. January 1994.

- Pinellas County Technical Institute. Florida Water and Pollution Control Operators Association. Wastewater Collection. Technology training Course. September 1993
- Pinellas County Technical Institute. Florida Water and Pollution Control Operators Association. Water Distribution B Technology Training Course. April 1993.
- Florida Chamber of Commerce Environmental Permitting Summer School. July 1991, August 1990.
- Santa Fe Community College. Florida Water and Pollution Control Operators Association. Wastewater Collection Class C Technology Training Course. August 1991.
- California State Univ. Sacramento. Operation of Wastewater Treatment Plants. Volume I: July 1991. Volume II: August 1991.
- Pinellas Vocational Technical Institute. Florida Water and Pollution Control Operators Association. Backflow Prevention Assembly Tester Training Course. September 1990.

- Santa Fe Community College. Florida Water and Pollution Control Operators Association. Water Distribution Class C Technology Training Course. August 1990.
- California State University Sacramento. Operation and Maintenance of Wastewater Collection Systems. Volume I: June 1990. Volume II: September 1990.
- California State University, Sacramento. Operation and Maintenance of a Water Distribution System. February 1990.
- Michigan State University. Supervisory Management in the Water/Wastewater Field. November 1990.
- University of Florida. Water Treatment Plant Operations Course. December 1988.
- California State University, Sacramento. Water Treatment Plant Operation. Volume I: January 1988. Volume II: July 1988.
- Pinellas Vocational Technical Institute. Water Operations Training Program Class C. December 1986.
- Florida Water and Pollution Control Operators Association. Water and Wastewater Treatment. Annual Short School. December 1986. October 1987. February 1988.

Professional Certifications

- State of Florida, Department of Business and Professional Regulation: Certified Underground Utility Contractor – CUC 1223914
- State of Florida, Department of Business and Professional Regulation: Licensed Water Treatment Plant Operator, Certification (#COA5894)
 - **Class A** February 1989
 - **Class B** August 1988
 - **Class C** February 1987
 - **Class D** November 1986
- State of Florida, Department of Business and Professional Regulation; Licensed Wastewater Treatment Plant Operator. Certification (#COB8727).
 - **Class B** July 1994
 - **Class C** May 1993
 - Wastewater Collection Technician.
Class A Certification #358 July 1997
 - Wastewater Collection Technician.
Class B Certification #563. October 1993.
 - Wastewater Collection Technician.
Class C Certification #1351. August 1991.

- Backflow Prevention Assembly Tester. Certification #7.

- Water Distribution Technician.

Class A Certification #285 July 1997

- Water Distribution Technician.

Class B Certification #371, April 1993.

- Water Distribution Technician.

Class C Certification #996. August 1990

Professional Memberships

American Water Works Association
Florida Water and Pollution Control
Operators Association
National Rural Water Association

Tony Perez
Maintenance Supervisor

Background and Present Responsibilities

Currently oversees Region 6 maintenance department for scheduling and contract completion. Responsible for the management and oversight of 14 employees.

Professional Experience.

U.S. Water Services Corporation

2013 to current

- Day to day scheduling and contract completion
- Responsible for ordering parts
- Responsible for all maintenance quotes in 8 counties
- Assist the area managers and regional manager is compliance with maintenance issues.

2008-2013 Oxford Pipeline

- Responsible for oversight of all projects within the area
- Responsible for day to day scheduling and contract compliance
- Responsible for maintenance troubleshooting.

Education/Licenses

- Confined Space Certified
- RPZ certified



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: Charlotte County BOCC
Contact Person: Mike Nixon, P.E., McKim & Creed
City, State: 551 North Cattlemen Rd. Suite 106 Sarasota FL 34232
Telephone Number: 941 379 3404
Email Address: mnixon@mckimcreed.com
Description of goods or
Services provided: Lift Station 815 Rehabilitation
Contract Amount: \$573,376.88
Start/End Date of Contract: 6/2019 - 5/2020
2. Company Name: DeSoto County BOCC
Contact Person: Tom Helt, P.E., Weiler Engineering Corporation
City, State: 201 West Marion Ave., Suite 1306 Punta Gorda FL 33950
Telephone Number: 941 505 1700
Email Address: thelt@weilerengineering.org
Description of goods or
Services provided: DeSoto County Lake Suzy Pumping System LS 7 Upgrade & Booster LS 15
Contract Amount: \$556,353.38
Start/End Date of Contract: 6/2018 - 7/2019
3. Company Name: Lee County BOCC
Contact Person: Elaine Capps, P.E., Lee County Utilities Dept.
City, State: 1500 Monroe Street Fort Myers FL 33901
Telephone Number: 239 533 8673
Email Address: ecapps@leegov.com
Description of goods or
Services provided: Pine Island WWTP Effluent Pump Station Replacement
Contract Amount: \$437,159.59
Start/End Date of Contract: 10/2018 - 5/2019

This document must be completed and returned with your Submittal.

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 to those required under the City's contract and 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.

	Contact Name	Phone	Current Client? Y or N	Number of years service provided	Description of service
1	Pasco County BOCC, Ivan Martinez, P.E.	(813) 235 6189	Y	3+ Years	Miscellaneous PS Rehab
2	Hillsborough County BOCC Angel Concepcion	(813) 824 6819	Y	3+ Years	Miscellaneous PS / WTP / LS Rehab
3	St Johns County BOCC Jim Overton	(904) 209 0158	Y	3+ Years	Miscellaneous PS/ LS Rehab

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 Engineer.** Bidder shall attach additional sheets as necessary.

Subcontractor No. 1

Name: Heyward Florida Incorporated

Description of Work: Odor Control System

Percent of Contract Price: 9.5 %

Previous Experience Together: Yes/No No

Subcontractor No. 2

Name: Shine and Company Inc.

Description of Work: Electrical

Percent of Contract Price: 10 %

Previous Experience Together: Yes/No No

Subcontractor No. 3

Name: Sanders Company Inc.

Description of Work: PICS

Percent of Contract Price: 10 %

Previous Experience Together: Yes/No Yes

Subcontractor No. 4

Name: _____

Description of Work: _____

Percent of Contract Price: _____

Previous Experience Together: Yes/No _____

Subcontractor No. 5

Name: _____

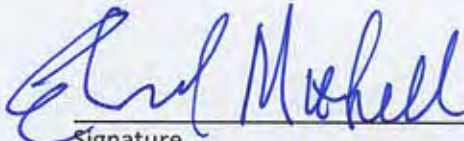
Description of Work: _____

Percent of Contract Price: _____

Previous Experience Together: Yes/No _____

FORM 7.10 – CERTIFICATE AS TO CORPORATE PRINCIPAL

I, Edward Mitchell, certify that I am the _____ secretary of the corporation named as Principal in the within Bid Bond; that Gary Deremer _____, who signed the said Bid Bond on behalf of the Principal, was then* of said corporation; that I know his signature, and his signature thereto is genuine; and that said Bid Bond was duly signed, sealed and attested for in behalf of said corporation by authority of its governing body.
*President



Signature



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 State of Florida***THIS AFFIDAVIT IS SUBMITTED IN REFERENCE TO THE FOLLOWING SOLICITATION:**RFSQ/RFP/ITN/BID/CONTRACT/PROJECT #(as applicable): 21-09BUSINESS NAME: *USWSC CONTACT PERSON/TITLE: ** MAILING ADDRESS: 4939 Cross Bayou Blvd.,CITY-STATE-ZIP: New Port Richey FL 34652Length of Time at Address Provided: 15 Year

*U.S. Water Services Corporation

**Christina Crego, Admin

Physical Presence of Business: ☒ Headquarters, ☐ Manufacturing Facility, or ☐ Locally Owned Franchise

And within Legal Boundaries:

☐ The City of Port Orange☐ Volusia County☒ The State of FLORIDAFlorida FEIN (Federal Employer Identification Number): 20-0008821BUSINESS STRUCTURE: ☒ Corporation☐ LLC☐ Partnership☐ Sole Proprietorship☐ Other (Specify): _____PHONE NUMBER: 727 848 8292FAX: 727 849 8860EMAIL: CCREGO@USWATERCORP.NET****Please attach a valid business tax receipt, or other such documentation******ATTESTATION – I understand that:**

- In accordance with City Of Port Orange City Code 2-275, local businesses shall have five (5) business days from bid/proposal opening to submit a best and final bid for evaluation. To qualify: A Port Orange business initial bid must be within (8%) of the lowest and best responsible bid from a non-Port Orange business; A Volusia County business initial bid must be within (5%) of the lowest and best responsible bid from a non-Volusia County business; A State of Florida business initial bid must be within (3%) of the lowest and best responsible bid from a non-State of Florida business.
- A local business must have its headquarters, manufacturing facility, or locally owned franchise located within the legal boundaries of the City of Port Orange, Volusia County, or the State of Florida, as indicated herein, for at least twelve (12) months prior to the bid or proposal opening date and a valid business license, issued by the corresponding government agency. Post office boxes are not verifiable and shall not be used for the purpose of establishing said physical address. Bidders shall attach to this affidavit of eligibility with a bid or proposal, a copy of a valid business tax receipt or such other documentation, to the city's satisfaction, demonstrating the physical business presence of the firm within corresponding local limits.
- The preference does not apply to goods or services exempted by statute or prohibited by Federal law, State law, or other funding source restrictions.
- The preference established in this policy does not prohibit the right of the City, or other authorized purchasing authority, to compare quality or fitness for use of supplies, materials, equipment and services proposed for purchase and compare qualifications, character, responsibility and fitness of all persons, firms or corporations submitting bids or proposals.
- The information contained herein may be subject to verification.
- A bidder who misrepresents the local preference status of its firm in a proposal or bid submitted to the City of Port Orange will lose the privilege to claim local preference status, and shall lose eligibility to claim local preference for a period of one (1) year. The City Manager may also recommend that the firm be referred for debarment.

As an authorized representative of the firm, I certify that this firm complies fully with the above requirements.

U.S. Water Services Corporation

Name of Business

By: _____

Printed Name: Gary DeremerTitle: PresidentSTATE OF FLORIDACOUNTY OF PASCO

The foregoing instrument was acknowledged before me by means of ☒ physical presence or _____ online notarization; this
29th day of April, 2021 by Gary Deremer as President of
*USWSC a Florida corporation, (He or she is ☒ personally known or _____ produced
 _____ as identification.

*U.S. Water Services CorporationChristina R. Crego
Notary Public, State of FLORIDA

Printed, typed or stamped name, commission and expiration:

***This document must be completed and returned with your Submittal***

PASCO COUNTY BUSINESS TAX RECEIPT

Issued pursuant and subject to Florida Statutes and Pasco County Ordinances. Issuance does not certify compliance with zoning or other laws. This receipt must be posted conspicuously in place of business.

2021

Expires September 30th



ACCOUNT #:: 50521

SIC CODE: 7389.06

MIKE FASANO
TAX COLLECTOR
PASCO COUNTY FLORIDA

TYPE OF BUSINESS
CONSULTANT / ADVISOR
STATE LICENSE #

U S WATER SERVICES CORPORATION

4939 CROSS BAYOU BLVD
NEW PORT RICHEY, FL 34652-3434

OWNER/QUALIFYING AGENT
DEREMER GARY

LOCATION ADDRESS:
4939 CROSS BAYOU BLVD
NEW PORT RICHEY, FL 34652-3434

DATE	RECEIPT	AMOUNT
08/26/2020	20-1-116686	93.75

Dear Business Owner:

Your **2021** Pasco County Business Tax Receipt is printed above. Please detach the receipt and display it in a place that is visible to the public and available for inspection.

The Pasco County Business Tax Receipt is in addition to any other license or certificate that may be required by law and does not signify compliance with zoning, health, or regulatory requirements. The Pasco County Business Tax Receipt is non-regulatory and is not meant to be a certification of the holder's ability to perform the service for which it is registered.

Business Tax Receipts expire September 30th. Annual renewals are mailed in June to the address of record at that time. Please contact our office if there are any changes to your business name, ownership, physical address, or closing of your business.

Thank you for allowing us to serve you!

MIKE FASANO
PASCO COUNTY TAX COLLECTOR

EAST PASCO GOVERNMENT CENTER
DADE CITY

WEST PASCO GOVERNMENT CENTER
NEW PORT RICHEY

TAX COLLECTOR BUILDING
GULF HARBORS

CENTRAL PASCO GOVERNMENT CENTER
LAND O' LAKES

COMPARK 75 BUSINESS PARK
WESLEY CHAPEL

CALL CENTER: MONDAY - FRIDAY 8:30 AM - 5:00 PM (352) 521-4338 • (727) 847-8032 • (813) 235-6076

PASCO COUNTY BUSINESS TAX RECEIPT

Issued pursuant and subject to Florida Statutes and Pasco County Ordinances. Issuance does not certify compliance with zoning or other laws. This receipt must be posted conspicuously in place of business.

2021

Expires September 30th



ACCOUNT #: 70098

SIC CODE: 1522.00

MIKE FASANO
TAX COLLECTOR
PASCO COUNTY FLORIDA

TYPE OF BUSINESS
GENERAL CONTRACTOR

STATE LICENSE #
CGC003307

OWNER/QUALIFYING AGENT
DEREMER GARY

LOCATION ADDRESS:
4939 CROSS BAYOU BLVD
NEW PORT RICHEY, FL 34652-3434

US WATER SERVICES CORPORATION

4939 CROSS BAYOU BLVD
NEW PORT RICHEY, FL 34652-3434

DATE	RECEIPT	AMOUNT
08/26/2020	20-1-116695	207.50

Dear Business Owner:

Your **2021** Pasco County Business Tax Receipt is printed above. Please detach the receipt and display it in a place that is visible to the public and available for inspection.

The Pasco County Business Tax Receipt is in addition to any other license or certificate that may be required by law and does not signify compliance with zoning, health, or regulatory requirements. The Pasco County Business Tax Receipt is non-regulatory and is not meant to be a certification of the holder's ability to perform the service for which it is registered.

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Thank you for allowing us to serve you!

MIKE FASANO
PASCO COUNTY TAX COLLECTOR

EAST PASCO GOVERNMENT CENTER
DADE CITY

WEST PASCO GOVERNMENT CENTER
NEW PORT RICHEY

TAX COLLECTOR BUILDING
GULF HARBORS

CENTRAL PASCO GOVERNMENT CENTER
LAND O' LAKES

COMPARK 75 BUSINESS PARK
WESLEY CHAPEL

CALL CENTER: MONDAY - FRIDAY 8:30 AM - 5:00 PM (352) 521-4338 • (727) 847-8032 • (813) 235-6076

PASCO COUNTY BUSINESS TAX RECEIPT

Issued pursuant and subject to Florida Statutes and Pasco County Ordinances. Issuance does not certify compliance with zoning or other laws. This receipt must be posted conspicuously in place of business.

2021

Expires September 30th



ACCOUNT #:: 70096

SIC CODE: 1623.00

MIKE FASANO
TAX COLLECTOR
PASCO COUNTY FLORIDA

TYPE OF BUSINESS
EXCAVATING & UNDERGROUND UTILITY CONTR

STATE LICENSE #
CUC1223914

OWNER/QUALIFYING AGENT
DEREMER GARY

LOCATION ADDRESS:
4939 CROSS BAYOU BLVD
NEW PORT RICHEY, FL 34652-3434

US WATER SERVICES CORPORATION

4939 CROSS BAYOU BLVD
NEW PORT RICHEY, FL 34652-3434

DATE	RECEIPT	AMOUNT
08/26/2020	20-1-116690	76.25

Dear Business Owner:

Your **2021** Pasco County Business Tax Receipt is printed above. Please detach the receipt and display it in a place that is visible to the public and available for inspection.

The Pasco County Business Tax Receipt is in addition to any other license or certificate that may be required by law and does not signify compliance with zoning, health, or regulatory requirements. The Pasco County Business Tax Receipt is non-regulatory and is not meant to be a certification of the holder's ability to perform the service for which it is registered.

Business Tax Receipts expire September 30th. Annual renewals are mailed in June to the address of record at that time. Please contact our office if there are any changes to your business name, ownership, physical address, or closing of your business.

Thank you for allowing us to serve you!

MIKE FASANO
PASCO COUNTY TAX COLLECTOR

EAST PASCO GOVERNMENT CENTER
DADE CITY

WEST PASCO GOVERNMENT CENTER
NEW PORT RICHEY

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GULF HARBORS

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LAND O' LAKES

COMPARK 75 BUSINESS PARK
WESLEY CHAPEL

CALL CENTER: MONDAY - FRIDAY 8:30 AM - 5:00 PM (352) 521-4338 • (727) 847-8032 • (813) 235-6076

Attachment H

Certification Regarding Debarment, Suspension, Ineligibility And Voluntary Exclusion

Subcontractor Covered Transactions

- (1) The prospective subcontractor, U.S. Water Services Corporation, of the Sub-Recipient certifies, by submission of this document, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the Sub-Recipient's subcontractor is unable to certify to the above statement, the prospective subcontractor shall attach an explanation to this form.

SUBCONTRACTOR

U.S. Water Services Corporation (Prime Contractor)

By: 

Signature

Gary Deremer, President

Name and Title

4939 Cross Bayou Blvd.,

Street Address

New Port Richey FL 34652

City, State, Zip

4/29/2021

Date

Note: Before contract is executed: Debarment Form – Attachment H Must be complete by each proposed Bidder/Contractor

This document must be completed and returned with your Submittal

BID COST/FEE PROPOSAL



"ATTACHMENT 1" SCHEDULE OF UNIT PRICING

BID FORM

CITY OF PORT ORANGE

ITB # 21-09

HERBERT & NOVA MASTER LIFT STATION IMPROVEMENTS AND UPGRADE

Completed Attachment 1 Bid Proposal form MUST be included with Bid Submission

Instruction to save Attachment from DemandStar website:

Perform "File Save As" and save spreadsheet to your computer. Fill in pricing in highlighted cells, preferably electronically.

Bidders are required to complete all fields shaded in green. All other fields will be automatically calculated.

NAME OF BUSINESS:	U.S. Water Services Corporation
CONTACT PERSON:	Christina Crego
EMAIL ADDRESS:	CCREGO@USWATERCORP.NET
AUTHORIZED SIGNATURE:	Gary Deremer, President

PROPOSAL PRICING

ITEM #	DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL COST
A	BASE BID				
1	Pre-Construction Video	LS	1	\$ 2,500.00 -	\$ 2,500.00 -
2	Demolition of Existing Lift Station	LS	1	\$ 36,838.00 -	\$ 36,838.00 -
3	Bypass Pumping	LS	1	\$ 24,572.00 -	\$ 24,572.00 -
4	Complete Lift Station	LS	1	\$ 315,638.00 -	\$ 315,638.00 -
5	Electrical (Includes Generator)	LS	1	\$ 380,640.00 -	\$ 380,640.00 -
6	Tie Into Existing Force Main	LS	1	\$ 21,292.00 -	\$ 21,292.00 -
7	DIP Fittings	TN	0.5	\$ 13,000.00 -	\$ 6,500.00 -
8	Installation of Decorative Wall	LS	1	\$ 44,654.00 -	\$ 44,654.00 -
9	Odor Control	LS	1	\$ 127,310.00 -	\$ 127,310.00 -
10	Permit Allowance	LS	1	\$ 5,000.00 -	\$ 5,000.00 -
11	As-Built Plans	LS	1	\$ 9,828.00 -	\$ 9,828.00 -
12	Restoration	LS	1	\$ 22,764.00 -	\$ 22,764.00 -
				TOTAL BASE BID:	\$ 997,536.00 -
1	Confirm the number of calendar days to complete upon receipt of PO:			DAYS	300
2	Warranty for Labor:			YEARS	1
3	Warranty for Materials:			YEARS	1

AWARD: THIS BID WILL BE AWARDED TO THE LOWEST, RESPONSIVE, RESPONSIBLE BIDDER

This document must be completed and returned with your Submittal

ITB 21-09 Herbert and Nova Master Lift Station Rehabilitation

Page 443 of 558



Ron DeSantis, Governor

Halsey Beshears, 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

DELCHER, CECIL R

U S WATER SERVICES CORPORATION
4939 CROSS BAYOU BOULEVARD
NEW PORT RICHEY FL 34652

LICENSE NUMBER: CGC003307

EXPIRATION DATE: AUGUST 31, 2022

Always verify licenses online at MyFloridaLicense.com



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This is your license. It is unlawful for anyone other than the licensee to use this document.



Ron DeSantis, Governor

Halsey Beshears, Secretary



STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

THE UNDERGROUND UTILITY & EXCAVATION CO HEREIN IS CERTIFIED UNDER THE
PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

DEREMER, GARY ANDREW

US WATER SERVICES CORPORATION
4821 US HWY 19 STE 2
NEW PORT RICHEY FL 34652

LICENSE NUMBER: CUC1223914

EXPIRATION DATE: AUGUST 31, 2022

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.

State of Florida

Department of State

I certify from the records of this office that U.S. WATER SERVICES CORPORATION is a corporation organized under the laws of the State of Florida, filed on April 30, 2003, effective April 28, 2003.

The document number of this corporation is P03000047833.

I further certify that said corporation has paid all fees due this office through December 31, 2021, that its most recent annual report/uniform business report was filed on January 20, 2021, and that its status is active.

I further certify that said corporation has not filed Articles of Dissolution.

*Given under my hand and the
Great Seal of the State of Florida
at Tallahassee, the Capital, this
the Twentieth day of January,
2021*



Randy R. ...
Secretary of State

Tracking Number: 6767048680CC

To authenticate this certificate, visit the following site, enter this number, and then follow the instructions displayed.

<https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication>



[Department of State](#) / [Division of Corporations](#) / [Search Records](#) / [Search by FEI/EIN Number](#) /

[Previous On List](#) [Next On List](#) [Return to List](#)

[Events](#) **No Name History**

Detail by FEI/EIN Number

Florida Profit Corporation

U.S. WATER SERVICES CORPORATION

Filing Information

Document Number	P03000047833
FEI/EIN Number	20-0008821
Date Filed	04/30/2003
Effective Date	04/28/2003
State	FL
Status	ACTIVE
Last Event	AMENDED AND RESTATED ARTICLES
Event Date Filed	03/31/2020
Event Effective Date	NONE

Principal Address

4939 CROSS BAYOU BOULEVARD
NEW PORT RICHEY, FL 34652

Changed: 03/31/2004

Mailing Address

4939 CROSS BAYOU BOULEVARD
NEW PORT RICHEY, FL 34652

Changed: 05/09/2005

Registered Agent Name & Address

DEREMER, GARY A
4939 CROSS BAYOU BOULEVARD

NEW PORT RICHEY, FL 34652

Name Changed: 03/31/2020

Address Changed: 03/31/2020

Officer/Director Detail

Name & Address

Title CEO

DEREMER, GARY
4939 CROSS BAYOU BLVD.
NEW PORT RICHEY, FL 34652

Title VP

DELCHER, CECIL
4939 CROSS BAYOU BLVD.
NEW PORT RICHEY, FL 34652

Title VP

AMIOTT, RALPH
4939 CROSS BAYOU BOULEVARD
NEW PORT RICHEY, FL 34652

Title VP

KADER, MOHAMMED
4939 CROSS BAYOU BOULEVARD
NEW PORT RICHEY, FL 34652

Title VP, Secretary

Mitchell, Edward
4939 CROSS BAYOU BOULEVARD
NEW PORT RICHEY, FL 34652

Title CFO

RUPE, KAYCEE
4939 CROSS BAYOU BOULEVARD
NEW PORT RICHEY, FL 34652

Title VP

SALIBA, CHRIS
4939 CROSS BAYOU BOULEVARD

NEW PORT RICHEY, FL 34652

Title VP

RENDELL, WILLIAM TROY
 4939 CROSS BAYOU BOULEVARD
 NEW PORT RICHEY, FL 34652

Title VP

DUPONT, JEFFREY
 4939 CROSS BAYOU BOULEVARD
 NEW PORT RICHEY, FL 34652

Title VP

VOSS, AARON
 4939 CROSS BAYOU BOULEVARD
 NEW PORT RICHEY, FL 34652

Title VP

SMITH, CARL
 4939 CROSS BAYOU BOULEVARD
 NEW PORT RICHEY, FL 34652

Annual Reports

Report Year	Filed Date
2019	04/04/2019
2020	01/16/2020
2021	01/20/2021

Document Images

01/20/2021 -- ANNUAL REPORT	View image in PDF format
03/31/2020 -- Amended and Restated Articles	View image in PDF format
01/16/2020 -- ANNUAL REPORT	View image in PDF format
09/25/2019 -- Amendment	View image in PDF format
04/04/2019 -- ANNUAL REPORT	View image in PDF format
03/02/2018 -- ANNUAL REPORT	View image in PDF format
04/24/2017 -- ANNUAL REPORT	View image in PDF format
04/15/2016 -- ANNUAL REPORT	View image in PDF format
02/19/2015 -- ANNUAL REPORT	View image in PDF format
02/26/2014 -- ANNUAL REPORT	View image in PDF format
	View image in PDF format

[03/18/2013 -- ANNUAL REPORT](#)[04/19/2012 -- ANNUAL REPORT](#)[04/13/2011 -- ANNUAL REPORT](#)[04/02/2010 -- ANNUAL REPORT](#)[04/29/2009 -- ANNUAL REPORT](#)[03/31/2008 -- ANNUAL REPORT](#)[04/30/2007 -- ANNUAL REPORT](#)[04/30/2006 -- ANNUAL REPORT](#)[05/09/2005 -- ANNUAL REPORT](#)[03/31/2004 -- ANNUAL REPORT](#)[08/07/2003 -- Amendment](#)[06/09/2003 -- Off/Dir Resignation](#)[04/30/2003 -- Domestic Profit](#)[View image in PDF format](#)[View image in PDF format](#)[View image in PDF format](#)[View image in PDF format](#)[View image in PDF format](#)[View image in PDF format](#)[View image in PDF format](#)[View image in PDF format](#)[View image in PDF format](#)[View image in PDF format](#)[View image in PDF format](#)[View image in PDF format](#)[Previous On List](#)[Next On List](#)[Return to List](#)[Events](#)**No Name History**

BID BOND

BID BOND

Bond No.: N/A

KNOW ALL MEN BY THESE PRESENTS that U. S. Water Services Corporation, as Contractor, duly authorized to conduct business in the State of Florida, whose principal place of business is located at 4939 Cross Bayou Blvd., New Port Richey, FL 34652, Tel.: (727) 848-8292 (hereinafter called "PRINCIPAL"), and North American Specialty Insurance Company, as SURETY, duly authorized to conduct business in the State of Florida, whose principal place of business is located at 1200 Main Street, Ste 800, Kansas City, MO 64105, Tel.: (847) 273-1251 (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 AMOUNT BID *** dollars and (00)/100 (\$ 5% of Bid), 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 12, 2021, for:

Project Name / Bid No.: ITB 21-09 Herbert and Nova Master Lift Station Rehabilitation

Project Address: NE Corner of S Nova Rd and Herbert Street

Legal Description: Herbert and Nova Master Lift Station Rehabilitation

Description of Work: Demolition of the existing building and generator, installation of a new generator and automatic transfer switch, wetwell coating system, top slab, piping, valves, valve vault and decorative wall at the Herbert Street and Nova Road Master Lift Station.

NOW, THEREFORE,

A. If the principal shall not withdraw said bid within 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 within 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 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 12th day of April, A.D. 2021, 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 original bid bond and financial statement of Surety Company).

PRINCIPAL: U. S. Water Services Corporation

Signature [Signature]
Corporate Officer & Title Barry Deremer, President

ATTEST:
Signature [Signature]
Corporate Secretary Edward Mitchell (Affix Corporate Seal)



WITNESSES:

SURETY: North American Specialty Insurance Company

Attorney-in-Fact (signature) [Signature]
Name & Title Allyson Foss Wing, Attorney-in-Fact
Name of Local Resident Agent Allyson Foss Wing, FL Licensed Resident Agent
City, State, Zip Longwood, FL 32750
Telephone: (407) 834-0022
A.M. Best No.: A+, XV NAIC No.: 29874

ATTEST:
N/A
Signature _____
Corporate Secretary (Affix Corporate Seal)

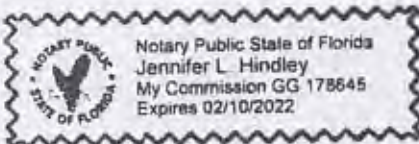
STATE OF Florida

COUNTY OF Seminole

by means of ☒ physical presence or ☐ online notarization
Before me this day personally appeared Allyson Foss Wing (affiant), who, being duly sworn, deposes and says that he/she is the Attorney-in-Fact for the North American Specialty Insurance Company (corporate surety) and that this person has been authorized by North American Specialty 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 [Signature]

Sworn to / Affirmed and subscribed before me this 12th day of April, 2021, by Allyson Foss Wing who is personally known to me or who produced N/A as identification.



NOTARY PUBLIC - STATE OF Florida
Type or print name: Jennifer L. Hindley
Commission No.: GG 178645
Commission Expires: 02/10/2022

(Seal)

END OF BID BOND

This document must be completed and returned with your Submittal



**NORTH AMERICAN
SPECIALTY INSURANCE COMPANY**

1450 American Lane, Suite 1100, SCHAUMBURG, ILLINOIS 60173
847-273-1231, FAX: 847-273-6408, 800/338-0753

NORTH AMERICAN SPECIALTY INSURANCE COMPANY
A New Hampshire Corporation

BALANCE SHEET AS OF DECEMBER 31, 2019
(Statutory Basis)

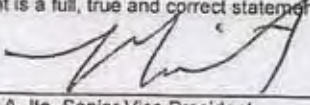
Valuation of securities on National Association of Insurance Commissioner Basis

ASSETS

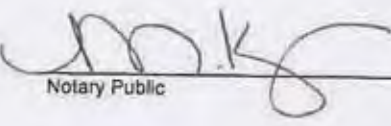
LIABILITIES

Cash	107,599,514	Reserve for Unearned Premiums	1,263
Bonds	205,726,476	Reserve for Losses and Loss Adjustment Expenses	21,145,528
Other Invested Assets	64,161,844	Funds Withheld	7,577,476
Other Admitted Assets	118,474,935	Taxes and Other Liabilities	143,938,110
		Surplus	323,300,392
TOTAL ADMITTED ASSETS	495,962,769	TOTAL LIABILITIES & POLICYHOLDERS' SURPLUS	495,962,769

The undersigned, being duly sworn, says: That he is Senior Vice President of North American Specialty Insurance Company, Kansas City, Missouri; that said company is a corporation duly organized, existing by virtue of the Laws of the State of New Hampshire and that said Company has also complied with and is duly qualified to act as Surety under the Act of Congress approved; July 1947 6 U.S.C. sec. 6-13; and that to the best of his knowledge and belief the above statement is a full, true and correct statement of the financial condition of the said Company on the 31st day of December, 2019.


Michael A. Ito, Senior Vice President
North American Specialty Insurance Company

Subscribed and sworn before me,
this 6th day of March, 2020


Notary Public



SWISS RE CORPORATE SOLUTIONS

**NORTH AMERICAN SPECIALTY INSURANCE COMPANY
WASHINGTON INTERNATIONAL INSURANCE COMPANY
WESTPORT INSURANCE CORPORATION**

GENERAL POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT North American Specialty Insurance Company, a corporation duly organized and existing under laws of the State of New Hampshire, and having its principal office in the City of Kansas City, Missouri and Washington International Insurance Company a corporation organized and existing under the laws of the State of New Hampshire and having its principal office in the City of Kansas City, Missouri, and Westport Insurance Corporation, organized under the laws of the State of Missouri, and having its principal office in the City of Kansas City, Missouri does hereby make, constitute and appoint:

J.W. GUIGNARD, BRYCE R. GUIGNARD, PAUL J. CIAMBRIELLO, APRIL L. LIVELY, JENNIFER L. HINDLEY, MARGIE L. MORRIS,

DEBORAH ANN MURRAY, M. GARY FRANCIS, CHRISTINE MORTON, KELLY PHELAN and ALLYSON FUSS WING JOINTLY OR SEVERALLY

Its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its act and deed, bonds or other writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of:

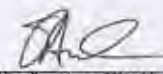
ONE HUNDRED TWENTY FIVE MILLION (\$125,000,000.00) DOLLARS

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of North American Specialty Insurance Company and Washington International Insurance Company at meetings duly called and held on March 24, 2000 and Westport Insurance Corporation by written consent of its Executive Committee dated July 18, 2011.

"RESOLVED, that any two of the President, any Senior Vice President, any Vice President, any Assistant Vice President, the Secretary or any Assistant Secretary be, and each or any of them hereby is authorized to execute a Power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings and all contracts of surety, and that each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be binding upon the Company when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached."



By 
Steven P. Anderson, Senior Vice President of Washington International Insurance Company
& Senior Vice President of North American Specialty Insurance Company
& Senior Vice President of Westport Insurance Corporation

By 
Mike A. Ito, Senior Vice President of Washington International Insurance Company
& Senior Vice President of North American Specialty Insurance Company
& Senior Vice President of Westport Insurance Corporation



IN WITNESS WHEREOF, North American Specialty Insurance Company, Washington International Insurance Company and Westport Insurance Corporation have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers this 21st day of OCTOBER, 20 19.

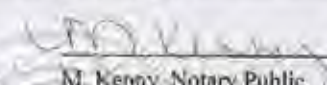
**North American Specialty Insurance Company
Washington International Insurance Company
Westport Insurance Corporation**

State of Illinois ss:
County of Cook

On this 21st day of OCTOBER, 20 19, before me, a Notary Public personally appeared Steven P. Anderson, Senior Vice President of

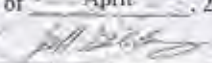
Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company and Senior Vice President of Westport Insurance Corporation and Michael A. Ito, Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company and Senior Vice President of Westport Insurance Corporation, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.




M. Renny, Notary Public

I, Jeffrey Goldberg, the duly elected Vice President and Assistant Secretary of North American Specialty Insurance Company, Washington International Insurance Company and Westport Insurance Corporation do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney given by said North American Specialty Insurance Company, Washington International Insurance Company and Westport Insurance Corporation which is still in full force and effect.

IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this 12th day of April, 20 21.


Jeffrey Goldberg, Vice President & Assistant Secretary of Washington International Insurance Company &
North American Specialty Insurance Company & Vice President & Assistant Secretary of Westport Insurance Corporation

CITY OF PORT ORANGE, FLORIDA

INVITATION TO BID

ITB #21-09

HERBERT AND NOVA MASTER LIFT STATION REHABILITATION



City of Port Orange Purchasing Division

Prepared by: Michael Hall, Purchasing Agent

Release Date: March 8, 2021

Bid Due Date & Time: April 12, 2021 @ 2:30 P.M.

City of Port Orange, Florida

1000 City Center Circle

Port Orange, FL 32129

(386) 506-5740

purchdiv@port-orange.org

www.port-orange.org



Legal Notice to Proposers

ITB 21-09

HERBERT AND NOVA MASTER LIFT STATION REHABILITATION

Notice is hereby given that the City of Port Orange is soliciting bids for ITB 21-09 HERBERT AND NOVA MASTER LIFT STATION REHABILITATION. 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 P.M. on April 12, 2021** 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 P.M. in Council Chambers.**

There will be a Non-Mandatory Pre-Bid Conference for the project at **10:00 A.M.** (local time) on **March 22, 2021** at City Hall, Council Chambers (1st floor), 1000 City Center Circle, Port Orange, Florida 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 shall sign in accordingly. Bidders are urged to obtain Bid documents and familiarize themselves with the documents prior to the Pre-Bid meeting.

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 shall be submitted with each submission.

DESCRIPTION: *The City of Port Orange is soliciting sealed Bids to acquire the services for the demolition of the existing building and generator, installation of a new generator and automatic transfer switch, wetwell coating system, top slab, piping, valves, valve vault and decorative wall at the Herbert Street and Nova Road Master Lift Station.*

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 2-256, 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. Local bidders may be given a local preference pursuant to the Code of Ordinances, City of Port Orange, Chapter 2, Article VI, Division 2, Section 2-275.

Copies of the Bid documents, requirements, the scope of service and all other pertinent information necessary to submit a complete package may be obtained electronically from the City of Port Orange website at www.port-orange.org/bids.aspx and (DemandStar) via their website at www.demandstar.com. All questions shall be directed **in writing** to the Purchasing Agent, Michael Hall, mhall@port-orange.org or purchdiv@port-orange.org and reference **"Questions on ITB 21-09 HERBERT AND NOVA MASTER LIFT STATION REHABILITATION"** in the subject line. Last day for questions will be **March 29, 2021 at 5:00 P.M.**

All Bidders are required to complete and submit a Public Entity Crime Statement, the Anti-Collusion Statement, and Drug-Free Proposal Preference Statement, as well as other documents as required by the solicitation.

NO bid shall be withdrawn for a period of ninety (90) days subsequent to the bid opening without the consent of the City of Port Orange, Florida.

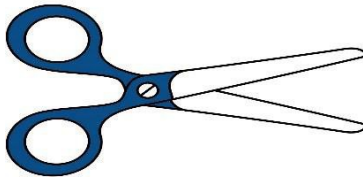
No Bids received after the time and date specified for the opening will be considered. The City of Port Orange, Florida reserves the right to reject any and all Bids, to waive any and all non-substantial irregularity in Bids received, whenever such waiver or rejection is in the best interest of the City.

Bids shall be **submitted to the City Clerk's office** with one (1) original and one (1) identical digital (CD or flash drive) version in PDF format, addressed to Michael Hall, Purchasing Agent, Finance Department, City Hall, 1000 City Center Circle, Port Orange, Florida 32129 in a **SEALED ENVELOPE/ PACKAGE** plainly marked on the outside: **"ITB 21-09 HERBERT AND NOVA MASTER LIFT STATION REHABILITATION"**.

Michael Hall – Purchasing Agent
Legal Ad - One Time – **March 8, 2021**

[Remainder of this page left intentionally blank]

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 #21-09
BID TITLE:	HERBERT AND NOVA MASTER LIFT STATION REHABILITATION
DUE DATE/TIME:	April 12, 2021 at 2:30 P.M.
SUBMITTED BY:	(Name of Company)
DELIVER TO:	City of Port Orange City Clerk's Office Attn: Michael Hall – Purchasing Agent Finance Department 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 Bidders for the provision of contracting to acquire the services for the demolition of the existing building and generator, installation of a new generator and automatic transfer switch, wetwell coating system, top slab, piping, valves, valve vault and decorative wall at the Herbert Street and Nova Road Master Lift Station.

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 if any language, requirements, etc., or any combination thereof, 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

Firms or companies (Bidder) desiring to provide services, as described herein shall submit sealed bids, including one original copy and one (1) digital (CD or flash drive) version in PDF format, in conformance with the detailed submittal instructions.

TIMELINE (Local Time)

The City reserves the right to alter dates as needed.

Date of Distribution:.....March 8, 2021

Non-Mandatory Pre-Bid Conference:.....March 22, 2021 at 10:00 A.M.

Deadline for Questions:.....March 29, 2021 by 5:00 P.M.

Final Addendum Posting:.....April 5, 2021 by 5:00 P.M.

Bids Due:April 12, 2021 by 2:30 P.M.

City Council Meeting for Approval of Recommendation of AwardTo Be Determined

Bids must be delivered in a sealed envelope/package and delivered to:

City of Port Orange City Clerk's Office
Attn: Michael Hall – Purchasing Agent
Finance Department
1000 City Center Circle
Port Orange, Florida 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 assure 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. This office will not be responsible for deliveries made to any place other than the specified address.

Offers by telephone, email or telegram shall not be accepted. Also, Bidders are instructed NOT to fax their bid package. **Faxed bids shall 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 for the project 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 shall sign in accordingly.

QUESTIONS REGARDING THIS ITB

All questions shall reference “**ITB 21-09 HERBERT AND NOVA MASTER LIFT STATION REHABILITATION**” 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:

Michael Hall – Purchasing Agent
1000 City Center Circle
Port Orange, FL 32129
mhall@port-orange.org or
purchdiv@port-orange.org

ADDENDA REGARDING THE INVITATION TO BID

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. It is the Bidder's responsibility to be sure all correct number of addenda was received. 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. It is the responsibility of the Bidder to ensure all addenda have been received prior to submitting a bid.

Written responses, in the form of an addendum, will be provided via the City website www.port-orange.org/bids.aspx and Demand Star websites. 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 references that verify required experience will 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.

PRICING SHEETS

Pricing Sheets/Bid Forms are 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 price sheets/bid forms 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.

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 ninety (90) days subsequent to the Bid opening without the consent of the City of Port Orange, Florida. Negligence on the part of the Bidder in preparing the 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. No responsibility will attach the Purchasing Department 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 in the Proposal Submittal and Requirements Section 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 conductor 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 Board employee a gratuity of any kind for the purpose of influencing a recommendation or decision in connection with any part of the Board's purchasing activity.
- (f) Other reasons deemed appropriate by the City.

OWNERSHIP OF DOCUMENTS

All documents resulting from this project 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 for 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 of the required post-award documents within 10 days after the issuance of the Notice of Intent to Award in order to execute the contract.

[Remainder of this page left intentionally blank]

SECTION 3 – SCOPE OF WORK

1) SUMMARY OF WORK

This is for the construction of the **HERBERT AND NOVA MASTER LIFT STATION REHABILITATION**.

The work consists of furnishing all labor, equipment, and materials for the demolition of the existing building and generator, installation of a new generator and automatic transfer switch, wetwell coating system, top slab, piping, valves, valve vault and decorative wall to provide screening from surrounding properties at the Herbert Street and Nova Road Master Lift Station, in accordance with the specification, requirements, and drawings contained in this Section 3, Scope of Work.

- A. 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.
- B. 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.
- C. 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.
- D. The Contractor shall comply with all City, County, State, Federal, and other codes which are applicable to this Project.

2) DRAWINGS, SPECIFICATIONS, AND REQUIREMENTS

See Pages 12-401 and 539-558 of this solicitation for Specifications and Drawings. You can find a separate PDF of the drawings on the City of Port Orange website at the link below:

<https://www.port-orange.org/bids.aspx>

Document Title:

- A. **“Attachment A” ITB 21-09 Bid Set - Drawings for Herbert and Nova Master Lift Station Rehabilitation**

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SECTION 01 00 00
PROJECT 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. He 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 or 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 for 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. Five (5) copies 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

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 the **HERBERT & NOVA LIFT STATION IMPROVEMENTS AND UPGRADES**. The work consists of furnishing all labor, equipment, and materials for the construction of the facilities consisting of, but not limited to, the following:

Demolition of the existing building and generator, installation of a new generator and automatic transfer switch, wetwell coating system, top slab, piping, valves, valve vault and decorative wall to provide screening from surrounding properties.

- 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 his work sequence based on the use of crews to facilitate completion of construction and testing within the specified Contract time. Sequence shall be reviewed and approved by the City.

END OF SECTION

SECTION 01 22 00
UNIT PRICES

PART 1 – GENERAL

- 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 pavement base removal.
 - 3. Shoring and sheeting.
 - 4. Dewatering and disposal of surplus water.
 - 5. Structural Fill.
 - 6. Backfill.
 - 7. Grading.
 - 8. Replacement of unpaved roadways, grass, and shrubbery plots.
 - 9. Cleanup.
 - 10. Testing and placing system in operation.
 - 11. Any material and equipment required to be installed and utilized for the test.
 - 12. Pipe, structures, pavement replacement and/or appurtenances included within the limits of lump sum work.
 - 13. Maintaining the existing quality of service during construction.
 - 14. Appurtenant work as required for a complete and operable system.
 - 15. Maintaining or detouring of traffic.

- D. No payment shall be made for work constructed outside the authorized limits of work

PART 2 – MATERIALS AND EQUIPMENT

2.01 Pre-Construction Video

Bid Item 1

Lump sum payment will be made based on delivery to the City of two copies with documentation of the video for the project limits. The contract lump sum price shall be full compensation for all materials and work necessary to complete the professional videotaping in accordance with the project specifications. Construction work shall not start until DVD's are delivered and approved by the project representative.

2.02 Demolition of Existing Lift Station

Bid Item 2

Lump sum payment shall be made for the demolition, removal, abandonment, filling, and/or other work to existing facilities as shown on the plans and as required to complete the required work. Demolished facilities shall be shown on the as-builts. City shall have right to all abandoned equipment. CONTRACTOR shall deliver to City or dispose of properly. CONTRACTOR is responsible for proper disposal of all removed materials.

2.03 Bypass Pumping

Bid Item 3

Lump sum payment will be made at the completion of the operational lift station for temporary bypass pumping. The bypass pumping system shall be duplex pumps and each pump shall be capable of passing the flows with one unit on standby. Temporary systems shall be automatic float operated and switch over to standby, have cellular alarm notification, and have a noise level no greater than 70 dba at seven (7) meters.

2.04 Complete Lift Station

Bid Item 4

Lump sum payment will be made for the pumps, rails, top slab, hatch, new wetwell, valves, yard piping, mechanical equipment, restoration, and all other items necessary for a complete installation. This includes all materials, equipment and labor required to construct the station as shown on the plans and described in the specifications.

2.05 Electrical (Includes Generator)

Bid Item 5

Lump sum payment shall be made for the installation of all Electrical equipment, including generator, as shown on the plans and described in the specifications. Payment will be full compensation for furnishing all plant labor, materials, equipment, and electrical work to integrate and connect the new motors, lighting, control panels, junction boxes, cables, wiring, and miscellaneous components required to complete all electrical work in accordance with the contract plans, specifications, the National Electric Code and FBC. CONTRACTOR shall obtain requisite electrical permits prior to commencement of work.

2.06 Tie-Ins

Bid Item 6

Payment will be made at the applicable unit price for the cost of the "tie-in" performed. The lump sum price will be full compensation for all materials and labor required to satisfactorily

accomplish this item as detailed in the plans and specifications. A tie-in is described as making a connection to an existing main.

2.07 DIP Fittings (Add or Delete)

Bid Item 7

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.

2.08 Installation of Decorative Wall

Bid Item 8

Lump Sum payment shall be made for installation of a decorative wall as shown in the plans and described in the specifications.

2.09 Odor Control

Bid Item 9

Lump sum payment shall be full compensation for all labor, equipment, and materials required to install the odor control system in accordance with the contract plans and specifications. Payment shall also be full compensation for all pipe cutting and fittings. Contractor shall be required to demonstrate completion of the proposed systems to the owner and engineer as described by the specifications.

2.10 Permit Allowance

Bid Item 10

An allowance is established to pay costs associated with building permit fees and ancillary costs associated with construction of the lift station improvements. No provisions for mark-up are included within the allowance.

2.11 As-Built Plans

Bid Item 11

Lump sum payment will be made based on delivery of record drawings produced by a licensed surveyor conforming to the specifications. Periodical record drawings shall be submitted with each pay estimate on which the ENGINEER shall rely to ensure the improvements are constructed in accordance with the design locations and elevations. Progress payments submitted without updated record drawings to document work constructed that pay period shall be a basis for rejection of the pay request until such time as adequate record drawings are submitted.

2.12 Restoration

Bid Item 12

At the completion of construction, lump sum payment shall be made for site restoration to provide positive drainage, acceptable finish grades, base and pavement restorations, rock, etc. Sod shall match existing materials or as called out within the plans and specifications. All pavement, gravel, sod, and grading for a final site acceptable to the City and their project representative are included in this pay item.

PART 3 – EXECUTION (NOT USED)

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 lump sum 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.

B. Related Requirements Described Elsewhere:

1. Conditions of the Construction Contract.

1.02 FORM AND CONTENT OF SCHEDULE OF VALUES

- A. Type schedule on 8-1/2 inch x 11 inch white paper. Contractor's standard forms and computer printouts may be considered for approval by the Engineer upon Contractor's request. 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.
- 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.
- B. Related Requirements Described Elsewhere:
 - 1. Construction Progress Schedule: Section 01 32 16.
 - 2. Schedule of Values: Section 01 29 73.
 - 3. Photographic Documentation: Section 01 32 33.
 - 4. Project Record Documents: Section 01 78 39.

1.02 FORMAT REQUIRED

- A. Submit applications 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 percents.
 - 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 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 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 percents complete with the ENGINEER and resolve any conflict or discrepancies.
- B. Application for Payments 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 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. Construction Progress Schedules: Section 01 32 16.
2. Shop Drawings: Section 01 33 23.
3. Project Record Documents: Section 01 78 39.

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.
- C. 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. Summary of Work: Section 01 11 00.
3. Project Meetings: Section 01 31 19.
4. Shop Drawings: Section 01 33 23
5. Schedule of Values: Section 01 29 73.

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 work day of each month.
2. 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 offered by Primavera, 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. 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 the Contract. 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 indicated 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 and following the completion of the Work.
- B. Summary: This Section includes administrative and procedural requirements for the following
 - 1. Preconstruction photographs
 - 2. Preconstruction video recordings
 - 3. Completion construction photographs
- C. Related Requirements Described Elsewhere:
 - 1. Section 01 00 00 – Project Requirements
 - 2. Section 01 11 00 – Summary of Work
 - 3. Section 01 35 00 – Location, Scope and Special 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. 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.
 - 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 Contractor
 - d. Date photograph was taken
 - e. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.
- B. Construction Photographs: Submit within seven (7) days of taking photographs.
 - 1. Format: electronic submittal to Engineer

2. Identification: With each submittal, provide the following information:

- a. Name of Project.
- b. Name and contact information for photographer.
- c. Name of Contractor.
- d. Date photograph was taken if not date stamped by camera.
- e. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.

C. Video Recordings: Submit video recordings within seven (7) days of recording.

1. Submit video recordings in digital video disc format

2. Identification: With each submittal, provide the following information:

- a. Name of Project.
- b. Name and contact information of photographer.
- c. Name of Contractor.
- d. Date video recording was recorded.
- e. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.
- f. Weather conditions at time of recording.

1.03 COST OF PHOTOGRAPHY

A. The Contractor shall pay costs for photography and videography.

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.

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.

B. Digital Video Recordings: Provide high-resolution digital video disc in format acceptable to Engineer.

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.
- 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 Engineer.
- 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 Engineer.
 - 1. Flag excavation areas and construction limits before taking construction photographs.
 - 2. Take twenty (20) photographs to show existing conditions adjacent to property before starting the Work.
 - 3. Take 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.
- E. Final Completion Construction Photographs: Take twenty (20) color photographs after date of Substantial Completion for submission as project record documents. Engineer will inform photographer of desired vantage points.
 - 1. Do not include date stamp.

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. Preconstruction Video Recording: Before starting construction, record video recording of Project site and surrounding properties from different vantage points, as directed by Engineer.
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 Application for Payment.

END OF SECTION

SECTION 01 33 23
SHOP DRAWINGS

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 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 Re submittal 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.

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 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. The number of each Shop Drawing, Product Data, and Sample submitted.

- 5. Notification of deviations from Contract Documents.
- 6. Submittal Log Number conforming to Specification Section Numbers.
- G. The CONTRACTOR shall submit descriptive or product data submittals/drawings electronically to the ENGINEER. The ENGINEER will review the submittals/drawings and return marked-up submittals/drawings with appropriate review comments electronically to the CONTRACTOR.
- H. Once submittals/drawings are approved, they are to be distributed electronically to the OWNER, ENGINEER and 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. Re submittals will be handled in the same manner as first submittals. On Re submittals 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 Re submittal; thereafter review time for subsequent Re submittals 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 Re submittal. 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 blank area three and one-half inch x three and one-half inch (3-1/2" x 3-1/2"), located adjacent to the title block. The title block 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 title and number.
 - 9. Specification section.
 - 10. Drawing number.
- 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.

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 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 (2) 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 35 00
LOCATION, SCOPE, AND SPECIAL REQUIREMENTS

PART 1 – GENERAL

- 1.01 The CONTRACTOR shall not have any right in property in any materials taken from any excavation and CONTRACTOR 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 CONTRACTOR'S cost and expense as provided in these specifications.
- 1.02 From investigations, including surveys made at the site, it is assumed that physical conditions are approximately as indicated on the drawings, but the nature of the materials below the surface, the depth to satisfactory foundations, or the stability of beds or banks or quantity of groundwater are not guaranteed.
- 1.03 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.
- 1.04 The CONTRACTOR shall take all necessary precautions to prevent damage to existing City utilities which are to remain in service during any of the CONTRACTOR'S construction operations. Should such utilities be damaged by the CONTRACTOR, CONTRACTOR shall be required to replace, or repair same, to the satisfaction of the ENGINEER, at no additional cost to the OWNER.
- 1.05 Certain information regarding the reputed presence, size, character, and location of existing underground structure, pipes and conduits has been shown on the contract drawings. The location of underground structures shown may be inaccurate, and other obstructions than those shown may be encountered. The CONTRACTOR distinctly agrees that the ENGINEER and the OWNER are 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 CONTRACTOR shall have no claim for delay or extra compensation on account of incorrectness of information given; or on account of insufficiency or absence of information regarding obstructions either revealed or not revealed by the drawings; and that CONTRACTOR shall have no claim for relief from any obligation or responsibility under this Contract, in case the location, size or character of any pipe or other underground structure is encountered that is not shown on the drawings.
- 1.06 The CONTRACTOR agrees that the work shall be started not later than the date indicated in the "Notice to Proceed" and shall substantially complete all work within **270 calendar days**, with final completion within **30 days** of substantial completion.
- A. 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 stipulated above, the sum of **One Thousand Dollars (\$1,000)** 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.

- 1.07 The City shall provide reference points as shown on the plans. CONTRACTOR shall be responsible for having a land surveyor registered in the State of Florida and approved by the ENGINEER lay out the work, shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of the ENGINEER. CONTRACTOR shall report to ENGINEER whenever such reference point is lost or destroyed or required location because of necessary changes in grades or locations, and the CONTRACTOR shall be responsible for replacement or relocation of such reference points by professionally qualified personnel, registered in the State of Florida and approved by the ENGINEER.
- 1.08 At least 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.
- 1.09 All dewatering and pumping necessary to accomplish the work of this Contract shall be performed by the CONTRACTOR at no extra or additional cost to the OWNER. Any permits required shall be the responsibility of the CONTRACTOR.
- 1.10 Examination of Contract Documents and Site. Before submitting a Bid, each CONTRACTOR must (a) examine the Contract Documents thoroughly, (b) visit the site to become familiarized with local conditions that may in any manner affect cost, progress, or performance of the work, (c) become familiarized 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.
- 1.11 Attention is directed to the requirements of the following agencies with regard to permits and construction requirements within their jurisdiction.
 - A. City of Port Orange
 - B. Florida Department of Environmental Protection
 - C. The OWNER will make necessary application for permits or permit exemptions to construct such facilities. It shall be, however, the responsibility of the CONTRACTOR to construct the facilities in strict accordance with the requirements of the above-mentioned agencies, and no extra or additional payments will be made by the OWNER for this work.
- 1.12 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. Certain non-essential items such as clean up, seeding and mulching, sodding, some well pointing operations, saw cutting of pavement, etc. may be performed by the CONTRACTOR during the above times by giving the Project Engineer "Advance Notice"

of such operations. The Prime CONTRACTOR shall establish the "normal (40 hour)" work week and all subcontractors shall work only during this "normal (40 hour)" work week to allow the Project Engineer's Representative to observe the contract work during this "normal (40 hour)" work week. Any weekend, nighttime, or holiday work permitted to be performed by the CONTRACTOR shall be by agreement of both the ENGINEER and the City. Such work shall be performed in the presence of the ENGINEER's Project Representative, paid for and scheduled at least 48 hours in advance of the activity planned. The fee shall be \$500 per inspector per day or any portion thereof, paid in advance directly to the ENGINEER. The fee shall only cover the activities the ENGINEER can reasonably inspect with one person. The ENGINEER solely reserves the right to determine the number of inspectors required for the number of CONTRACTOR's crews working outside of the normal 40-hour work week.

- 1.13 The CONTRACTOR is responsible for recording a copy of the Payment and Performance Bond in the Official Records of Volusia County, Florida and shall provide copies of the recorded documents 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 contract payment shall be made to the CONTRACTOR for this item.
- 1.14 The CONTRACTOR acknowledges that the CONTRACTOR is responsible for complying with all aspects of the Florida Trench Safety Act (90-96, Laws of Fla.) effective October 1, 1990. CONTRACTOR assumes all responsibility and costs entailed.
- 1.15 The proposed work indicated on the project plans may require adjustment in the field due to conflicts or field conditions. Field changes which do not substantially alter the character of the work shall not be grounds for the issuance of the change order.
- 1.16 Construction materials may be stockpiled. 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. The CONTRACTOR shall provide a notarized written letter from the property owner approving use of the property by the property owner prior to using the property.
- 1.17 The CONTRACTOR is responsible for obtaining a 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 shall be granted by the City.
- 1.18 Land disturbed shall have hay bales or "turbidity curtains" installed around the perimeter to control erosion and sediment runoff where it is likely to occur during construction at no extra cost to the OWNER.
- 1.19 All contract unit pricing shall remain valid for the duration of the contract.
- 1.20 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.

- 1.21 Limitations on the ENGINEER's Responsibilities:
- A. Neither the ENGINEER's authority to act under this Paragraph nor any decision made by him in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of the ENGINEER to the CONTRACTOR, any Subcontractor, any of their agents or employees or any other person performing any of the work.
 - B. The ENGINEER will not be responsible for the construction means, methods, techniques, sequences or procedures, or the safety precautions and programs incident thereto, and CONTRACTOR will not be responsible for the CONTRACTOR's failure to perform the work in accordance with the Contract Documents.
 - C. The ENGINEER will not be responsible for the acts or omissions of the CONTRACTOR, any subcontractors, or any of his or their agents or employees, or any other persons performing any of the work.
- 1.22 Reasonable care shall be taken during construction to avoid damage to vegetation. Ornamental shrubbery and tree branches shall be temporarily tied back, where appropriate, to minimize damage. Trees which receive damage to branches shall be trimmed of those branches to improve the appearance of the tree. Tree trunks receiving damage from equipment shall be treated with a tree dressing.
- 1.23 Substantial completion is defined as materials in place tested and in use, sodding, and sidewalk and other restoration items complete.
- 1.24 The CONTRACTOR's forces shall be required to "hand dig" and expose all existing public/private utilities and other existing facilities which may be in conflict with the proposed construction in order to adjust the proposed facility alignments to avoid any conflicts.
- 1.25 All existing improved areas disturbed by construction shall be sodded with the same type sod as the existing variety of sod encountered. Payment will be made for this work under the appropriate lump sum pay item. No separate payment will be made for sodding.
- 1.26 The CONTRACTOR shall make provisions for materials security. Any City provided work areas shall be returned to its original or better condition upon the completion of the project. Sodding of any disturbed areas utilized by the CONTRACTOR for work area will be accomplished by the CONTRACTOR at no additional cost to the City. Separate payment for this work will not be made and shall be included in the appropriate contract work items by the CONTRACTOR in the bid proposal.
- 1.27 The OWNER shall provide copies of previous surveys for the CONTRACTOR's surveyor's use. The CONTRACTOR shall bear all costs for a registered professional surveyor to "layout" the proposed project. At project completion time, the CONTRACTOR shall bear the costs of setting property corners which were lost during construction if they were disturbed by the CONTRACTOR's construction operation.
- 1.28 The CONTRACTOR shall perform on the site and with his own organization work equivalent to not less than 50 percent (50%) of the total dollar value of the work to be performed under this contract. The exception is specialty work may be performed by subcontractors and the

cost of any such specialty work so performed by subcontractor may be deducted from the total contract amount before computing the amount of work required to be performed by the CONTRACTOR with his own organization.

- 1.29 The CONTRACTOR shall be responsible for dust control on the project. The CONTRACTOR shall control dust when conditions as determined by the ENGINEER warrant. Water shall be provided by the City for this use in accordance with Paragraph 1.30 of this section. No separate payment shall be made for this item.
- 1.30 The CONTRACTOR and/or subcontractor shall not work on City's holidays. City Utility personnel are not available for emergency repairs nor are construction representatives on these holidays.
- 1.31 No construction trailer shall be required for this project.
- 1.32 All construction, manufacturing, fabrication and testing of materials shall be performed under the guidelines set forth in applicable local, state and federal codes, and/or under recommendations provided in technical publications of respected professional or industry organizations. Material testing programs, where applicable, shall be presented to the ENGINEER for review and approval prior to construction. All products constructed or manufactured/supplied for the project shall be accompanied by industry acceptable warranties or guarantees.
- 1.33 For the purpose of these specifications. "Project Completion" is defined as completion of an agreed upon list of punch-list items compiled in a planned project walkthrough held at a time the CONTRACTOR considers the project to be "Substantially Complete". The CONTRACTOR shall notify the OWNER and ENGINEER at least 48 hours in advance of substantial completion and schedule a mutually agreeable walkthrough.
- 1.34 The CONTRACTOR shall maintain a clean and neat site, void of loose debris, trash, remnant parts or materials. Trash receptacles and removal service shall be maintained by the CONTRACTOR specifically for this project. Existing facilities shall not be used to maintain the project. Temporary debris piles shall be limited in number as much as practical and contained in designated areas until removal. Debris and trash shall not be scattered in areas outside the limited designated areas at anytime.

Removal of debris/trash shall be scheduled as appropriate to not allow piles to reach five feet in height or greater than ten feet in diameter. Debris individually larger than these dimensions shall be removed from the site within five working days. Receptacles shall not be allowed to overflow at any time. Where necessary, the CONTRACTOR shall employ a Maintenance of Traffic Plan (MOTP) for vehicles and pedestrians. The plan must be in writing, including sketches or drawings, and must be submitted to the OWNER, OWNER's Representative or ENGINEER for review and approval before commencement of the plan. The CONTRACTOR shall follow all applicable local, state and federal codes regarding site safety and maintenance.

END OF SECTION

SECTION 01 42 00

REFERENCES

PART 1 – GENERAL

1.01 GENERAL

- A. Applicable Publications. Whenever in these Specifications references are made to published specifications, codes, standards, or other requirements, it shall be understood that wherever no date is specified, only the latest specifications, standards, or requirements of the respective issuing agencies which have been published as of the date that the Work is advertised for bids, shall apply; except to the extent that said standards or requirements may be in conflict with applicable laws, ordinances, or governing codes. No requirements set forth herein or shown on the Drawings shall be waived because of any provision of or omission from said standards or requirements.
- B. Assignment of Specialists. In certain instances, specification test requires (or implies) that specific work is to be assigned to specialist or expert entities who must be engaged for the performance of the Work. Such assignments shall be recognized as special requirements over which the CONTRACTOR has no choice or option. These requirements shall not be interpreted so as to conflict with the enforcement of building codes and similar regulations governing the Work. They are not intended to interfere with local union jurisdiction settlements and similar conventions. Such assignments are intended to establish which party or entity involved in a specific unit of Work is recognized as “expert” for the indicated construction processes or operations. Nevertheless, the final responsibility for fulfillment of the entire set of Contract requirements remains with the CONTRACTOR.

1.02 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Without limiting the generality of other requirements of the Specifications, all Work specified herein shall conform to or exceed the requirements of such referenced documents which are not in conflict with the requirements of these Specifications or applicable codes.
- B. References herein to “Building Code” shall mean the latest edition of the Florida Building Code. The latest edition of the code as approved and used by the local agency as of the date of award as adopted by the agency having jurisdiction shall apply to the Work herein, including all addenda, modifications, amendments, or other lawful changes thereto.
- C. In case of conflict between codes, reference standards, Drawings, and the other Contract Documents, the most stringent requirements shall govern. All conflicts shall be brought to the attention of the ENGINEER for clarification and directions prior to ordering or providing any materials or labor. The CONTRACTOR shall bid the most stringent requirements.

- D. Applicable Standard Specifications. The CONTRACTOR shall construct the Work specified herein in accordance with the requirements of the Contract Documents and the referenced portions of those referenced codes, standards, and specifications listed.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01 45 35
TESTING AND 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.
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. Excavation, Backfill, and Embankment: Section 31 23 00.
 - b. Trenching, Backfilling, and Compacting: Section 31 23 33.
 - c. Paving: Section 32 10 00.
 - d. Cast-in-Place Concrete: Section 03 30 00.

C. The following schedule defines the responsibility for various tests.

Test	Notes	Paid for By
Soil Compaction	Pipe Work: Every 300 feet (300') at each lift of compaction minimum. Beneath Structures: Each 500 SF lift of compaction minimum and each lift around structures.	Contractor
Pressure	As specified in Section 46 05 03	Contractor
Bacteriological	As required by local and state agencies	Contractor
LBR	Each 1500 SF of pavement (minimum)	Contractor
Concrete	Slump test each delivery and compressions test five (5) cylinders every 50 CY (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 ASTM 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 (2) 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 (2) 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	Four (4) cylinders per mix, two (2) broken at seven (7) days, two (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 C 114
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 percent (98%) Density]	Every 300 LF
	2) Limerock Bearing Ratio 40	Every 300 LF
Base	(Soil Cement)	
	(1) Mix Design 350 psi @ 28 days. Mix design required seven (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 [six inch (6") minimum]	Every 300 feet (300')

Paving	(1) Job Mix Formula. Required seven (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 feet (300') (left, right & center)
	(4) Marshall Field Stability Index	Every 1500 SY or fraction thereof
	(5) Thickness Cores	Every 300 feet (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 five (5) copies 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 57 13
TEMPORARY EROSION AND SEDIMENTATION CONTROL

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 as required by Rules and Regulations and permit conditions.
2. Temporary erosion controls include, but are not limited to, grassing, mulching, setting, watering and re-seeding on-site surfaces and soil and borrow area surfaces and 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. CONTRACTOR is responsible for providing effective temporary erosion and sediment control measures during construction or until final controls become effective.

B. Related Work Described Elsewhere:

1. Excavation, Backfill, and Embankment: Section 31 23 00.
2. Grassing, Mulching and Sodding: Section 32 92 00.

PART 2 – PRODUCTS

2.01 EROSION CONTROL

- A. Sodding is specified in Section 31 23 00.
- B. Netting shall be fabricated of material acceptable to the OWNER.

2.02 SEDIMENTATION CONTROL

- A. Bales shall be clean, seed-free cereal hay type.
- B. Netting shall be fabricated of material acceptable to the OWNER.
- C. Filter stone shall be crushed stone which conforms to Florida Department of Transportation (FDOT) specifications.

- D. Concrete block shall be hollow, non-load bearing type.
- E. Concrete shall be exterior grade not less than one inch (1") thick.

PART 3 – EXECUTION

3.01 EROSION CONTROL

- A. Minimum procedures for grassing are:
 - 1. Scarify slopes to a depth of not less than six inches (6") and remove large clods, rock, stumps, roots larger than one-half inch (1/2") 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 three-quarter inches (3/4") and one and one-half inches (1-1/2").
 - 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.

3.02 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.

3.03 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
MATERIAL AND EQUIPMENT

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 (2) 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 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 (1) 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 any 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 of 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 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 (7) 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 by him. 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 ensure 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 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 concurrent with the Contractor's for one (1) year after the time of acceptance.

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 to be designated 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 (3) weeks of operation.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01 71 13 MOBILIZATION

PART 1 – 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 CONTRACTOR's 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. 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 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.

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.

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. No waste material, debris or rubbish shall be buried on 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 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 74 25
MISCELLANEOUS WORK AND CLEANUP

PART 1 – GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. 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.
2. 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.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. 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 RESTORING 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.

3.02 CLEAN UP

- A. The CONTRACTOR shall remove all construction material, buildings, equipment, and other debris remaining on the job as the result of construction operations and shall render the site of the work in a neat and orderly condition. All suitable excess excavated material shall remain on site.

3.03 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.

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 is 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 & STARTUP CHECKLIST

PROJECT: _____
OWNER: _____

ENGINEER: _____
CONTRACTOR: _____
DATE: _____

STRUCTURE: _____
EQUIPMENT DESCRIPTION: _____
VENDOR: _____
REPRESENTATIVE: _____ INIT.: _____

of training days required: _____ # received: _____

STARTUP/TRAINING DESCRIPTION: _____

COMMENTS: _____

ACCEPTABLE: _____ PARTIALLY ACCEPTABLE: _____ NON-ACCEPTABLE: _____

ATTENDEES:

<u>NAME</u>	<u>AFFILIATION</u>	<u>DATE</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

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. Start-Up Procedures: Section 01 75 16.
 - 3. Operating and Maintenance Data: Section 01 78 23.
 - 4. Project Record Documents: Section 01 78 39.
 - 5. Warranties: Section 01 78 36.

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 have 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 non-conformances are corrected or the correction plan approved.
- 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 request 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 therefor.
 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, re-inspect the Work. The CONTRACTOR will be liable for re-inspection 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 re-inspected 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, re-inspect the Work and the CONTRACTOR shall be liable for re-inspection fees as described in paragraph 1.04, herein.
- D. When the ENGINEER finds that the Work is acceptable under the Contract Documents, the CONTRACTOR may make closeout submittals.

1.04 RE-INSPECTION FEES

- A. Should the ENGINEER perform re-inspections 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: To requirements of Section 01 78 36.
- B. Evidence of Payment and Release of Liens: To requirements of General and Supplementary Conditions.
- C. Certificate of Insurance for Products and Completed Operations.

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 re-inspection 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
OPERATING 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.

B. Related Requirements Described Elsewhere:

1. Section 01 33 23: Shop Drawings.
2. Section 01 78 39: Project Record Documents.
3. Section 01 78 36: Warranties.

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:

1. Size: Eight and one-half inches by 11 inches (8-1/2" x 11").
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 (14" x 17").
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.
7. Binders:
 - a. Commercial quality three-post binders with durable and cleanable plastic covers.
 - b. Maximum post width: two inches (2").
 - 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.
 - e. Recommended list of spare parts to keep in inventory.

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 (4) 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 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.
- B. Related Work Described Elsewhere:
 - 1. Instructions to Bidders: Bid Bonds.

1.02 SUBMITTAL REQUIREMENTS

- A. Assembly warranties, bonds and service and maintenance contracts, executed by each of the respective manufacturers, suppliers, and subcontractors.
- B. Number of original signed copies required: Two (2) 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 warranty, bond, or service and maintenance contract.
 - 5. Duration of warranty, 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.

1.03 FORM OF SUBMITTALS

- A. Prepare in duplicate packets.

- B. Format:
1. Size: Eight and one-half inches by 11 inches (8-1/2" x 11"), 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 AND BONDS". List:
 - a. Title of Project.
 - b. Name of CONTRACTOR.
- C. Binders: Commercial quality, three (3)-post binder, with durable and cleanable plastic covers and maximum post width of two inches (2").

1.04 WARRANTY SUBMITTALS REQUIREMENTS

- A. For all major pieces of equipment, submit a warranty from the equipment manufacturer. Manufacturer's warranty period shall be concurrent with CONTRACTOR's for one (1) year, unless otherwise specified, 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 one (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 one (1) year 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 (1) year warranty commencing at the time of OWNER 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 one (1) year warranty starting at the time of OWNER acceptance of the equipment.
- 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.

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.

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 or 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 USB thumb drive 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 linework and text, respectively.) Drawing entities are to be shown on the correct layer. All as-built entities shall have color and line type set "bylayer". Text sizes shall be relative to the plotted scale. Additional details or exploded views shall be included 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 linework and text shall be erased from the original design (construction) drawings during the as-built drawing preparation. Original linework or text shall be circled if accurate or stricken (not erased) if not with the accurate information noted/shown. New linework 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 (100') 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 (20') 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 (100') 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 (100'), 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 (100'), 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 flow-lines, edge of pavement, and road crown on both sides of the road if applicable shall be provided at 100 foot (100') 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 the Supplementary Conditions.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 02 41 00
DEMOLITION

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. This Section includes furnishing all labor, materials, equipment and incidentals required for selective site demolition.
2. This Section provides for the complete or partial removal and disposal of specified existing structures, foundations, piping, mechanical, and miscellaneous appurtenances encountered during construction operations.
3. This Section specifies certain activities necessary to maintain and facilitate operation during and immediately following construction and do not purport to cover all the activities necessary. The Contractor shall exercise due care for the existing system operation and shall maintain continuous operation of the existing lift station and the overall wastewater service and minimize operation inconvenience. In accordance with this requirement, a Demolition and Removal Plan shall be developed in accordance with Paragraph 1.06.
4. Demolition includes:
 - a. Demolition, complete or partial removal and cutting of existing piping and/or structures as required for the new construction.
 - b. Disposal of salvageable and excess unacceptable material as specified below.
 - c. Complete removal and off-site disposal of excess and unacceptable materials.
5. The Contractor shall examine the various drawings regarding the proposed site, visit the proposed site and determine for himself the extent of the work, the extent of work affected therein and all conditions under which he is required to perform the various operations.
6. Specific piping and/or structures to be partially or completely demolished are identified in the Construction Drawings.

1.02 PERMITS AND NOTICES

- A. Permits and Licenses: Contractor shall obtain all necessary permits and licenses for performing the work and shall furnish a copy of same to the Engineer prior to commencing the work. The Contractor shall comply with the requirements of the permits.

- B. Notices: Contractor shall issue written notices of planned demolition to Owner, Engineer and companies or local residents located within the project site. Notices shall be received with at least 48 hours in advance of the planned demolition activity.
- C. Utility Services: Contractor shall notify utility companies or local authorities furnishing gas, sewer, water, electrical or telephone to remove any equipment owned by them in structures to be demolished and to remove, disconnect, cap or plug their services to facilitate demolition.

1.03 CONDITIONS OF PIPING AND/OR STRUCTURES

- A. The Standard Building Codes shall control the demolition, modification or alteration of the existing piping and structures.
- B. No blasting shall be done on site. The Contractor shall not bring or store any explosives on site.

1.04 DISPOSAL OF MATERIAL

- A. Salvageable material shall become the property of the Owner, if the Owner requests any specific item. The Contractor shall dismantle all materials to such a size that it can readily handled and deliver any of this salvageable material requested by the Owner to a storage area designated by the Owner.
- B. The following materials are examples of the type that the Owner may maintain ownership of:
 - 1. Valves greater than 3 inches in diameter.
 - 2. Water meters on service connections.
- C. Any materials that the Owner rejects shall become the Contractor's property and must be removed from the site.
- D. Concrete, concrete block and unsalvageable bricks shall be hauled to a waste disposal site by the Contractor.
- E. All other material shall be hauled to a waste disposal site by the Contractor.
- F. The storage of or sale of removed items on the site will not be allowed.

1.05 SUBMITTALS

- A. Submit to the Engineer for approval, two (2) copies of the proposed Demolition and Removal Plan for the modifications as shown on the Drawings or as specified herein prior to the start of work. Include in the schedule the coordination of shutoff, capping and continuation of utility service as required. The Demolition and Removal Plan shall include as a minimum, the following:

1. A detailed sequence of demolition and removal work to insure the uninterrupted operation of the Owner's utility systems, and the expeditious completion of the Contractor's work.
 2. Evidence (by signature) of approval by the Owner of the work plan.
- B. Before commencing demolition work, all modifications necessary to bypass the affected portion of the system will be completed. Contractor shall coordinate with the residential Owner's personnel to determine the locations of the affected valves, fittings and water meters.
- C. The above procedure must be followed for each individual demolition operation.

1.06 TRAFFIC AND ACCESS

- A. Conduct demolition and modification operation, and removal of piping and debris to ensure minimum interference with roads, streets, and sidewalks both onsite and off-site and to ensure minimum interference with occupied or used facilities.
- B. Contractor shall at all times maintain safe and convenient access to the existing site.
- C. Do not close or obstruct streets or walks without permission from the Owner and Engineer. Provide alternate traffic routes around closed or obstructed access ways.

1.07 DAMAGE

- A. Promptly repair damage caused to adjacent facilities by demolition operations at no cost to the Owner.

1.08 UTILITIES

- A. Maintain existing utilities to remain in service and protect against damage during demolition operations. This may include the installation/construction of bypass piping where necessary.
- B. Do not interrupt existing utilities serving occupied or used facilities, except when authorized by the Owner and Engineer. Provide temporary services during interruption to existing utilities as required by the Owner.
- C. The Contractor shall cooperate with the Owner to shut off utilities serving the existing facilities as required by demolition operations. If service must be cut off to existing customers, the Owner must have at least three (3) days notice to make necessary preparations.
- D. The Contractor shall be solely responsible for making all necessary arrangements and for performing any necessary work involved in connection with the discontinuance or interruption of all public and private utilities or services under this jurisdiction of utility companies.
- E. All utilities being abandoned shall be disconnected and terminated at the service

mains in conformance with requirements of the utility companies or the municipality owning or controlling them.

1.09 POLLUTION CONTROL

- A. For pollution control, use water sprinkling, temporary enclosures, and other suitable methods as necessary to limit the amount of dust and dirt rising and scattering in the air to the lowest level of air pollution practical for the conditions or work. Comply with the governing regulations.
- B. Clean structures and improvements of all dust, dirt and debris caused by demolition operations as directed by the Engineer. Return areas to conditions existing prior to the start of work.

1.10 QUALITY CONTROL

- A. Protect all existing materials and equipment to be salvaged or reused from damage.
- B. Cap or plug all lines to be abandoned.
- C. Leave all exposed ends of all pipe covered and safe.

PART 2 - MATERIALS (NOT USED)

PART 3 - EXECUTION

3.01 SEQUENCE OF WORK

- A. The sequence of demolition and removal of the existing facilities will be in accordance with the approved Demolition and Removal Plan as specified in Paragraph 1.05 of this Section. The Contractor is solely responsible for construction and demolition sequencing of the Work.

3.02 REMOVAL OF EXISTING PIPING AND APPURTENANCES

- A. Subject to the constraints of maintaining the existing systems in operation; existing piping and appurtenances not necessary for the operation of the new system shall be removed as shown or indicated on the Drawings.
- B. All piping and appurtenances shall be cleaned, flushed and drained. Equipment to be retained by the Owner as specified in Paragraph 1.04 above shall be dismantled sufficiently to permit thorough cleaning and draining. All valves shall be left open. All abandoned piping shall be capped and sleeves and openings remaining after removal of the existing equipment, piping, and appurtenances shall be plugged and sealed as shown on the Drawings.
- C. All water meters on residential service connections located within the right-of-way that have not been relocated and connected to the new service lines shall be removed and given to the Owner.

3.03 STRUCTURES TO BE COMPLETELY DEMOLISHED

- A. Existing structures shall be completely demolished as shown on the Drawings. Structures shall be demolished to make room for construction of new facilities, unless otherwise shown on the Drawings. All demolished material and equipment shall be removed from site.

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 C 172.
- 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 – MATERIALS AND EQUIPMENT

- 2.01 Portland Cement. Shall comply with the standard specifications for Portland Cement, ASTM C 150, Type II, or Type III (high-early), where indicated on drawings.

2.02 Concrete Aggregate. Shall conform to standard specifications for concrete aggregate, ASTM C 33 or to ASTM C 330. Maximum size of aggregate shall not exceed one-fifth (1/5) of the narrowest dimension between reinforcing bars.

A. 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 to 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%
Coat and Lignite	1%

2. The fine aggregate shall be reasonably well graded from coarse to fine and when tested by means of laboratory sieves shall meet the following requirements in percent of total weight:

<u>Total Retained On</u>	<u>Percent (%) Retained</u>
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

3. 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.

B. Coarse Aggregate. 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 ENGINEER. Samples of the coarse aggregate shall be furnished

together with certified copies of the gradation and analysis from a recognized testing laboratory.

- 1. 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%

- 2. Where the cover over reinforcing is two inches (2") or more, the maximum size of aggregate shall be 12 inches (12"). Where the cover over reinforcing is less than two inches (2"), the maximum size of aggregate shall be three-quarter inch (3/4"). The maximum size of aggregate shall not exceed one-fifth (1/5) 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.

<u>Percent Passing</u>	
Maximum Size Square Mesh Screen	97 – 100 %
2 Maximum Size Square Mesh Screen	40 – 70 %
No. 4 Sieve	0 – 6 %

2.03 WATER. Water shall be clean and free from oil, acids, alkalis, organic materials, or other injurious substances.

2.04 REINFORCEMENT

- A. Reinforcing Bars: ASTM A 615, Grade 60, deformed bars of USA manufacture.
- B. Welded Wire Fabric: ASTM A 185, 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 three-quarter inch (3/4").
- C. Medium Density Overlay (MDO) Plywood Forms: PS-1, B-B High Density Concrete Form Overlay, Class I, unoled.
 - 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, two-inch (2") wide on each leg.
- E. Steel Forms. Uncoated steel, three-sixteenth inch (3/16") 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 wool 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 (0.11") 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 (13") in diameter by 12 inches (12") deep. Provide preformed mortar plugs to match the color of the concrete, recessed three inches (3"), adhered with an approved two (2)-part epoxy.
- H. Weep Hole Forms: PVC polyethylene, or ABS pipe, matching color of the concrete, four-inch (4") inside diameter, with outlet projecting 12 inches (12") from 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 (1) 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 (48") 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 three-quarter inch (3/4") 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 C 260.
- B. Water Reducing and Retarding Admixture:
1. Concrete Without Superplasticizer:
 - a. Water Reducing Admixtures: ASTM C 494, 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 C 494, 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 C 494, 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 C 494, 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 rehoplastic 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 three-quarter inch (3/4") sieve.
- 2.08 MEMBRANE CURING COMPOUND. Membrane curing compound shall be wax-free, pigmented, 100 percent (100%) 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. 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 degrees (90°) to support top bars.
- B. Membrane: Six (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, nine inches by three-eighth inches (9" x 3/8") at wall thickness of 12 inches (12") or greater, and six inches by three-eighth inches (6" x 3/8") at wall thickness less than 12 inches (12"). Provide six inch (6") 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 D 994.
 2. Non-extruding type, self-expanding cork, three-quarter inch (3/4") 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 (1) part cement to two and one-half (2-

1/2) 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 (1/3) overall thickness of slab, wall, or beam in which they are embedded.
 - 2. They shall not be spaced closer than three (3) 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 (32°C) 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 (12" or 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 30 percent (30%) nor more than 50 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 four inches (4"). 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 six (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" (ASTM 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 seven (7) days 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 | Additives (if any) |
| 2. | Type of cement and weight | Site arrival time |
| 3. | Quantity of water and time added | Site leaving time |
- D. Concrete.
- 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.
 - 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.
 - 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.
- Neither the speed of any mixer nor the quantity of material loaded into any mixer shall exceed the recommendations of the manufacturer.
 - Excessive over-mixing, required additions of water to preserve the required consistency, shall be cause for rejection of the batch.
 - Concrete shall not remain in a transit mixer or agitator truck more than 90 minutes after the water has been introduced, and not for more than 45 minutes if any approved retarding agent is not used.
 - Minimum mixing time shall be 50 revolutions of drum at rated speed.
- F. Measurement.
- Equipment necessary to determine and control the actual amounts of all materials entering the concrete shall be provided by the concrete manufacturer.
 - All materials shall be measured by weight, except that water may be measured by volume calculated at eight and one-third (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:
 - 0.37 (lbs/lb) – Concrete with superplasticizer
 - 0.38 (lbs/lb) – Concrete in Marine Environments
 - 0.45 (lbs/lb) – Class A concrete without superplasticizer
 - 0.55 (lbs/lb) – Class B concrete without superplasticizer
 - 0.65 (lbs/lb) – Class C concrete without superplasticizer
3. Air Content: Five percent (5%) plus or minus one and one-half percent ($\pm 1.5\%$) (Class A and B).
4. Slump:
 - Four inches (4") plus or minus one inch ($\pm 1"$) for Class A and B without superplasticizer.
 - Seven inches (7") plus or minus one inch ($\pm 1"$) for Class A and B with superplasticizer.
 - Eight inches (8") plus or minus one inch ($\pm 1"$) 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 (5'), 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 (12") deep before compacting. Concrete shall be compacted by internal vibrating equipment supplemented by spading and hand-rodging 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 (5) 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 one-inch (1") minimum layer of one to two and one-half (1:2-1/2) cement-sand grout, with a six-inch (6") to eight-inch (8") slump, placed on existing concrete not more than 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 (3) layers at 12 inches (12") each for the full length of the pour before proceeding higher. The placing of concrete shall not be delayed more than 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 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 insure 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 (1) vertical to three (3) horizontal or more than one (1) vertical to two (2) 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 (5'), 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, 30 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 18 hours and then immediately cover with waterproof curing sheet conforming to ASTM C 171, 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 (12").
- 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 six inches by six inches (6" x 6") No. 10 woven or electrically welded wire fabric conforming to the requirements of ASTM A 185, 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 one inch by one inch (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	Seven (7) days	90
Over 20 feet (20') Between Supports	12 days	Seven (7) days	90
Stairway	10 days	Five (5) days	80
Floor Slabs	Five (5) days	Three (3) days	70
Free Standing Walls, Columns, and Piers	Five (5) days	Three (3) days	70
Walls, Piers, Columns, Sides of Beams, Footings, Slabs on Grade, and Vertical Surfaces	24 – 48 hours	12 – 24 hours	70
Front Face Form of Curbs	Six (6) – 24 hours	Six (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 (6") 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 (1) part cement to one (1) 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:

<u>Finish Designation</u>	<u>Area Applied</u>
F-1	Exterior walls below grade not exposed to water: Repair defective concrete, fill depressions deeper than two inch (2"), and fill tie holes.
F-2	Exterior and interior walls exposed to water: Repair defective concrete, remove fins, fill depressions three inch (3") 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 (1) part cement and one and one-half (1-1/2) 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.

<u>Finish Designation</u>	<u>Area Applied</u>
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 10 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 three-inch (3") 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 ten-foot (10') straightedge applied at no less than two (2) 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 one-eighth inch (1/8") in ten feet (10') as determined by a ten-foot (10') 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 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.

3.07 TESTS

- A. Compressive strength tests shall be made by breaking standard six-inch (6") diameter by 12-inch (12") high test specimens prepared, cured, and broken in accordance with the ASTM Standard Methods C 31 and C 39, latest revision. Four (4) specimen test cylinders shall be taken from each pour of five (5) cubic yards or more. One (1) 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 (5) cubic yards as directed by the ENGINEER. Test specimens shall be taken in the presence of the ENGINEER. One (1) cylinder from each pour shall be broken at seven (7) days, the remainder at 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 C 143, 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.

3.08 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 D 175, 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 D 994, 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 nine-inch (9") PVC multi-rib center-bulb type for expansion joints, and one-quarter inch by four inches (1/4" x 4") and one-eighth inch by four inches (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 03 40 00
PRECAST CONCRETE

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Scope of Work: The work under this Section includes the design, casting, delivery, and erection of concrete structures as indicated on the Drawings.

1.02 QUALITY ASSURANCE

- A. Standards: Unless otherwise indicated, all materials, workmanship and practices shall be in accordance with the current editions of the following standards:
1. Standard Building.
 2. ACI 318, "Building Code Requirements for Reinforced Concrete".
 3. PCI MNL 116, "Manual for Quality Control for Plants and Production of Precast Concrete Products".

1.03 SUBMITTALS

- A. The following information shall be submitted for approval. Fabrication shall not begin until submission has been approved.
1. Quality Control: Satisfactory evidence shall be submitted that plant and production methods meet the requirements of PCI MNL 116.
 2. Design: Complete calculations including shear, moment, buoyancy, and camber calculations shall be submitted. All computation sheets shall bear the seal of a Professional Engineer registered in the State of Florida. Design water table shall be assumed to be at finished grade.
 3. Shop Drawings: Complete fabrication and erection drawings shall be submitted. All drawings shall bear the seal of a Professional Engineer registered in the State of Florida.
- B. Manufacturer's data sheets shall be submitted on the following:
1. Joint mastic and gaskets.
 2. Pipe connections.
 3. Grout material.
 4. Hatches and manhole covers

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Transportation and erection shall be done by qualified personnel using proper equipment. Lifting and supporting shall be done only at points indicated on the shop drawings.

PART 2 – PRODUCTS

2.01 MATERIALS AND FABRICATION

A. Precast Concrete Structures:

1. Design loads shall consist of dead load, live load, impact, soil loads and loads due to water table, as well as other loads which may be imposed upon the structure. Wetwells and manholes shall be designed in accordance with ASTM C 478. The minimum wall thickness for wetwells up to seven feet (7') I.D. shall be eight inches (8"). The minimum wall thickness for wetwells eight feet zero inches (8' 0") to 12 feet zero inches (12' 0") I.D. shall be ten inches (10"). The minimum wall thickness for four foot (4') I.D. manholes shall be six inches (6"). The minimum wall thickness for valve vaults shall be six inches (6").
2. Forms used for precast concrete shall be of metal and sufficiently designed and braced to maintain their alignment under pressures of the concrete during placing. Base and first section of precast structures shall be an integral cast.
3. Aggregates: All aggregates, fine and coarse, other than lightweight aggregate shall conform to ASTM C 33. Lightweight aggregates, fine and coarse, shall conform to ASTM C 330. Aggregates shall be free of deleterious substances causing reactivity with oxidized hydrogen sulfide. Both types of aggregate shall be graded in a manner so as to produce a homogenous concrete mix. All materials are to be accurately weighed at a central batching facility for mixing.
4. Cement shall be Portland cement Type II.
5. Minimum compressive strength of concrete used for precast concrete structures shall be 4000 psi at 28 days.
6. Placing. All concrete shall be handled from the mixer or transport vehicle to the place of final deposit in a continuous manner, as rapidly as practicable, and without segregation or loss of ingredients, until the approved unit is completed. Maximum elapsed time from batching to placement shall be two (2) hours. Concrete shall be placed in layers not over two feet (2') deep. Each layer shall be compacted by mechanical internal or external vibrating equipment. Duration of the vibration cycle shall be limited to the time necessary to produce satisfactory consolidation without causing objectionable segregation.

7. Curing:
- a. For purposes of early reuse of forms, precast concrete may be steam cured after an initial set has taken place. The steam temperature shall not exceed 160°F, and the temperature shall be raised from normal ambient temperatures at a rate not to exceed 40°F per hour.
 - b. The steam cured unit shall not be removed from the forms until sufficient strength is obtained for the unit to withstand any structural strain to which it may be subjected during the form stripping operation. After the stripping of forms, further curing by means of water spraying or a membrane curing compound may be used, and shall be of a clear or white type, conforming to ASTM C 309.
8. Reinforcing steel shall be sufficiently tied to withstand any displacement during the pouring operation. All bars shall be Grade 60.
9. Joints shall be tongue and groove pipe ends sealed with round or other flexible type natural rubber joint ring gaskets in conformance with ASTM C 433 or by a flexible performed bitumastic sealing material equal to Ram-Nek as manufactured by R.K. Snyder and Co., Houston, Texas. If rubber joint ring gaskets are used, interior and exterior voids in the pipe joints shall be sealed with flexible sealing material specified above, installed in strict accordance with the manufacturer's printed instructions. If manhole sections are sealed with a flexible preformed bitumastic sealing material, adequate material shall be applied so that "squeeze out" occurs at the interior and exterior of the joint. Rubber joint ring gaskets and flexible preformed bitumastic sealing material shall be provided by the manhole manufacturer.
10. Eccentric precast concrete cone sections shall be manufactured of precast concrete with reinforcing and joints as specified above for straight riser.
11. Lifting holes through the structures are not permitted. Equally spaced lifting lugs, rings or non-penetrating lift inserts shall be provided.
12. Top slabs for shallow manholes, valve vaults, and pumping station wet wells may be precast or cast-in-place. Steel reinforcing shall be as required for the dead load of the slab plus an H-20 designation live load. Concrete for top slabs shall have a compressive strength of 4000 psi at 28 days. Thickness of concrete for top slabs shall be a minimum of six inches (6") for shallow manholes and valve vaults and eight inches (8") for pumping station wet wells.
13. Manholes inverts shall be precast into the manhole base section by the manhole manufacturer unless prior approval is obtained from the ENGINEER to construct inverts in the field. The drop from inlet to outlet shall be a minimum of one inch unless approved by the ENGINEER. The channel height of the manhole invert shall match the crown of the exit sewer. Manhole benches shall be sloped a minimum of one inch per foot from the outside periphery of the manhole to the edge of the invert channel.

- B. Sealing Compound and Grout: Plastic sealing compound shall comply with Federal Specification SS-SS-00210. Mortar shall comply with ASTM C 387, Type S, or use grout complying with Section 03 60 00.
- C. Pipe Connections:
1. Pipe connections for wet wells and manholes shall be resilient, waterproof connections designed in accordance with ASTM C 923 "Resilient Connectors Between Reinforced Concrete Manhole Structures and Pipes". Resilient pipe connectors shall either be cast into the manhole wall or installed following casting in a cored section of the manhole wall. Resilient connectors shall either be a gasket type connector equal to the A-Lok pipe to manhole seal as manufactured by Atlantic Concrete Products, Inc., or a flexible neoprene boot with stainless steel clamps equal to KOR-N-Seal System as manufactured by the Dukor Corporation. When the pipe is installed in the resilient manhole connector, the pipe shall be capable of 20-degree minimum deflection in any direction.
 2. Pipe connections for wall penetrations for valve vaults and for manholes and wetwells where resilient connectors cannot be used shall be provided with wall sleeves and link seals.
- D. Frames and Covers: Cast iron manhole frames and covers shall be provided for manholes and aluminum access hatches shall be provided for wetwells and valve vaults as specified below:
1. Standard Manhole Frames and Covers: Shall be gray iron castings conforming to ASTM A 48, 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 frame and cover shall be machined so that the cover will not rock after it has been seated. The cover shall be provided with a precisely machined dovetail groove with a neoprene O-ring gasket to provide a self-sealing cover. The gasket shall be glued in place at the foundry. The manhole cover shall be solid with two non-penetrating pick holes. Manholes frames and covers shall be coated on all non-machined surfaces with three coats of coal tar epoxy as specified for the Class 7 Coating System in Section 09 90 00. Manhole frames and covers shall be U.S. Foundry and Manufacturing Corp. No. 38B, Ref. Cat. No. 225, Neenah Foundry Company No. R-1642 with a Type "B" cover or an equal approved by the ENGINEER.
 - a. Anchor Bolts: Anchor bolts for bolting manhole frame to precast manholes shall be three-quarter inch (3/4") diameter galvanized all thread steel rods with a five-inch (5") hook for embedment in the precast manhole. The bolts shall be of sufficient length to provide a minimum two-inch (2") thread projection through the flange of the manhole frame. Two (2) anchor bolts shall be cast into the precast manhole top section or slab, positioned at 180 degrees, at the time of manufacturer. Manhole frames shall be drilled to match the bolt settings prior to coating.

2. Aluminum Access Hatches: Aluminum hatches shall be provided for wetwells and valve vaults sized as indicated on the Drawings. Access hatches shall be as specified in Section 08 30 05.

E. Coatings:

1. Interior and exterior surfaces of precast structures shall be coated with a primer coat and three finish coats of coal tar epoxy as specified in Section 09 90 00.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Earthwork: The CONTRACTOR shall prepare an excavation large enough to accommodate the structure and permit sealing of openings, waterproofing, and backfilling operations. Earthwork shall conform to the applicable sections of Division 2.
- B. Installation of Precast Concrete Structures: Precast concrete structures shall be constructed in a workmanlike manner at the locations and dimensions indicated on the Drawings. Precast structures shall be set on foundation of crushed stone, 12 inches (12") thick. Crushed stone material shall be a well graded crushed stone or crushed gravel meeting the requirements of ASTM C 33, Gradation No. 67 [three-quarter inch (3/4") to No. 4 sieve]. The precast structures shall be constructed such that the structure will not transmit dead or live loads to the piping. Care shall be taken to prevent earth and other material from entering precast structures.
- C. Sealing and Grouting: Fill all interior and exterior joints between precast sections with a joint sealant, as recommended by the structure manufacturer.
- D. Installing Precast Sections:
 1. Set each precast concrete unit plumb on a bed of sealant to make a watertight joint at least two-inch (2") thick with the concrete base or with a preceding unit. Point the inside joint and wipe off the excess sealant.
 2. Assemble units so that the cover conforms to the elevations shown on the Drawings.
 3. Pipe connections at precast structures shall be provided at the locations shown on the Drawings. Connections shall be resilient and waterproof.
 4. All voids in interior and exterior manhole section joints and lift holes for manhole sections shall be filled with a non-shrinking, non-metallic grout. Grout shall be applied and cured in strict accordance with the manufacturer's recommendations. The grout shall be finished smooth and flush with the wall surface of the manhole.

E. Manhole Flow Channels and Bench Walls:

1. Unless prior approval is obtained from the ENGINEER, manhole flow channels (inverts) and bench walls shall be precast into the manhole base section as specified above.
2. Upon prior approval from the ENGINEER, manhole inverts may be constructed in the field. Invert channel bottoms shall be smooth and semicircular in shape conforming to inside of adjacent sewer sections. Changes in direction of flow shall be made with a smooth curve of as large radius as the size of manhole will permit. Changes in size and grade of channels shall be made gradually and evenly to give a smooth uninterrupted flow pattern through the manhole. Channel height shall match the crown of the connection sewer pipe exiting the manhole. Manhole bench walls shall be smooth and shall slope one inch per foot from the edge of the invert channel to the precast manhole wall. Invert channels may be constructed by forming in concrete or by building up brick and mortar to form the manhole bench walls on each side of the channel, and plastering over bricks with cement mortar with a minimum thickness of two inches (2"). Manhole invert construction shall only be performed by experienced and qualified workmen.
3. Bricks used to construct manhole invert channels and bench walls shall be standard size [22 inches high by four inches wide by eight inches long (22" H x 4" W x 8" L)] brick in conformance with ASTM C 32 "Sewer and Manhole Brick (Made from Clay and Shale)", Grade MS. Mortar used for masonry work shall be prepared by thoroughly mixing: One (1) volume of Type II Portland Cement with three (3) volumes of sand and sufficient clean water to produce a rich mass of approved consistency. Mixing mortar on the ground or any paved surface shall not be permitted. Sand to be used in making mortar shall be clean, well-graded, and shall pass a standard No. 4 sieve.

F. Setting Frames and Covers:

1. Unless otherwise indicated on the Drawings, in unpaved areas the tops of manholes shall be set 0.2 feet (0.2') above finished grade and the tops of wetwells and valve vaults shall be set 0.5 feet (0.5') above finished grade.
2. The top of all precast manholes may be brought to proper grade for receiving manhole frame by using not more than three courses of brick or precast concrete grade rings. Bricks and mortar used for manhole top grade adjustments shall be as specified above in Paragraph 3.01.E.3. Precast concrete grade rings shall be precast with steel reinforcement in conformance with ASTM C 478 and concrete with a compressive strength of 4000 psi in 28 days. Precast concrete grade rings shall be manufactured in half annular shapes for ease of handling. The grade ring dimensions shall be two inches (2") thick with an annular width of eight inches (8") and an inside diameter of 24 inches (24").
3. Masonry construction shall be performed by experienced and qualified workmen only. All work shall be laid plumb, straight, level, square and true. Brick shall be laid in full beds of mortar and shoved into place. All joints shall be full and not more than two inches (2") in thickness. The

CONTRACTOR shall set in place and bond in the masonry all necessary anchor bolts and miscellaneous items specified elsewhere. The masonry walls shall be plastered on the inside and outside with a one-half inch coat of Portland Cement mortar.

4. Following curing of any masonry construction required for manhole top adjustment, set manhole frame in a bed of three- to two-inch (3-2") thick flexible bitumastic sealing material (Ram-Nek) and anchor in place with two (2) three-quarter inch (3/4") diameter anchor bolts, which shall be securely embedded in the top of the manhole. Seal the flange of the manhole ring to the top of the manhole with cement mortar.
- G. Interior Lining: The interior coating system shall be applied following installation of the precast structures and any piping or equipment which will penetrate or attach to the walls. Surface preparation and application of the coating system shall be in strict accordance with the manufacturer's recommendations. Refer to Section 09 90 00 for additional specifications.
- H. Backfill: After the structure and all appurtenances are in place and approved, backfill shall be placed to the original ground line or to the limits designated on the Drawings. Backfill material shall consist of sand or loose earth, free from stones, clods, or other deleterious material. It shall be placed in horizontal layers not exceeding 12 inches (12") in depth, and shall be moistened and thoroughly compacted to a minimum relative density.

END OF SECTION

SECTION 03 60 00 GROUTING

PART 1 – GENERAL

1.01 WORK INCLUDED

- A. Provide all labor, materials, tools, and equipment and perform all grouting as specified hereinafter and indicated on the Drawings.

1.02 RELATED WORK

- A. Section 03 30 00: Cast-In-Place and Poured Concrete.

1.03 SUBMITTALS

- A. Submit manufacturer's literature for review on the following items:
 - 1. Non-shrink grout data including grout properties, mixing, surface preparation, and installation instructions.

1.04 DELIVERY AND STORAGE

- A. Deliver and store grouting materials in unbroken containers with seals and labels intact as packaged by the manufacturer.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Non-shrink, 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. Non-shrink 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.

PART 3 – EXECUTION

3.01 PREPARATION

- A. Clean all bonding surfaces of dust and oil.

3.02 INSTALLATION

- A. Non-shrink Grout:

1. Use non-shrink, nonmetallic grout for grouting precast concrete wall panel connections, column base plates, anchor bolts, reinforcing bars, pipe sleeves, machinery supports and pump base plates. Use epoxy grout for anchor bolts, etc., where indicated on the Drawings.
2. Mix and place non-shrink grout as recommended by the manufacturer.
3. Mix grout as close to the work area as possible and transport quickly to its final position in a manner which will not permit segregation of materials.
4. Cure non-shrink grout with water saturated burlap for at least three (3) days or with an application of Super Rez Seal cure and seal compound applied immediately after grout placement.
5. Do not operate machinery set on grout pads until the grout has cured for at least 24 hours.

END OF SECTION

SECTION 04 05 19
MASONRY ANCHORAGE AND REINFORCING

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Provide all materials, equipment and labor required to complete the reinforced unit masonry construction in accordance with the Drawings and Specifications. Coordinate all work with that of other trades.

1.02 RELATED WORK

- A. Section 04 20 00 - Unit Masonry
- B. Section 01 33 23 - Shop Drawings, Product Data, and Samples

1.03 SUBMITTALS

- A. Submit shop drawings, product data, mixes, etc., in accordance with Section 01 33 23.
- B. Submit complete shop drawings, including bar lists and placement drawings.
- C. Submit mill test certificate for reinforcing steel.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. General: Refer to Section 04 20 00 for masonry materials and accessories not included in this Section.
- B. Reinforcing Steel: ASTM Designation A615, Grade 60, unless otherwise specified.
- C. Construct all exterior walls of reinforced concrete masonry as follows:
 - 1. Concrete Masonry Units: ASTM C90, Type II, normal weight units with minimum compressive strength of 3000 psi.
 - 2. Premix Mortar: ASTM C387, Type M.
 - 3. Vertical Reinforcing: Provide as shown on the Drawings:
 - 4. Concrete Grout for Filling Cells: 3/8 inch pearock mix with minimum compressive strength of 3,000 psi.
 - 5. Horizontal Reinforcing: 9 gauge ladder type at 16" o.c.

PART 3 - EXECUTION

3.01 PLACING REINFORCEMENT

- A. Clean reinforcement of loose rust, mill scale, earth or other materials which will reduce bond to mortar or grout. Do not use reinforcement bars with kinks or bends not shown on Drawings or final shop drawings, or bars with reduced cross section due to excessive rusting or other causes.
- B. Place reinforcement accurately at the spacing shown. Support and secure vertical bars against displacement. Horizontal reinforcement may be placed as the masonry work progresses. Where vertical bars are shown in close proximity, provide a clear distance between bars of not less than the nominal bar diameter or 1 inch, whichever is greater.
- C. For columns, piers and pilasters provide a clear distance between vertical bars as shown, but not less than 1 ½ times the nominal bar diameter or 1 ½", whichever is greater. Provide lateral ties as shown.
- D. Splice reinforcement bars only as shown. Do not splice at other points unless approved by the Engineer. Provide lapped splices, unless otherwise shown. In splicing vertical bars or attaching to dowels, tie splices with wire.
- E. Provide not less than minimum lap shown, or if not shown, as required by governing code.
- F. Embed metal ties in mortar joints as work progresses, with a minimum mortar cover of 5/8 inch on exterior face of walls and ½" at other locations.
- G. Anchor reinforced masonry work to supporting structure as indicated.

3.02 INSTALLATION, GENERAL

- A. Perform general installation of unit masonry in accordance with the requirements specified in Section 04 20 00.
- B. Provide formwork and shores as required for temporary support of reinforced masonry elements. Design, erection, support, bracing and maintenance of formwork are the Contractor's responsibility.
- C. Construct formwork to conform to shape, line and dimensions shown and sufficiently tight to prevent leakage of mortar grout, or concrete (if any).
- D. Do not remove forms and shores until reinforced masonry member has hardened sufficiently to carry its own weight and all other reasonable temporary loads that may be placed on it during construction. Do not remove forms and shoring supporting the weight of concrete in beams, slabs and other members until concrete has attained its specified 28 day compressive strength.

3.03 INSTALLATION OF REINFORCED CONCRETE UNIT MASONRY

A. General:

1. Do not wet concrete masonry units (CMU).
2. Place CMU with full face shell mortar beds. Fill vertical head joints (end joints between units) solidly with mortar from face of unit to a distance behind face equal to not less than the thickness of longitudinal face shells. Solidly bed cross-webs of starting courses in mortar. Maintain head and bed joints widths as shown, or if not shown, provide 3/8 inch joints.
3. Where solid CMU units are shown, lay units with full mortar head and bed joints.

B. Walls:

1. Pattern Bond: Lay CMU wall units in running bond with vertical joints in each course centered on units in courses above and below, unless otherwise indicated. Bond and interlock each course at corners and intersections and use special-shaped units where shown, and as required for corners, jambs, sash, control joints, lintels, bond beams and other special conditions.
2. Maintain vertical continuity of core or cell cavities, which are to be reinforced and grouted, to provide minimum clear dimensions indicated and to provide minimum clearance and grout coverage for vertical reinforcement bars. Keep cavities free of mortar. Solidly bed webs in mortar where adjacent to reinforced cores or cells.
3. Where horizontal reinforced beams (bond beams) are shown, use special units or modify regular units to allow for placement of continuous horizontal reinforcement bars. Place small mesh expanded metal lath or wire screening in mortar joints under bond beam courses over cores or cells or non-reinforced vertical cells, or provide units with solid bottoms.
4. Option: Where all vertical cores are not shown to be grouted, Contractor may elect to fill all vertical cores with grout, in which case, requirements for mortar bedding of cross-webs and closing of core spaces below bond beams will not apply.

C. Columns, Piers and Pilasters:

1. Use CMU of the size, shape and number of vertical core spaces shown. If not shown, provide units which provide minimum clearances and grout coverage for number and size of vertical reinforcement bars shown.
2. Provide pattern bond as shown, or if not shown, provide alternate head joints in vertical alignment.

3. Where bonded pilaster construction is shown, construct wall and pilaster units together to the maximum pour height specified.

D. Grouting:

1. Use fine grout for filling spaces less than 4 inches in both horizontal directions.
2. Use course grout for filling 4 inch spaces or larger in both horizontal directions.
3. Grouting Technique: At the Contractor's option, use either low lift or high lift grouting techniques subject to the requirements which follow.

E. Low-Lifting Grouting:

1. Provide a minimum clear dimension of 2 inches and clear area of 8 square inches in vertical cores to be grouted.
2. Place vertical reinforcement prior to laying of CMU. Extend vertical reinforcement above elevation of maximum pour height as required to allow for splicing and support it in position at vertical intervals not exceeding 192 bar diameters nor 10 feet.
3. Lay CMU to maximum pour height. Limit pour height to 5 feet. If bond beam occurs below the 5 feet height stop pour at course below bond beam.
4. Pour grout using container with spout or by chute and rod or vibrate during placing. Place grout continuously. Do not interrupt pouring of grout for more than one hour. Terminate grout pours 1 ½ inches below top course of pour.
5. Bond Beams: Terminate grout in vertical cells 1 ½ inches below bond beam course. Place horizontal reinforcement in bond beams with corners and intersections lapped as shown. Place grout in bond beam course before filling vertical cores above bond beam.

F. High-Lift Grouting:

1. Do not use high-lift grouting technique for grouting of CMU unless minimum cavity dimension and area is 3 inches and 10 square inches, respectively.
2. Provide cleanout holes in first course at all vertical cells which are to be filled with grout. Use units with one face shell removed and provide temporary supports for units above, or use header units with concrete brick supports, or cut openings in one face shell.
3. Construct masonry to full height of maximum grout pour specified, prior to placing grout.

4. Limit grout lifts to a maximum height of 5 feet and grout pour to a maximum height of 24 feet, for single wythe hollow concrete masonry walls, unless otherwise indicated.
5. Place vertical reinforcement before grouting. Tie vertical reinforcement to dowels at base of masonry where shown and thread CMU over or around reinforcement. Support vertical reinforcement at intervals not exceeding 192 bar diameters nor 10 feet.
6. Where reinforcement is prefabricated into cage units before placing, fabricate the units with vertical reinforcement bars and lateral ties of the size and spacing shown.
7. Place horizontal beam reinforcement as the masonry units are laid.
8. Embed lateral tie reinforcement as the masonry units are laid.
9. Where lateral ties are shown in contact with vertical reinforcement bars, embed additional lateral tie reinforcement in mortar joints. Place as shown, or if not shown, provide as required to prevent grout blowout or rupture of CMU face shells, but provide not less than NO. 2 bars or 8 gage wire ties spaced 16 inches o.c. for members with 20 inches or less side dimensions, and 8 inches o.c. for members with side dimensions exceeding 20 inches.
10. Preparation of Grout Spaces: Prior to grouting, inspect and clean out the grout spaces. Remove dust, dirt, mortar droppings, loose pieces of masonry and other foreign materials from grout spaces. Clean reinforcement and adjust to proper position. Clean top surface of structural members supporting masonry to ensure bond. After final cleaning and inspection, close cleanout holes and brace closures to resist grout pressures.
11. Do not place grout until entire height of masonry to be grouted has attained sufficient strength to resist displacement of masonry units and breaking of mortar bond. Install shores and bracing, if required, before starting grouting operations.
12. Place grout by pumping into grout spaces unless alternate methods are acceptable to the Engineer.
13. Limit grout pours to sections which can be completed in one working day with not more than one hour interruption of pouring operation. Place grout in lifts which do not exceed 5 feet. Allow not less than 30 minutes, or more than one hour between lifts of a given pour. Rod or vibrate each grout lift during pouring operation.
14. Place grout in lintels or beams over openings in one continuous pour.
15. Where bond beam occurs more than one course below top of pour, fill bond beam course to within 1 inch of vertically reinforced cavities, during construction of masonry.

16. When more than one pour is required to complete a given section of masonry, extended reinforcement beyond masonry as required for splicing. Pour grout to within 12 inches of top course of first pour. After grouted masonry is cured, lay masonry units and place reinforcement for second pour section before grouting. Repeat sequence if more pours are required.

END OF SECTION

SECTION 04 20 00
UNIT MASONRY

PART I - GENERAL

1.01 WORK INCLUDED

A. Scope of Work:

1. Furnish all labor, materials, equipment and incidentals required to construct all masonry work as shown on the Drawings and specified herein.
2. The work under this Section includes, but is not necessarily limited to, the following:
 - a. Concrete masonry units (CMU)
 - b. Masonry reinforcing, ties and anchors
 - c. Grouting of masonry units

1.02 RELATED WORK

- A. Section 03 60 00 - Grouting
- B. Section 04 40 00 - Stone Assemblies

PART 2 - QUALITY ASSURANCE

2.01 CONSTRUCTION TOLERANCES

- A. Variation from Plumb: For vertical lines and surfaces of columns, walls and arrises do not exceed 1/4" in 10' or 3/8" in a story height not to exceed 20' nor 1/2" in 40' or more. For external corners, expansion joints, control joints and other conspicuous lines do not exceed 1/4" in any story or 20' maximum, nor 1/3" in 40' or more.
- B. Variation from Level: For lines of exposed lintels, sills, parapets, horizontal grooves and other conspicuous lines, do not exceed 1/4" in any bay or 20' maximum, nor 3/4" in 40' or more.
- C. Variation of Linear Building Line: For position shown in plan and related portion of columns, walls and partitions, do not exceed 1/2" in any bay or 20' maximum, nor 3/4" in 40' or more.
- D. Variation in Cross-Sectional Dimensions: For columns and thickness of walls, from dimensions shown, do not exceed minus 1/4" nor plus 1/2".

PART 3 - SUBMITTALS

3.01 PRODUCT DATA

- A. Submit manufacturer's specifications and other data for each type of masonry unit, accessory, and other manufactured products, including certifications that each type complies with specified requirements. Include instructions for handling, storage, installations and protection.

PART 4 - JOB CONDITIONS

4.01 PROTECTION OF WORK

- A. During erection, cover top of walls with heavy water proof sheeting at end of each days' work. Cover partially completed structures when work is not in progress.
- B. Extend cover a minimum of 24 inches down both sides and hold cover securely in place.
- C. Do not apply uniform floor or roof loading for at least 12 hours after building masonry walls or columns.
- D. Do not apply concentrated loads for at least 3 days after building masonry walls or columns.
- E. Staining: Prevent grout or mortar from staining the face of masonry to be left exposed or painted. Remove immediately grout or mortar in contact with such masonry.
- F. Protect sills, ledges and projections from droppings or mortar.

PART 5 - MATERIALS

5.01 MASONRY UNITS, GENERAL

- A. Manufacturer: Obtain masonry units from one manufacturer, of uniform texture and color for each kind required, for each continuous area and visually related areas.
- B. Concrete Masonry Units (CMU)
- C. Size: Manufacturer's standard units with nominal face dimensions of 12" wide x 16" long x 8" high (11 5/8" x 15 5/8" x 7 5/8" actual).

- D. Hollow Load-Bearing: ASTM C 90 where shown as "HL-CMU" and as follows:
 - 1. Grade N: for general use in exterior walls above and below grade that may or may not be exposed to moisture penetration or the weather, and for interior walls and backup.
- E. Weight: Where shown as "Normal Wt.", provide units using concrete aggregates complying with ASTM C 33 producing dry net unit weight of 125 lbs per cu. ft.
- F. Cure units by atmosphere drying for not less than 30 days before installation, to comply with ASTM C 90, Type II.
- G. Exposed Faces: Provide manufacturer's standard color and texture.
- H. CMU shall be free from substances that will cause staining or popouts and shall be fine, even texture with straight and true edges. All units shall have been wet steam cured for at least 18 hours and then air cured in covered stored for not less than 28 days before delivery. Units shall have a maximum linear drying shrinkage of 0.025 percent (ASTM C-426) and have a moisture content at time of delivery not exceeding 30 percent of total absorption.
- I. Units shall be obtained from one manufacturer to insure even color and texture.
- J. Provide special units required by the Drawings, including solid, corner, pilaster, lintels, and jamb units.

5.02 MORTAR

- A. Portland cement shall conform to ASTM C150 Type II. Masonry cements used when specifically approved for colored mortar. Color mortar shall be factory premixed with color pigments and Portland cement requiring only sand and water for mixing. Color mortar for project shall be from the same lot and batch numbers. Color to be selected by the Engineer from manufacturer's standard colors.
- B. Lime for masonry mortar shall be hydrated, conforming to ASTM C207, Type S.
- C. Sand shall be clean, hard, durable particles, free from injurious amounts of organic matter. The sand shall conform to the limits of ASTM C144; Sand for grout shall conform to ASTM C144 or C33 as required.
- D. Water shall be free from injurious amounts of oil, acids, alkalis or organic matter, and shall be clean and fresh.
- E. Mortar proportions shall conform to ASTM C476, Type PM, or as otherwise approved by the Engineer. Ingredients shall be accurately measured by volume in boxes especially constructed for the purpose by the Contractor. Measurement by shovel will not be allowed.
- F. Strength of mortars shall exceed 1,800 pounds per square inch, when tested with 2 inch cubes at the end of a 28 day aging period.

- G. Grout for setting bearing plates, machinery, or any other equipment shall be as specified in Section 036000.

5.03 ACCESSORIES (REINFORCING, TIES, ANCHORS AND MISCELLANEOUS)

- A. Single Wythe reinforcement shall be truss type, fabricated with single pair of galvanized 9 gauge side rods and continuous 9 gauge cross-rods spaced not more than 16 inches on center.
- B. Galvanized dove-tailed anchor slots with anchors at 24 inches on center shall be furnished for anchorage to concrete framework or walls.
- C. Approved 16 gauge corrugated nonferrous metal ties manufactured for use with the anchor slots provided shall be spaced at a maximum of 8 inches o.c. vertically and 30 inches o.c. horizontally.
- D. The Contractor shall provide and install miscellaneous anchors and attachment members required both for the anchorage of his own work and that of other trades requiring attachment to masonry, which is not specifically provided under separate sections.
- E. Control joints shall be factory extruded preformed rubber gaskets, unless otherwise shown on the Drawings, conforming to ASTM D-2000 2AA-205 and shall be as manufactured by Dur-O-Walt, Hohmann and Bernard, Inc., AA Wire Products or equal. Control joints shall be installed as shown on the Drawings.
- F. Cleaning compound shall be mild, non-caustic detergent solution such as 801 Super Real Clean by Superior Manufacturing Co., or 600 Sureclean by Process Solvent Co., Inc. or equal.
- G. Reinforcing steel shall be ASTM A-615, Grade 60 of the sizes shown.

5.04 INSULATION

- A. Free-flowing vermiculite used to insulate masonry wall cores; light weight and inorganic. Loose weight density shall be 4.5 - 7.0 lbs/ft³ and material shall be capable of supporting its own weight. Material shall conform to ASTM C-516-80, Type II Material.
- B. Material shall have an insulated R-value of 5.9, a U-value of 0.17, and shall be fire resistant with zero flame spread, fuel contribution, and smoke development as per ASTM E-84 Tunnel test. Sound transmission shall be rated at STC of 51.
- C. Manufacturer: Zonolite Masonry Insulation for 8 inches CMU, by Grace Construction Products, or equal.

PART 6 - EXECUTION

6.01 MORTAR

- A. Mortar shall be machine mixed in an approved type of mixer in which the quantity of water can be accurately and uniformly controlled. The mixing time shall not be less than five minutes, approximately two minutes of which shall be for mixing the dry materials and not less than three minutes for continuing the mixing after the water has been added. Where hydrated lime is used for mortar requiring a lime content, the Contractor will have the option of using the dry-mix method or first converting the hydrated lime into a putty.
- B. Where the dry-mix method is employed, the materials for each batch shall be well turned over together until the even color of the mixed, dry materials indicates that the cementitious material has been distributed throughout the mass, after which the water shall be gradually added until a thoroughly mixed mortar of the required plasticity is obtained.
- C. Mortar boxes shall be cleaned out at the end of each day's work, and all tools shall be kept clean. Mortar that has begun to set shall not be used.

6.02 MORTAR - INSTALLATION

- A. Masonry shall not be laid at temperatures below 40 degrees F, without the approval of the Engineer, and all work shall be done in such a manner as to insure the proper and normal hardening of all mortar. All masonry work shall be so protected and heated that the temperature at the surface will not fall below 50 degrees F for a period of 72 hours after placing. Any completed work found to be affected by freezing shall be taken down and rebuilt by the Contractor at his expense.
- B. All CMU shall be laid in a full bed of mortar, applied to shells only. Butter the vertical joint of each unit already set in the wall and all contact faces of the unit to be set. Each unit shall be placed and shoved against the unit previously laid so as to produce a well compacted vertical mortar joint for the full shell thickness. Units shall set with all cells in a vertical position. The moisture content of the units when laid shall not exceed 35 percent of the total absorption as determined by laboratory test. CMU shall be laid with the horizontal stringline control to the inside face of block.
- C. All concrete masonry units shall be laid in bond with vertical joints in each course centered on units in courses above and below, unless otherwise shown.
- D. Joints of all masonry shall be tooled in accordance with the following:
 - 1. Wait until unit mortar is thumb-print hard before tooling joint. This may require as much as three hours in the shade and one hour in the sun in the summertime.
 - 2. The required personnel of the Contractor shall be kept on the job after hours, if necessary, to properly tool joints.

3. Both vertical and horizontal joints shall be maintained uniform in spacing.
 4. Joints for CMU shall be 3/8 inch.
 5. Joints for standard CMU shall be rubbed with a sponge to provide a flush, neat, rubbed joint.
 6. Joints for structural block shall be 3 inch.
- E. Install all frames required to be set in masonry, set masonry tightly against frames, build in all frame anchors, and fill frames with mortar.
 - F. Control joints shall be installed at the intersection of masonry walls with structural concrete and elsewhere as detailed on the drawings. Joints shall be raked out to a depth of 3/4 inch for the full height of the wall suitable for caulking. The maximum length, horizontally, between vertical control joints shall be 40 feet, but joints shall be located only as directed or shown. Joints shall be equal in width to the standard mortar joint.
 - G. All masonry slots, chases, or openings required for the proper installation of the work of other sections shall be constructed as indicated on the Drawings or in accordance with information furnished before the work is started at the points affected. No chase shall cut into any wall constructed of hollow units after it is built, except as directed and approved by the Engineer.
 - H. Surfaces shall be brushed as work progresses and maintained as clean as it is practicable. Unfinished work shall be raked back where possible, and toothed only where absolutely necessary. Before leaving fresh or unfinished work, walls shall be fully covered and protected against rain and wind and before continuing work previously laid shall be swept clean. The tops of walls or other unfinished work shall be protected against all damage by frost or the elements by means of waterproof paper, tarpaulins, boards or other means approved by the Engineer.
 - I. The Contractor shall build in all miscellaneous items to be set in masonry for which placement is not specifically provided under separate Divisions, including reglets, lintels, ties, electrical panel boxes, sleeves, vents, grilles, anchors, grounds, and exterior electrical conduits and fixtures, and shall cooperate with other trades whose work is to be coordinated with the work under this Section.
 - J. All anchorage, attachment, and bonding devices shall be set so as to prevent slippage and shall be completely covered with mortar or grout.
 - K. All ties and reinforcing for masonry shall be furnished and installed by the Contractor.
 - L. Loose lintels shall be set in a full bed of mortar and supported by solid or mortar filled hollow concrete blocks as detailed on the Drawings.
 - M. Bed and grout all steel, for equipment and machinery, and items coming in contact with masonry where grouting is required, including door bucks and frames set in

masonry. The Contractor shall install all anchor bolts, base plates and seats in masonry walls, and build in all items required for the completion of the building as they apply to masonry.

6.03 PLACING REINFORCEMENT

- A. Reinforcement shall be cleaned of loose rust, mill scale, earth or other materials which will reduce bond to mortar or grout. Reinforcement bars with kinks or bends not shown on Drawings or final shop drawings, or bars with reduced cross-section due to excessive rusting or other cause shall not be used.
- B. Reinforcement shall be accurately positioned at the spacing shown. Vertical bars shall be supported and secured against displacement. Horizontal reinforcement may be placed as the masonry work progresses. Where vertical bars are shown in close proximity, a clear distance between bars of not less than the nominal bar diameter of 1 inch, whichever is greater, shall be provided.
- C. For columns, piers and pilasters, provide a clear distance between vertical bars as shown, but not less than 1 ½ times the nominal bar diameter on 1 ½ inches, whichever is greater. Provide lateral ties as shown.
- D. Reinforcement bars shall be spliced as shown; do not splice at other points unless approved by the Engineer. Lapped slices shall be provided, unless otherwise shown. In splicing vertical bars or attaching to dowels, splices shall be tied with wire.
- E. Not less than minimum lap shown shall be provided, or if not shown, as required by governing code.
- F. Metal ties shall be embedded in mortar joints as work progresses, with a minimum mortar cover of 5/8 inch on exterior face of walls and ½ inch at other locations.
- G. Reinforced masonry work shall be anchored to supporting structure as indicated.

6.04 INSTALLATION, GENERAL

- A. General installation requirements of unit masonry shall be specified in Section 04 40 00.
- B. Formwork and shores as required for temporary support of reinforced masonry elements shall be provided. The Contractor shall be responsible for the design, erection, support, bracing and maintenance formwork.
- C. Formwork shall be constructed to conform to shape, line and dimensions shown and shall be made sufficiently tight to prevent leakage of mortar grout, or concrete (if any).
- D. Do not remove forms and shores until reinforced masonry member has hardened sufficiently to carry its own weight and all other reasonable temporary loads that may be placed on it during construction. Forms and shoring supporting the weight

of concrete in beams, slabs and other members shall remain in place until concrete has attained its specified 28 day compressive strength.

6.05 INSTALLATION OF REINFORCED CONCRETE UNIT MASONRY

A. General:

1. Do not wet concrete masonry units (CMUs).
2. CMU shall be laid as specified in Section 04 40 00.

B. Walls:

1. Pattern Bonds: Bonds for standard and split faced CMU shall be as specified in Section 04 40 00. Each course shall be bonded and interlocked at corners and intersections. Special-shaped units shall be used where shown, and as required for corners, jambs, sash, control joints, lintels, bond beams and other special conditions.
2. Vertical continuity of core or cell cavities, which are to be reinforced and grouted, shall be maintained to provide minimum clear dimensions indicated and to provide minimum clearance and grout coverage for vertical reinforcement bars. Cavities shall be kept free of mortar. Webs shall be solidly bedded in mortar where adjacent to reinforced cores or cells.
3. Where horizontal reinforced beams (bond beams) are shown, use special units or modify regular units to allow for placement of continuous horizontal reinforcement bars. Small mesh expanded metal lath or wire screening shall be placed in mortar joints under bond beam courses over cores or cells of non-reinforced vertical cells, or provide units with solid bottoms.
4. Option: Where all vertical cores are not shown to be grouted, Contractor may elect to fill all vertical cores with grout. In which case, requirements for mortar bedding of cross-webs and closing of core spaces below bond beams do not apply.

C. Columns, Piers, and Pilasters:

1. CMU of the size, shape, and number of vertical core spaces shall be used. If not shown, units which provide minimum clearances and grout coverage for number and size of vertical reinforcement bars shown shall be provided.
2. Pattern bond shall be provided as shown, or if not shown, alternate head joints in vertical alignment.
3. Where bonded pilaster construction is shown, wall and pilaster units shall be laid together to maximum pour height specified.

D. Grouting:

1. Fine grout shall be used for filling spaces less than 4 inches in both horizontal directions.
2. Course Grout shall be used for filling 4 inch spaces or larger in both horizontal directions.
3. Grouting Technique: At the Contractor's option, either low-lift or high-lift grouting techniques subject to the requirements which follow may be used.

E. Low-Lift Grouting:

1. A minimum clear dimension of 2 inches and clear area of 8 square inches in vertical cores to be grouted shall be provided.
2. Vertical reinforcement shall be placed prior to laying of CMU. Vertical reinforcement shall be extended above elevation of maximum pour height as required to allow for splicing and supported in position at vertical intervals not exceeding 192 bar diameters nor 10 feet.
3. CMU shall be laid to maximum pour height. Pour height shall not exceed 5 feet; if bond beam occurs below 5 feet height pour shall be stopped at course below bond beam.
4. Grout shall be poured using contained with spout or by chute and shall be rodded or vibrated during placing. Grout shall be placed continuously; do not interrupt pouring of grout for more than one hour. Grout pours shall be terminated 1 ½ inches below top course of pour.
5. Bond Beams: Grout shall be stopped in vertical cells 1 ½ inches below bond beam course. Horizontal reinforcement shall be placed in bond beams with corners and intersections lapped as shown. Grout shall be placed in bond beam course before filling vertical cores above bond beam.

F. High-Lift Grouting:

1. High-lift grouting techniques for grouting of CMU shall not be used unless minimum cavity dimension and area is 3 inches and 10 square inches, respectively.
2. Cleanout holes shall be provided in first course at all vertical cells which are to be filled with grout. Use units with one face shell removed and provide temporary supports for units above, or use header units with concrete brick supports, or cut openings in one face shell.
3. Masonry shall be constructed to full height of maximum grout pour specified, prior to placing grout.
4. Grout lifts shall be limited to a maximum height of 5 feet and grout pour to a maximum height of 24 feet, for single wythe hollow concrete masonry walls, unless otherwise indicated.

5. Vertical reinforcement shall be placed before grouting. Vertical reinforcement shall be tied to dowels at the base of masonry where shown and thread CMU over or around reinforcement. Vertical reinforcement shall be supported at intervals not exceeding 192 bar diameters nor 10 feet.
6. Where reinforcement is prefabricated into cage units before placing, units shall be fabricated with vertical reinforcement bars and lateral ties of the size and spacing shown.
7. Horizontal beam reinforcement shall be placed as the masonry units are laid.
8. Lateral tie reinforcement shall be embedded in mortar joints where shown as masonry units are laid.
9. Where lateral ties are shown in contact with vertical reinforcement bars, additional lateral tie reinforcement shall be embedded in mortar joints. Place as shown, or if not shown, provide as required to prevent grout blowout or rupture of CMU face shells, but provide not less than No. 2 bars or 8 gauge wire ties spaced 16 inches o.c. for members with 20 inches or less side dimensions, and 8 inches o.c. for members with side dimensions exceeding 20 inches.
10. Preparation of Grout Spaces: Prior to grouting, the grout spaces shall be inspected and cleaned out. Dust, grit, mortar droppings, loose pieces of masonry and other foreign materials shall be removed from grout spaces. Reinforcement shall be cleaned and adjusted to proper position. Top surface of structural members supporting masonry shall be cleaned to ensure bond. After final cleaning and inspection, cleanout holes shall be closed and closures shall be braced to resist grout pressures.
11. Do not place grout until entire height of masonry to be grouted has attained sufficient strength to resist displacement of masonry units and breaking of mortar bond. Shores and bracing, if required, shall be installed before starting grouting operations.
12. Grout shall be placed by pumping into grout spaces unless alternate methods are acceptable to the Engineer.
13. Grout pours shall be limited to sections which can be completed in one working day with not more than one hour interruption of pouring operation. Grout shall be placed in lifts which do not exceed 5 feet. Not less than 30 minutes, nor more than one hour shall be allowed between lifts of a given pour. Each grout lift shall be rodded or vibrated during pouring operation.
14. Grout shall be placed in lintels or beams over openings in one continuous pour.
15. Where bond beam occurs more than one course below top of pour, fill bond beam course to within 1 inch of vertically reinforced cavities, during construction of masonry.

16. When more than one pour is required to complete a given section of masonry, reinforcement shall be extended beyond masonry as required for splicing. Grout shall be poured to within 1 ½ inch of top course of first pour. After grouted masonry is cured, masonry units shall be laid and reinforcement shall be placed for second pour section before grouting. Repeat sequence if more pours are required.

END OF SECTION

SECTION 04 40 00
STONE ASSEMBLIES

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes unit masonry assemblies consisting of the following:
 - 1. Concrete masonry units.

1.02 SUBMITTALS

- A. Product Data: For each masonry unit, accessory, and other manufactured product indicated.
- B. Shop Drawings: For masonry reinforcing bars; comply with ACI 315, "Details and Detailing of Concrete Reinforcement."
- C. Material Test Reports: For each type of masonry unit, mortar, and grout required.
- D. Material Certificates: For each type of masonry unit required.

1.03 QUALITY ASSURANCE

- A. Preconstruction Testing Service: Engage a qualified independent testing agency to perform preconstruction testing on each type of unit required per test method indicated.
 - 1. Concrete Masonry Units: ASTM C 140.
 - 2. Mortar: For properties per ASTM C 270, UBC Standard 21-16.
 - 3. Grout: For compressive strength per ASTM C 1019 UBC, Standard 21-18.
- B. Fire-Resistance Ratings: Where indicated, provide materials and construction identical to those of assemblies with fire-resistance ratings determined per ASTM E 119 by a testing and inspecting agency, by equivalent concrete masonry thickness, or by another means, as acceptable to authorities having jurisdiction.
- C. Mockups: Build sample panels for each type of exposed unit masonry assembly to verify selections made under sample Submittals and to demonstrate aesthetic effects.
 - 1. Build mockups in sizes approximately 48 inches long by 48 inches high by full thickness.

1.04 PROJECT CONDITIONS

- A. Cold-Weather Requirements: Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with

cold-weather construction requirements in ACI 530.1/ASCE 6/TMS 602 and the Florida Building Code.

- B. Hot-Weather Requirements: When ambient temperature exceeds 100 deg F, or 90 deg F with a wind velocity greater than 8 mph, do not spread mortar beds more than 48 inches ahead of masonry. Set masonry units within one minute of spreading mortar.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:
 - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the products specified.
 - 2. Products: Subject to compliance with requirements, provide one of the products specified.

2.02 MASONRY UNITS

- A. Concrete Masonry Units: ASTM C 90.
 - 1. Unit Compressive Strength: 1900-psi- minimum, average net-area compressive strength.
 - 2. Weight Classification: Normal weight.
 - 3. Type: I, moisture-controlled units.
 - 4. Special Shapes: Provide for lintels, corners, jambs, sash, control joints, headers, bonding, and other special conditions.

2.03 MORTAR AND GROUT MATERIALS

- A. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold-weather construction.
- B. Hydrated Lime: ASTM C 207, Type S.
- C. Mortar Cement: ASTM C 1329.
 - 1. Products:
 - a. Blue Circle Cement; Magnolia Superbond Mortar Cement.
 - b. Lafarge Corporation; Lafarge Mortar Cement.
- D. Masonry Cement: ASTM C 91.

- E. Aggregate for Mortar: ASTM C 144; except for joints less than 1/4 inch thick, use aggregate graded with 100 percent passing the No.16 sieve.
- F. Aggregate for Grout: ASTM C 404.
- G. Cold-Weather Admixture: Nonchloride, noncorrosive, accelerating admixture complying with ASTM C 494, Type C, and recommended by the manufacturer for use in masonry mortar of composition indicated.
 - 1. Products:
 - a. Euclid Chemical Co.; Accelguard 80.
 - b. Grace, W. R. & Co., Construction Products Division; Morseled.
 - c. Sonneborn, Div. of ChemRex, Inc.; Trimix-NCA.
- H. Water: Potable.

2.04 REINFORCING

- A. Uncoated Steel Reinforcing Bars: ASTM A 615/A 615M; ASTM A 616/A 616M, including Supplement 1; or ASTM A 617/A 617M, Grade 60.
- B. Masonry Joint Reinforcement: ASTM A 951; mill galvanized, carbon-steel wire for interior walls and hot-dip galvanized, carbon-steel wire for exterior walls.
 - 1. Wire Size for Side Rods: W2.8 or 0.188-inch diameter.
 - 2. Wire Size for Cross Rods: W2.8 or 0.188-inch diameter.
 - 3. Single-Wythe Masonry: Use either ladder or truss type with single pair of side rods and cross rods spaced not more than 16 inches o.c.

2.05 TIES AND ANCHORS

- A. Materials, General: As follows, unless otherwise indicated:
 - 1. Galvanized Carbon-Steel Wire: ASTM A 82; with ASTM A 153, Class B-2 coating for exterior walls and Class 1 coating for interior walls.
 - 2. Galvanized Steel Sheet: ASTM A 366/A 366M cold-rolled, carbon-steel sheet hot-dip galvanized after fabrication to comply with ASTM A 153, at exterior walls; and ASTM A 653/A 653M, G60, commercial-quality, steel sheet zinc coated by hot-dip process on continuous lines before fabrication at interior walls.

2.06 MISCELLANEOUS MASONRY ACCESSORIES

- A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; formulated from urethane.

- B. Preformed Control-Joint Gaskets: Designed to fit standard sash block and to maintain lateral stability in masonry wall. Made from styrene-butadiene-rubber compound complying with ASTM D 2000, Designation M2AA-805.
- C. Bond-Breaker Strips: Asphalt-saturated, organic roofing felt complying with ASTM D 226, Type I (No. 30 asphalt felt).

2.07 INSULATION

- A. Loose-Granular Fill Insulation: Perlite complying with ASTM C 549, Type II or IV.

2.08 MASONRY CLEANERS

- A. Job-Mixed Detergent Solution: Solution of 1/2-cup dry measure tetrasodium polyphosphate and 1/2-cup dry measure laundry detergent dissolved in 1 gal. of water.
- B. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.

2.09 MORTAR AND GROUT MIXES

- A. General: Do not use admixtures, unless otherwise indicated. Do not use calcium chloride in mortar or grout.
- B. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification.
- C. Mortar for Unit Masonry: Comply with ASTM C 270, UBC Standard 21-15, BIA M1, Property Specification.
 - 1. Extended-Life Mortar for Unit Masonry: Mortar complying with ASTM C 1142 may be used instead of mortar specified above, at Contractor's option.
 - 2. Limit cementitious materials in mortar to portland cement, mortar cement, and lime.
 - 3. For masonry below grade, in contact with earth, and where indicated, use Type M.
 - 4. For exterior, above-grade, load-bearing and non-load-bearing walls and parapet walls; for interior load-bearing walls; for interior non-load-bearing partitions; and for other applications where another type is not indicated, use Type N.

- 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 5 of ACI 530.1/ASCE 6/TMS 602 for dimensions of grout spaces and pour height.
 - 2. Provide grout with a slump of 8 to 11 inches as measured according to ASTM C 143.

2.10 SOURCE QUALITY CONTROL

- A. Owner will engage a qualified independent testing agency to perform source quality-control testing indicated below. Payment for these services will be made by Owner.
- B. Concrete Masonry Unit Tests: For each type of concrete masonry unit indicated, units will be tested according to ASTM C 140.

Pert 3 - EXECUTION

3.01 INSTALLATION, GENERAL

- A. Cut masonry units with motor-driven saws. Allow units cut with water-cooled saws to dry before placing, unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
- B. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures.
- C. Comply with tolerances in ACI 530.1/ASCE 6/TMS 602 and the following:
 - 1. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/4 inch in 20 feet, nor 1/2 inch maximum.
 - 2. For conspicuous horizontal lines, such as exposed lintels, sills, parapets, and reveals, do not vary from level by more than 1/4 inch in 20 feet, nor 1/2 inch maximum.

3.02 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. Bond Pattern for Exposed Masonry: Lay exposed masonry in bond pattern indicated; do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.

- C. Built-in Work: As construction progresses, build in items specified under this and other Sections of the Specifications. Fill in solidly with masonry around built-in items.
- D. Fill cores in hollow concrete masonry units with grout 24 inches under bearing plates, beams, lintels, posts, and similar items, unless otherwise indicated.

3.03 MORTAR BEDDING AND JOINTING

- A. Lay hollow masonry units as follows:
 - 1. With full mortar coverage on horizontal and vertical face shells.
 - 2. Bed webs in mortar in starting course on footings and in all courses of piers, columns, and pilasters, and where adjacent to cells or cavities to be filled with grout.
 - 3. For starting course on footings where cells are not grouted, spread out full mortar bed, including areas under cells.
- B. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than the joint thickness, unless otherwise indicated.

3.04 CAVITIES

- A. Keep cavities clean of mortar droppings and other materials during construction.
 - 1. Use wood strips temporarily placed in cavity to collect mortar droppings. As work progresses, remove strips, clean off mortar droppings, and replace in cavity.

3.05 MASONRY JOINT REINFORCEMENT

- A. Provide continuous masonry joint reinforcement as indicated. Install with a minimum cover of 5/8 inch on exterior side of walls, 1/2 inch elsewhere. Lap reinforcement a minimum of 6 inches.
- B. Provide continuity at corners and wall intersections by using prefabricated "L" and "T" sections.

3.06 ANCHORING MASONRY

- A. Anchor masonry to structural members where masonry abuts or faces structural members to comply with the following:
 - 1. Provide an open space not less than 1 inch in width between masonry and structural member, unless otherwise indicated.
 - 2. Anchor masonry to structural members with flexible anchors embedded in masonry joints and attached to structure.

3.07 LINTELS

- A. Provide masonry lintels where shown. Provide precast lintels made from concrete matching concrete masonry units in color, texture, and compressive strength and with reinforcing bars indicated or required to support loads indicated.

3.08 REINFORCED UNIT MASONRY INSTALLATION

- A. Temporary Formwork and Shores: Construct formwork and shores to support reinforced masonry elements during construction.
 - 1. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and other temporary loads that may be placed on them during construction.
- B. Placing Reinforcement: Comply with requirements in ACI 530.1 / ASCE 6 / TMS 602.
- C. Grouting: Do not place grout until entire height of masonry to be grouted has attained sufficient strength to resist grout pressure.
 - 1. Comply with requirements in ACI 530.1/ASCE 6/TMS 602 & Florida Building Code for cleanouts and for grout placement, including minimum grout space and maximum pour height.

3.09 FIELD QUALITY CONTROL

- A. Owner will engage a qualified independent testing agency to perform field quality-control testing indicated below. Payment for these services will be made by the Owner.
 - 1. Testing Frequency: Tests and Evaluations listed in these subparagraphs will be performed during construction for each 5000 sq. ft. of wall area or portion thereof.
 - 2. Mortar: Properties will be tested per ASTM C 780.
 - 3. Grout: Sampled and tested for compressive strength per ASTM C 1019.
 - 4. Concrete Masonry Unit Tests: For each type of concrete masonry unit indicated, units will be tested according to ASTM C 140.

3.10 CLEANING

- A. Clean unit masonry by dry brushing to remove mortar fins and smears before tooling joints, as work progresses.
- B. After mortar is thoroughly set and cured, clean exposed masonry as follows:
 - 1. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes.

2. Protect adjacent surfaces from contact with cleaner.
3. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing the surfaces thoroughly with clear water.
4. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.
5. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2 applicable to type of stain on exposed surfaces.

3.11 MASONRY WASTE DISPOSAL

1. Masonry Waste Disposal: Dispose of clean masonry waste, including broken masonry units, waste mortar, and excess or soil-contaminated sand. Remove excess, clean masonry waste, as described above, and legally dispose of waste off Owner's property.

END OF SECTION

SECTION 08 30 05
ACCESS HATCHES

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Scope of Work. This Section includes providing all labor, materials, and equipment necessary to install the access hatch doors or the collection basin and the flow meter vault as indicated in the Drawings and/or specified herein.

1.02 QUALITY ASSURANCE

- A. Standards. The access doors shall meet the standards of the following:
 - 1. Standard Building Code.
 - 2. OSHA Requirements.
- B. Manufacturers. Halliday Products, Orlando, Florida; The Bilco Company, New Haven, Connecticut; or approved equal.

1.03 SUBMITTALS

- A. Shop Drawings. Shop drawings shall be submitted to the ENGINEER for approval. Shop drawings shall include manufacturer's data sheets showing all materials, connections, and other required details to illustrate a complete operating access door.

1.04 WARRANTY AND GUARANTEES

- A. The manufacturer shall guarantee the access door against defects in material and workmanship for a period of 10 years. Refer to Section 01 78 39 for requirements.

PART 2 – PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. The access doors, in sizes as shown on the drawings, shall be standard design of the manufacturer.

2.02 MATERIALS

- A. Each hatch shall be designed according to the openings shown on the Drawings. The aluminum access frames shall be manufactured from one-third inch (1/3") thick, one (1) piece extruded aluminum frame. The frame shall be a self-draining channel with one and one-half inch (1-1/2") draining coupling located in the channel frame. The door panels shall close flush and shall be one-third inch (1/3") thick aluminum diamond (checker) plate. The installed access doors shall be designed to withstand traffic loads, as required. Removable aluminum cross-beams shall be provided by the hatch supplier as required to accomplish the stated loadings. The doors shall

have stainless steel hinges with tamper proof fasteners. All hardware shall be made of 316L stainless steel. Each door shall have spring operators, such that the maximum lifting effort is less than 25 pounds. The hatch supplier shall provide the number of doors as required to accomplish the lifting requirements. Each door shall open to 90 degrees (90°) and lock automatically with a stainless steel, positive locking arm and a stainless steel release handle. Each door shall have a recessed stainless steel lifting handle.

- B. All access doors shall be designed with a neoprene gasket on the inside lip of the frame perimeter, to form an essentially air-tight seal.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. The access hatches and doors shall be installed as recommended by the manufacturer and adjusted for proper operation without binding.

END OF SECTION

SECTION 09 24 23
CEMENT STUCCO

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Scope of Work: The work included under this Section includes the application of a 3 part Portland cement stucco finish as indicated on the drawings.

1.02 DELIVERY, STORAGE AND HANDLING

- A. All materials shall be delivered in original packages, containers, or bundles bearing name of manufacturer and brand. All cementitious materials shall be kept dry until ready to be used, shall be kept off the ground, under cover and away from sweating walls or other damp surfaces.

1.03 RELATED WORK DESCRIBED ELSEWHERE:

- A. Section 09 90 00: Painting and Coating

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Sand: Sand shall be clean and sharp silica sand, free from alkali, salt or organic matter, shall be graded from coarse to fine and shall conform to ASTM C897.
- B. Water: Water shall be free from organic materials, strong acids or alkalis. Unclean or questionable water should be tested.
- C. Hydrated Lime: Special finishing hydrated lime ASTM C206, Type S. Hydrated lime for masonry purposes ASTM C207, Type S.
- D. Portland Cement: Portland cement shall conform to ASTM Designation C-150, Type I, domestic manufacturer.
- E. Waterproofing: Waterproofing shall be Sec. No. 1, Sec. Manufacturing Company; Stearox, Master Builders or approved equal.
- F. Bonding Agent: Bonding agent shall be equal to U.S. Gypsum Company "Bondcrete", or Lambert Corporation, "Bonderite Liquid".

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Stuccoing on Concrete and Masonry Surfaces:

1. Concrete surfaces shall be brushed cleaned of all dust, loose particles, or other foreign materials. All laitance and efflorescence shall be removed by washing with a 10 percent solution of commercial muriatic acid and water, and then rinsed well with clear water. Grease or form oil shall be removed by wiping with naphtha spirits, and bonding agent shall be applied to all concrete surfaces in accordance with the manufacturer's directions.
2. Masonry surfaces shall be thoroughly cleaned and lightly wetted immediately before plastering.
3. Base coat plaster stucco shall be applied where required to level uneven surfacing. Base coat plaster stucco shall be one part cement, three parts sand and not over 1/3 part hydrated lime, measured by volume. Mix shall be applied with sufficient pressure to form good bond and then uniformly scratched. Base coat shall develop a thickness of 3/8 inch minimum.
4. Finish coat stucco shall be one part cement, two parts sand, not over 1/3 part hydrated lime by volume and one quart of Sec. No. 1 waterproofing per bag of cement. Finish coat shall be applied not less than 1/8 inch thick no sooner than 4 days after application of base coat. Base coat shall be uniformly wet, but not saturated, before apply finish coat. Finish coat shall be floated to a true and even surface and kept surface damp for at least two days before allowing it to dry out.
5. Concrete and masonry surfaces should have sufficient roughness to provide proper bond. If the surface is not rough, it shall be hacked or bushhammered, or a dash coat of cement grout, composed of one part cement to one and one-half parts sand, mixed to a mushy consistency, shall be used prior to application of the base coat.

3.02 PROTECTION

- A. Where finish surfaces, such as tile, metal frames, or metal windows have been installed prior to completion of plaster work, the finished surfaces shall be protected from damage during plastering. Protection shall consist of covering with a non-straining kraft paper or polyethylene sheet and joints sealed with tape or adhesive. Metal frames may be protected with a removal type of masking tape, or an approved type of non-staining petroleum jelly mixed in accordance with manufacturer's directions. Protection shall be maintained in place during plastering and removed when plaster work is completed.

3.03 FIELD QUALITY CONTROL

- A. Patching: Upon completion, the Contractor shall point up plaster around trim and other work and shall cut out and patch defective and damaged plaster. Patching of plaster shall match existing work in texture and finish, and, at jointing with plaster previously applied, shall finish flush and smooth.

END OF SECTION

SECTION 09 90 00
PAINTING AND COATING

PART 1 – GENERAL

1.01 Scope

- A. This specification defines the methods of surface preparation, coating systems, and methods of application for painting as outlined herein.
- B. The Contractor shall furnish all supervision, labor, tools, materials, equipment, scaffolding or other structures, and supervision required for the transportation, unloading, storage, and application of the paint and associated products covered by this specification.
- C. The work includes painting and finishing of interior and exterior exposed items above and below grade surfaces, such as structural steel, miscellaneous metals, ceilings, walls, floors, doors, frames, pipe, handrails, posts, fittings, valves, pumps, tanks, equipment, and all other work obviously required to be painted unless otherwise specified herein or on the drawings. The omission of minor items in the schedule of work shall not relieve the contractor of his obligation to include such items where they come within the general intent of the specification as stated herein.
- D. The following items will not be painted:
 - 1. Any code requiring labels, such as Underwriters' Laboratories and Factory Mutual, or any equipment identification, performance rating, name or nomenclature plates.
 - 2. Any moving parts of operating units, mechanical and electrical parts, such as valve and damper operators, linkages, sinkages, sensing devices, motor and fan shafts, unless otherwise indicated.
 - 3. Aluminum handrails, walkways, windows, louvers, and grating unless otherwise specified herein.
 - 4. Signs and nameplates.
 - 5. Finish hardware.
 - 6. Stainless steel angles, tubes, pipe, etc.
 - 7. Products with polished chrome, aluminum, nickel, or stainless steel finish.
 - 8. Plastic switch plates and receptacle plates.
 - 9. Flexible couplings, lubricated bearing surfaces, insulation and metal and plastic pipe interior.
 - 10. Sprinkler heads.
- E. All work shall be done in strict accordance with this specification, the design drawings and the painting package, including manufacturer's printed instructions.
- F. The Contractor will obtain, at its own expense, all permits, licenses and inspections and shall comply with all laws, codes, ordinances, rules, and regulations

promulgated by authorities having jurisdiction, which may bear on the work. This compliance will include Federal Public Law 91-596 more commonly known as the "Occupational Safety and Health Act of 1970."

- G. Wherever the word "Engineer" occurs in this specification, it shall apply to the authorized representative of Mead & Hunt, Inc. Where the word "Contractor" occurs in this specification, it shall apply to the contractor performing any part of or all of this work.
- H. Surfaces to be painted: (Refer to 17.0 Coating Schedule for description of surfaces to be painted and their specified coating systems and colors).

1.02 Definitions

- A. Field Painting is the painting of new or rebuilt items at the job site. Field painting shall be the responsibility of the Contractor.
- B. Shop Painting is the painting of new or rebuilt items in the shop prior to delivery to the jobsite.

1.03 Abbreviations

- A. The abbreviations and definitions listed below, when used in this specification, shall have the following meanings:
 - 1. SSPC – Society for Protective Coatings
 - 2. Exterior – Outside, exposed to weather
 - 3. Interior Dry – Inside, not subject to immersion service
 - 4. Interior Wet – Inside, subject to immersion service
 - 5. ASTM – American Society of Testing Materials
 - 6. NACE – National Association of Corrosion Engineers
 - 7. NSF – National Sanitation Foundation
 - 8. AWWA – American Water Works Associates

PART II - RESOLUTION OF CONFLICTS

- A. It shall be the responsibility of the Contractor to arrange a meeting prior to the start of painting, or flooring installation between the Contractors, the Paint Manufacturer whose products are to be used, and the Engineer. All aspects of surface preparation, application and coating systems as covered by this specification will be reviewed at this meeting.
- B. Clarification shall be requested promptly from the Engineer when instructions are lacking, conflicts occur in the specification, or the procedure seems improper or inappropriate for any reason.
- C. Copies of all manufacturer's instructions and recommendations shall be furnished to the Engineer by the Painting Contractor.
- D. It shall be the responsibility of the Coating Manufacturer to have their factory representative meet in person with the Contractor and Engineer a minimum of

three times during the job as a consultant on surface preparation, mil thickness of coating and proper application of coating unless meeting is determined to be unnecessary by the Engineer.

PART III - INSPECTION OF SURFACES

- A. Before application of the prime coat and each succeeding coat, all surfaces to be coated shall be subject to inspection by the Engineer. Any defects or deficiencies shall be corrected by the Contractor before application of any subsequent coating.
- B. Samples of surface preparation and of painting systems shall be furnished by the Contractor to be used as a standard throughout the job, unless omitted by the Engineer.
- C. When any appreciable time has elapsed between coatings, previously coated areas shall be carefully inspected by the Engineer, and where, in his opinion, surfaces are damaged or contaminated, they shall be cleaned and recoated at the Contractor's expense. Recoating times of manufacturer's printed instructions shall be adhered to.
- D. Coating thickness shall be determined by the use of a properly calibrated "Nordson-Mikrotest" or "Positest" Coating Thickness Gauge (or equal) for ferrous metal or an OG232 "Tooke" Paint Inspection gauge (or equal) for non-ferrous and cementitious surfaces. Please note that use of the "tooke" gauge is classified as a destructive test.

1.

PART IV - EQUIPMENT

- A. Effective oil and water separators shall be used in all compressed air lines serving spray painting and sandblasting operations to remove oil or moisture from the air before it is used. Separators shall be placed as far as practical from the compressor.
- B. All equipment for application of the paint and the completion of the work shall be furnished by the Contractor in first-class condition and shall comply with recommendations of the paint manufacturer.
- C. Contractor will provide free of charge to the Engineer a "Nordson-Mikrotest" or "Positest" dry film thickness gauge for ferrous metal and an OG232 "Tooke" gauge or equal for non-ferrous and cementitious surface, to be used to inspect coatings by the Engineer and Contractor. The gauges may be used by the Contractor and returned each day to the Engineer. Engineer will return gauges to Contractor at completion of job.

PART V - MATERIALS

- A. All materials specified herein are manufactured by the TNEMEC Company, Inc., Xypex Chemical Corporation, or Chemprobe Technologies, Inc. These products are specified to establish standards of quality and are approved for use on this project.
- B. Equivalent materials of other manufacturers may be substituted on approval of the Engineer. Requests for substitution shall include Manufacturer's literature for each product giving the name, generic type, descriptive information and evidence of satisfactory past performance and an independent laboratory certification that their product meets the performance criteria of the specified materials. Unless otherwise stated, the latest revision of identified specifications shall be used.
 - 1. Abrasion – Fed. Test Method Std. No. 141, Method 6192, CS-17 Wheel, 1,000 grams load
 - 2. Adhesion – Elcometer Adhesion Tester
 - 3. Exterior Exposure – Exposed at 45 degrees facing the ocean (South Florida Marine Exposure)
 - 4. Hardness – ASTM D3363
 - 5. Humidity – ASTM D2247
 - 6. Salt Spray (Fog) – ASTM B117
- C. Bidders desiring to use coatings other than those specified shall submit their proposal in writing to the Engineer at least ten (10) days prior to the bid opening. Substitutions which decrease the film thickness, the number of coats applied, change the generic type of coating, or fail to meet the performance criteria of the specified materials will not be approved. Prime and finish coats of all surfaces shall be furnished by the same manufacturer.
- D. All coatings to be shop applied must meet the requirements for volatile organic compounds (VOC) of not more than 3.5 lbs/Gallon after thinning.
- E. Colors, where not specified, shall be as selected by the Owner or their Representative.
- F. All coatings in contact with potable water need to be NSF Certified in accordance with ANSI/NSF Standard 61.

PART VI - WORKMANSHIP AND MATERIALS

- A. Surface Preparation
 - 1. The surface shall be cleaned as specified for the paint system being used. All cleaning shall be as outlined in the Steel Structures Painting Council's Surface Preparation Specification, unless otherwise noted. If surfaces are subject to contamination, other than mill scale or normal atmospheric rusting, the surfaces shall be pressure washed, and acid or caustic pH residues neutralized, in addition to the specified surface preparation.

B. Standards for Surface Preparation

1. SSPC-SP1 Chemical and/or Solvent Cleaning

- a. Remove all grease, oil, salt, acid, alkali, dirt, dust, wax, fat, foreign matter, and contaminants, etc. by one of the following methods: steam cleaning, alkaline cleaning, or volatile solvent cleaning.

2. SSPC-SP2 Hand Tool Cleaning

- a. Removal of loose rust, loose mill scale, and loose paint to a clean sound substrate by hand chipping, scraping, sanding, and wire brushing.

3. SSPC-SP3 Power Tool Cleaning

- a. Removal of loose rust, loose mill scale, and loose paint to a clean sound substrate by power tool chipping, descaling, sanding, wire brushing, and grinding.

4. SSPC-SP4 Flame Cleaning

- a. Dehydrating and removal of rust, loose mill scale, and some light mill scale by use of flame, followed by wire brushing.

5. SSPC-SP5 (NACE-1) White Metal Blast Cleaning

- a. Complete removal of all mill scale, rust, rust scale, previous coating, etc., leaving the surface a uniform gray-white color.

6. SSPC-SP6 (NACE-3) Commercial Grade Blast Cleaning

- a. Complete removal of all dirt, rust scale, mill scale, foreign matter, and previous coatings, etc., leaving only shadows and/or streaks caused by rust stain and mill scale oxides. At least 66% of each square inch of surface area is to be free of all visible residues, except slight discoloration.

7. SSPC-SP7 (NACE-4) Brush-Off Blast Cleaning

- a. Removal of rust scale, loose mill scale, loose rust, and loose coatings, leaving tightly bonded mill scale, rust and previous coatings. On concrete surfaces, brush-off blast cleaning shall

remove all laitance, form oils, and solid contaminants. Blasting should be performed sufficiently close to the surface so as to open up surface voids, bug holes, air pockets, and other subsurface irregularities, but so as not to expose underlying aggregate.

8. SSPC-SP8 Pickling

- a. Complete removal of rust and mill scale by acid pickling, duplex pickling or electrolytic pickling (may reduce the resistance of the surface to corrosion, if not to be primed immediately).

9. SSPC-SP10 (NACE-2) Near-White Blast Cleaning

- a. Removal of all rust scale, mill scale, previous coating, etc., leaving only light stains from rust, mill scale, and small specks of previous coating. At least 95% of each square inch of surface area is to be free of all visible residues and the remainder shall be limited to slight discoloration.

10. SSPC-SP11-87 Power Tool Cleaning to Bare Metal

- a. Complete removal of rust, rust scale, mill scale, foreign matter, and previous coatings, etc., to a standard as specified on a Commercial Grade Blast Cleaning (SSPC-SP6, NACE-3) by means of power tools that will provide the proper degree of cleaning and surface profile.

11. SSPC-SP13 (NACE-6) Surface Preparation of Concrete

- a. Surface preparation of concrete by mechanical, chemical, or thermal methods prior to the application of bonded protective coating or lining systems.

C. Visual standards

- 1. SSPC-VIS-1 (Swedish SIS OS 5900), "Pictorial Surface Preparation Standards for Painting Steel Surfaces," and the National Association of Corrosion Engineers, "Blasting Cleaning Visual Standards" TM-01-70 and TM-01-75 shall be considered as standards for proper surface preparation.
- 2. Oil, grease, soil, dust, etc., deposited on the surface preparation that has been completed shall be removed prior to painting according to SSPC-SP1 Solvent Cleaning.
- 3. Weld flux, weld spatter and excessive rust scale shall be removed by Power Tool Cleaning as per SSPC-SP11-87T.

4. All weld seams, sharp protrusions, and edges shall be ground smooth prior to surface preparation or application of any coatings.
5. All areas requiring field welding shall be masked off prior to shop coating, unless waived by the Engineer.
6. All areas which require field touch-up after erection, such as welds, burnbacks, and mechanically damaged areas, shall be cleaned by thorough Power Tool as specified in SSPC-SP11-87T.
7. "Touch-up systems will be same as original specification except that approved manufacturer's organic zinc-rich shall be used in lieu of inorganic zinc where this system was originally used. Also strict adherence to manufacturer's complete touch-up recommendations shall be followed. Any questions relative to compatibility of products shall be brought to the Engineer's attention; otherwise, Contractor assumes full responsibility.

PART VII – PRE-TREATMENTS

- A. When specified, the surface shall be pretreated in accordance with the specified pretreatment prior to application of the prime coat of paint.

PART VIII - STORAGE

- A. Materials shall be delivered to the job site in the original packages with seals unbroken and with legible unmutated labels attached. Packages shall not be opened until they are inspected by the Engineer and required for use. All painting materials shall be stored in a clean, dry, well-ventilated place, protected from sparks, flame, and direct rays of the sun or from excessive heat. Paint susceptible to damage from low temperatures shall be kept in a heated storage space when necessary. The Contractor shall be solely responsible for the protection of the materials stored by himself at the job site. Empty coating cans shall be required to be neatly stacked in an areas designated by the Engineer and removed from the job site on a schedule determined by the Engineer. Engineer may request a notarized statement from contractor detailing all materials used on the project.

PART IX - PREPARATION OF MATERIALS

- A. Mechanical mixers, capable of thoroughly mixing the pigment and vehicle together, shall mix the paint prior to use where required by manufacturer's instructions; thorough hand mixing will be allowed for small amounts up to one gallon. Pressure pots shall be equipped with mechanical mixers to keep the pigment in suspension, when required by manufacturer's instructions. Otherwise, intermittent hand mixing shall be done to assure that no separation occurs. All mixing shall be done in accordance with SSPC Vol. 1, Chapter 4, "Practical Aspects, Use and Application of Paints" and/or with manufacturer's recommendations.
- B. Catalysts or thinners shall be as recommended by the manufacturer and shall be added or discarded strictly in accordance with the manufacturer's instruction.

PART X - APPLICATION

- A. Paint shall be applied only on thoroughly dry surfaces and during periods of favorable weather, unless otherwise allowed by the paint manufacturer. Except as provided below, painting shall not be permitted when the atmospheric temperature is below 50° F, or when freshly painted surfaces may be damaged by rain, fog, dust, or condensation, and/or when it can be anticipated that these conditions will prevail during the drying period.
- B. No coatings shall be applied unless surface temperature is a minimum of 5° above dew point; temperature must be maintained during curing.

DEW POINT CALCULATION CHART

Ambient Air Temperature – Fahrenheit

Relative

Humidity	20	30	40	50	60	70	80	90	100	110	120
90%	18	28	37	47	57	67	77	87	97	107	117
85%	17	26	36	45	55	65	76	84	95	103	113
80%	16	25	34	44	54	63	73	82	93	102	110
75%	15	24	33	42	52	62	71	80	91	100	108
70%	13	22	31	40	50	60	68	78	88	96	105
65%	12	20	29	38	47	57	66	76	85	93	103
60%	11	29	27	36	45	55	64	73	83	92	101
55%	9	17	25	34	43	53	61	70	80	89	98
50%	6	15	23	31	40	50	59	67	77	86	94
45%	4	13	21	29	37	47	56	64	73	82	91
40%	1	11	18	26	35	43	52	61	69	78	87
35%	-2	8	16	23	31	40	48	57	65	74	83
30%	-6	4	13	20	28	36	44	52	61	69	77

SURFACE TEMPERATURE AT WHICH CONDENSATION OCCURS

- C. Dew Point
 1. Temperature at which moisture will condense on surface. No coatings should be applied unless surface temperature is a minimum of 5° above this point. Temperature must be maintained during curing.
- D. Example
 1. If air temperature is 70° F and relative humidity is 65%, the dew point is 57° F. No coating should be applied unless surface temperature is 62° F minimum.

- E. No coatings shall be applied unless the relative humidity is below 85%.
- F. Suitable enclosures to permit painting during inclement weather may be used if provisions are made to control atmospheric conditions artificially inside the enclosure, within limits suitable for painting throughout the painting operations.
- G. Field Painting in the immediate vicinity of, or on, energized electrical and rotating equipment, and equipment and/or pipes in service shall not be performed without the approval of the Engineer.
- H. Extreme care shall be exercised in the painting of all operable equipment, such as valves, electric motors, etc., so that the proper functioning of the equipment will not be affected.
- I. The Contractor's scaffolding shall be erected, maintained, and dismantled without damage to structures, machinery, equipment or pipe. Drop cloths shall be used where required to protect buildings and equipment. All surfaces required to be clear for visual observations shall be cleaned immediately after paint application.
- J. Painting shall not be performed on insulated pipe within three (3) feet of insulation operations or on insulation where covering and surface coat have not had time to set and dry. Painting shall not be performed on uninsulated pipe within one (1) foot of any type of connection until the connection has been made, except as directed by the Engineer.
- K. The prime coat shall be applied immediately following surface preparation and in no case later than the same working day. All paint shall be applied by brushing, paint mitt and roller, conventional spraying, or airless spraying, using equipment approved by the paint manufacturer.
- L. Each coat of paint shall be recoated as per manufacturer's instructions. Paint shall be considered recoatable when an additional coat can be applied without any detrimental film irregularities such as lifting or loss of adhesion.
- M. Surfaces that will be inaccessible after assembly shall receive either the full specified paint system or three shop coats of the specified primer before assembly.
- N. Finish colors shall be in accordance with the COLOR SCHEDULE and shall be factory mixed (i.e., there shall be no tinting by the Contractor, unless authorized by the Engineer).
- O. All edges and weld seams in immersion service shall receive a "stripe coat" (applied by brush) of the 1st coat prior to application of the full 1st coat.
- P. All open seams in the roof area of tanks shall be filled after application of the topcoat with a flexible caulking such as Sika Flex 1A.

PART XI - WORKMANSHIP

- A. The Contractor must show proof that all employees associated with this project shall have been employed by the Contractor for a period not less than six (6) months.
- B. Painting shall be performed by experienced painters in accordance with the recommendations of the paint manufacturer. All paint shall be uniformly applied without sags, runs, spots, or other blemishes. Work, which shows carelessness, lack of skill, or is defective in the opinion of the Engineer, shall be corrected at the expense of the Contractor.
- C. The Contractor shall provide the names of at least 6 other projects of similar size and scope that they have successfully completed under their current company name.
- D. Application of Paint
 - 1. BY BRUSH AND/OR ROLLERS
 - a. Top quality, properly styled brushes and rollers shall be used. Rollers with a baked phenohl core shall be utilized.
 - b. The brushing or rolling shall be done so that a smooth coat as nearly uniform in thickness as possible is obtained. Brush or roller strokes shall be made to smooth the film without leaving deep or detrimental marks.
 - c. Surfaces not accessible to brushes or rollers may be painted by spray, by dauber or sheepskins, and paint mitt.
 - d. It may require 2 coats to achieve the specified dry film thickness if application is by brush and roller.
- E. Air, Airless, Or Hot Spray
 - 1. The equipment used shall be suitable for the intended purpose, shall be capable of properly atomizing the paint to be applied and shall be equipped with suitable pressure regulators and gauges.
 - 2. Paint shall be applied in a uniform layer, with a 50% overlap pattern. All runs and sags should be brushed out immediately or the paint shall be removed and the surface resprayed.
 - 3. High build coatings should be applied by a crosshatch method of spray application to ensure proper film thickness of the coating.
 - 4. Areas inaccessible to spray shall be brushed; if also inaccessible to brush, daubs or sheepskins shall be used, as authorized by the manufacturer.

5. Special care shall be taken with thinners and paint temperatures so that paint of the correct formula reaches the receiving surface.
6. Nozzles, tips, etc., shall be of sizes and designs as recommended by the manufacturer of the paint being sprayed.
7. The first coat on concrete surfaces in immersion service should be sprayed and backrolled.

PART XII - PROTECTION AND CLEAN-UP

- A. It shall be the responsibility of the Contractor to protect at all times, in areas where painting is being done, floors, materials of other crafts, equipment, vehicles, fixtures, and finished surfaces adjacent to paint work. Cover all electric plates, surface hardware, nameplates, gauge glasses, etc., before start of painting work.
- B. At the option of the Engineer during the course of this project, the Contractor will contain all spent abrasives, old paint chips, paint overspray and debris by means suitable to the Engineer, including but not limited to, full shrouding of the area.
- C. If shrouding is required, the Contractor must provide a complete design of the intended shroud or cover. Care must be taken not to modify or damage the structure during the use of the shroud. If damage should occur, the Contractor is held responsible for all repairs.
- D. At completion of the work, remove all paint where spilled, splashed, splattered, sprayed or smeared on all surfaces, including glass, light fixtures, hardware, equipment, painted, and unpainted surfaces.
- E. After completion of all painting, the Contractor shall remove from job site all painting equipment, surplus materials, and debris resulting from this work.
- F. The Contractor is responsible for the removal and proper disposal of all hazardous materials from the jobsite in accordance with Local, State, and Federal requirements as outlined by the Environmental Protection Agency.
- G. A notarized statement shall be presented to the Engineer that all hazardous materials have been disposed of properly including but not limited to: Name of disposal company, disposal site, listing of hazardous materials, weights of all materials, cost per pound and EPA registration number.

PART XIII - TOUCH-UP MATERIALS

- A. The Contractor shall provide at the end of the project at least one (1) gallon of each generic topcoat in each color as specified by the Engineer for future touch-up. Two gallons may be required for (2) component materials.

PART XIV - ON-SITE INSPECTION

- A. During the course of this project the Engineer will reserve the option of incorporating the services of a qualified inspection service. The inspection service

will be responsible for assuring the proper execution of this specification by the successful contractor.

PART XV - COATING SYSTEM SCHEDULE

A. STEEL – STRUCTURAL, TANKS, PIPES, AND EQUIPMENT

1. EXTERIOR EXPOSURE (NON-IMMERSION)

A.1 System No. 73-1 Epoxy/High Build Urethane

Surface Preparation: SSPC-SP6 Commercial Blast Cleaning

	<u>DFT-Mils</u>
<u>1st Coat:</u> 66-1255 Epoxoline Primer	3.0 – 4.0
<u>2nd Coat:</u> 66-Color Hi-Build Epoxoline	2.0 – 3.0
<u>3rd Coat:</u> 73-Endura-Shield	<u>2.0 – 3.0</u>
	7.0-10.0
Minimum 8.0 Mils	

NOTE: This system is highly resistant to abrasion, wet conditions, corrosive fumes, and chemical contact. Provides 2-3 times the color and gloss retention of conventional paints. Second coat to be same color or close to finish color. Specify Series 1074 Endura-Shield for a gloss finish. Specify Series 161 in lieu of the 66 for faster recoats or lower temperature curing.

A.2 System No. 73-2 High Build Urethane For Marginally Cleaned Surfaces or Topcoating Existing Systems.

Surface Preparation: SSPC-SP6 Commercial Blast Cleaning or SSPC-SP3 Power Tool Cleaning Feather all edges.

	<u>DFT-Mils</u>
<u>Shop Coat:</u> Manufacturer Standard Primer (or existing coating)	1.5 – 2.0
<u>Tie Coat:</u> 135 Chembuild	3.0 – 5.0
<u>Topcoat:</u> 73-Color Endura-Shield	<u>2.0 – 3.0</u>
	6.5-10.0
Minimum 7.5 Mils	

NOTE: This system can be used over factory finish paint or over non-sandblasted steel and offer the high performance of a urethane coating. Specify Series 1074 Endura-Shield for gloss finish. A test patch is always recommended to insure proper application.

A.3 System No. 82-1 Silicone Alkyd Enamel – Gloss

Surface Preparation: SSPC-SP6 Commercial Blast Cleaning

	<u>DFT-Mils</u>
<u>1st Coat:</u> 37H-77 Chem-Prime H.S.	2.0 – 3.5
<u>2nd Coat:</u> 23-Color Enduratone	1.5 – 2.5
<u>3rd Coat:</u> 82-Color Silicone Alkyd Enamel	<u>1.0 – 2.5</u>

4.5 – 8.5
Minimum 5.5 Mils

A.4 System 90-97 Zinc/Epoxy/Urethane

Surface Preparation: SSPC-SP6 Commercial Blast Cleaning

	<u>DFT-Mils</u>
<u>Primer:</u> 90-97 Theme-Zinc	2.5 – 3.5
<u>2nd Coat:</u> 66-Color Hi-Build Epoxoline	2.0 – 3.0
<u>3rd Coat:</u> 73 Endura-Shield III	<u>2.0 – 3.0</u>
	6.5 – 9.5
Minimum 8.0 Mils	

NOTE: This system offers the added corrosion protection of a zinc rich primer. Series 90-97 Theme-Zinc is an organic zinc-rich primer that can be used for field touch up of a zinc primer or for touch up of galvanized surfaces that are damaged. You can substitute Series 91-H₂O Hydrozinc for the 90-97. You can substitute Series 1074 for the Series 73 if a gloss finish is desired.

A.5 System No. 30-1 DTM Acrylic Overcoat System

Surface Preparation: Pressure Clean @ 3500 PSI
Spot SP2, SP3, SP6, or SP7
Feather all edges.

	<u>DFT-Mils</u>
<u>Spot Primer:</u> 135 Chembuild	2.0 – 4.0
<u>2nd Coat:</u> 30 Spra-Saf EN	2.0 – 4.0
<u>3rd Coat:</u> 30 Spra-Saf EN	<u>2.0 – 4.0</u>
Total	4.0 – 8.0
Total	6.0 – 12.0 (Spots)

NOTE: This is an excellent coating system to overcoat existing unknown coating systems with limited surface preparation, using a non-stressful coating with excellent color and gloss retention. This coating should be spray applied and has excellent dry fall properties. The brush and roller version of Series 30 with a SG finish is the Series 29 Tufcryn. A test patch is always recommended to assure proper adhesion.

B. INTERIOR EXPOSURE (NON-IMMERSION)

B.1 System No. N69-1 High Solids Epoxy

Surface Preparation: SSPC-SP6 Commercial Blast Cleaning

	<u>DFT Mils</u>
<u>1st Coat:</u> N69-Color Hi-Build Epoxoline II	5.0 – 7.0
<u>2nd Coat:</u> N69-Color Hi-Build Epoxoline II	<u>5.0 – 7.0</u>
	10.0 – 14.0
Minimum 12.0 Mils	

NOTE: This coating will provide maximum protection. It offers chemical and corrosion resistance for long-term protection against salt spray, moisture, corrosive fumes, and chemical attack. Series N69 is a polyamidoamine cured epoxy. Primer coat must be touched-up before 2nd coat is applied.

B.2 System No. 66-2 Polyamide Epoxy

Surface Preparation: SSPC-SP6 Commercial Blast Cleaning

	<u>DFT-Mils</u>
<u>1st Coat:</u> 66-Color Hi-Build Epoxoline	3.0 – 5.0
<u>2nd Coat:</u> 66-Color Hi-Build Epoxoline	4.0 – 6.0
	7.0 – 11.0
Minimum	9.0 Mils

NOTE: This system will provide chemical and corrosion resistance against abrasion, moisture, corrosion fumes, chemical contact, and immersion in non-potable water. Primer coat must be touched-up before 2nd coat is applied. Substitute Series 161 for low temperature cure or quick recoats.

B.3 System No. 66-6 High Build Epoxy (Over OEM Finishes)

Surface Preparation: Spot SSPC-SP6 Commercial Blast Cleaning or
SSPC-SP11 Power Tool Cleaning To Bare Metal

	<u>DFT-Mils</u>
<u>1st Coat:</u> Manufacturer's Standard (or existing coating)	1.0 – 2.0
<u>2nd Coat:</u> 135 Chembuild	3.0 – 5.0
<u>3rd Coat:</u> 66-Color Hi-Build Epoxoline	3.0 – 5.0
	6.0 – 10.0
Minimum	7.0 Mils

NOTE: This system is to be used over standard manufacturer's primer to offer a high performance epoxy finish. Excellent for areas of rust not able to be completely cleaned.

B.4 System No. 23-1 Alkyd Enamel – Semi-Gloss

Surface Preparation: SSPC-SP6 Commercial Blast Cleaning

	<u>DFT-Mils</u>
<u>1st Coat:</u> 37H-77 Chem-Prime H.S.	2.0 – 3.5
<u>2nd Coat:</u> 23-Color Enduratone	1.5 – 2.5
<u>3rd Coat:</u> 23-Color Enduratone	1.5 – 2.5
	5.0 – 8.5
Minimum	6.0 Mils

C. IMMERSION

C.1 System No. N69-2 High Solids High Build Epoxy (Non-Potable Water)

Surface Preparation: SSPC-SP10 Near White Blast Cleaning

		<u>DFT-Mils</u>
<u>Stripe Coat:</u>	N69-Color Hi-Build Epoxoline II by brush and roller to all weld Seams and plate edges	3.0 – 5.0
<u>1st Coat:</u>	N69-Color Hi-Build Epoxoline II	5.0 – 7.0
<u>2nd Coat:</u>	N69-Color Hi-Build Epoxoline II	5.0 – 7.0
		10.0 – 14.0 (Excluding stripe coat)
		Minimum 12.0 Mils

NOTE: This system provides maximum protection in immersion service. Scarify the surface before topcoating if the Series N69 has been exterior-exposed for 60 days or longer. If primer coat is damaged, it must be touched-up before 2nd coat is applied.

C.2 System No. 66-2 High Build Epoxy (Non-Potable Water)

Surface Preparation: SSPC-SP10 Near White Blast Cleaning

		<u>DFT-Mils</u>
<u>Stripe Coat:</u>	66-Color to all weld seams and plate edges	2.0 – 4.0
<u>1st Coat:</u>	66-Color Hi-Build Epoxoline	3.0 – 5.0
<u>2nd Coat:</u>	66-Color Hi-Build Epoxoline	3.0 – 5.0
<u>3rd Coat:</u>	66-Color Hi-Build Epoxoline	3.0 – 5.0
		9.0 – 15.0 (Excluding stripe coat)
		Minimum 11.0 Mils

NOTE: This system will provide chemical and corrosion resistance for protection against abrasion, moisture, corrosive fumes, chemical contact, and immersion. Primer coat must be touched-up before 2nd coat is applied. Scarify the surface before topcoating if the Series 66 has been exterior-exposed for 60 days or longer. Substitute Series 161 for low temperature cure or quick recoats.

C.3 System No. 20-1 Epoxy-Polyamide (Potable Water)

Surface Preparation: SSPC-SP10 Near White Blast Cleaning

		<u>DFT-Mils</u>
<u>Stripe Coat:</u>	20-1255 Pota-Pox (Beige) to all weld seams and plate edges	2.0 – 4.0
<u>1st Coat:</u>	20-15BL Pota-Pox (Tank White)	3.0 – 5.0
<u>2nd Coat:</u>	20-1255 Pota-Pox (Beige)	4.0 – 6.0
<u>3rd Coat:</u>	20-15BL Pota-Pox (Tank White)	4.0 – 6.0

11.0–17.0 (Excluding
stripe coat)
Minimum 12.0 Mils

Caulk: Seal all open roof seams with
a flexible NSF Certified
caulking such as Sika Flex 1A

NOTE: This system meets American Water Works Association AWWA D 102 Inside Paint System Number 1. Series 20 meets the new requirements of approval for potable water use as established by the National Sanitation Foundation Standard 61. Substitute Series FC20 for low temperature cure or quick recoats.

C.4 System No. N140 High Solids Epoxy (Potable Water)

Surface Preparation: SSPC-SP10 Near White Blast Cleaning

	<u>DFT-Mils</u>	
Stripe Coat: N140-15BL Pota-Pox Plus (by brush and roller to all weld seams and plate edges)	3.0 – 5.0	
1st Coat: N140-1255 Pota-Pox Plus (Beige)	6.0 – 8.0	
2nd Coat: N140-15BL Pota-Pox Plus (Tank White)	6.0 – 8.0	
	12.0 – 16.0	(Excluding stripe coat)
	Minimum 14.0 Mils	

NOTE: Series N140 meets the new requirements of approval for potable water use as established by the National Sanitation Foundation Standard 61.

C.5 System No. 46-30 Coal Tar-Epoxy (Non-Potable Water)

Surface Preparation: SSPC-SP10 Near White Blast Cleaning*

	<u>DFT-Mils</u>
One Coat: 46H-413 Hi-Build Tneme-Tar	16.0 – 20.0

NOTE: May be applied in a two-coat application. Review critical recoat time if utilized.

*SSPC-SP6 Commercial Blast Cleaning may be used for non-immersion service.

C.6 System No. 91-H₂O Zinc/Epoxy (Potable Water)

Surface Preparation: SSPC-SP10 Near White Metal Blast

	<u>DFT-Mils</u>
Stripe Coat: 91-H ₂ O Hydrozinc 2000 (by brush & roller to all weld seams and plate edges.)	2.5 – 3.5

<u>1st Coat:</u>	91- H ₂ O Hydrozinc 2000	2.5 – 3.5
<u>2nd Coat:</u>	20-1255 Pota-Pox (Beige)	4.0 – 6.0
<u>3rd Coat:</u>	20-15BL Pota-Pox (Tank White)	<u>4.0 – 6.0</u>
		10.5 -15.5
	Minimum 12.0 Mils	

Caulk: Seal all open roof seems with a flexible NSF Certified caulking such as Sika-Flex 1A.

NOTE: Can substitute Series N140, or FC20 for Series 20 if preferred. Meets AWWA D102-97 Inside Coating System No. 3.

15.2 **OVERHEAD METAL DECKING, JOIST**

D. INTERIOR EXPOSURE

D.1 System No. 115-1 Uni-Bond DF

Surface Preparation: Surfaces must be dry, clean, and free of oil, grease, and other contaminants. Allow concrete to cure 28 days. Galvanized metal decking must be scarified.

	<u>DFT-Mils</u>
<u>Coating:</u> 115-Color Uni-Bond DF	2.0 – 4.0

NOTE: This system should be used on ceiling areas where a one-coat system is desired. Can be applied over steel, galvanized, and aluminum decking, joist, beams, conduits, and concrete.

E. EXTERIOR EXPOSURE

E.1 System No. 135-5 Epoxy/DTM Acrylic

Surface Preparation: Pressure clean to remove all dirt, oil, grease, chemicals, and foreign contaminants. Remove loose paint and all rust by hand and power tool cleaning (SSPC-SP 2 & 3). Feather all edges.

	<u>Dry Film-Mils</u>
<u>Spot Primer:</u> 135 Chembuild	3.0 – 5.0
<u>1st Coat:</u> 30 Spra-Saf EN	2.0 – 4.0
<u>2nd Coat:</u> 30 Spra-Saf EN	<u>2.0 – 4.0</u>
TOTAL	4.0 – 8.0 (For (2) Coats)

NOTE: This system can be applied over a wide variety of coatings and factory finishes. It can also be applied direct to galvanized aluminum decking, joists, conduits, and tight rust.

15.3 **MILL COATED STEEL PIPE**

F. EXTERIOR/INTERIOR EXPOSURE (NON-IMMERSION)

F.1 System No. 66-3 Epoxy-Polyamide

Surface Preparation: Surface shall be clean and dry. Scarify by Brush Blasting if surface is hard and glossy.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 66-Color Hi-Build Epoxoline	3.0 – 4.0
<u>2nd Coat:</u> 66-Color Hi-Build Epoxoline	4.0 – 6.0
<u>*3rd Coat:</u> 73 Endura-Shield	(2.0 – 3.0)
	(9.0 – 13.0)
Minimums	11.0 Mils for 3 coats
	9.0 Mils for 2 coats

*Optional topcoat for exterior exposure

NOTE: This system can be applied directly to mill coated steel pipe without sandblasting for use in non-immersion. There may be some bleed through with the 1st coat. Do not apply over glossy varnish type mill coatings without thorough scarification.

15.4 **GALVANIZED STEEL – PIPE AND MISCELLANEOUS FABRICATIONS**

G. EXTERIOR/ (NON-IMMERSION)

G.1 System No. 73-2 Epoxy/High Build Urethane

Surface Preparation: SSPC-SP1 Solvent Cleaning and Scarify by Brush Off Blasting, Hand Sanding, or Chemical Treatment

	<u>DFT-Mils</u>
<u>1st Coat:</u> 66-Color Hi-Build Epoxoline	2.0 – 4.0
<u>2nd Coat:</u> 73-Color Endura-Shield	2.0 – 4.0
	4.0 – 8.0
Minimum	5.0 Mils

NOTE: Series 66 has excellent adhesion to galvanized steel. This system is highly resistant to abrasion, wet conditions, corrosive fumes, and chemical contact. Provides 2-3 times the color and gloss retention of conventional paints. First coat to be same color as or close to the finish color. Specify Series 1074 Endura-Shield for gloss finish.

H. INTERIOR EXPOSURE (NON IMMERSION)

H.1 System No. 66-6 Polyamide Epoxy

Surface Preparation: SSPC-SP1 Solvent Cleaning and Scarify by Brush Off Blasting, Hand Sanding, or Chemical Treatment

	<u>DFT-Mils</u>
<u>1st Coat:</u> 66-Color Hi-Build Epoxoline	2.0 – 4.0
<u>2nd Coat:</u> 66-Color Hi-Build Epoxoline	2.0 – 4.0
	4.0 – 8.0
Minimum	5.0 Mils

I. IMMERSION (POTABLE WATER)

I.1 System No. 20-1 Epoxy-Polyamide (Potable Water)

Surface Preparation: Solvent Clean Per SSPC-SP1 & Abrasive Blast per SSPC-SP7

	<u>DFT-Mils</u>
<u>1st Coat:</u> 20-1255 Pota-Pox Primer	4.0 – 6.0
<u>2nd Coat:</u> 20-15BL Pota-Pox Finish	4.0 – 6.0
	8.0–12.0
Minimum 10.0 Mils	

NOTE: Series 20 meets the new requirements of approval for potable water use as established by the National Sanitation Foundation Standard 61. Substitute Series FC20 for low temperature cure or quick recoat.

15.5 CHAIN-LINK FENCES

J. GALVANIZED STEEL & NON-FERROUS METAL

J.1 System No. 6-2 Oil Based Enamel

Surface Preparation: Surface shall be clean and dry

	<u>DFT-Mils</u>
<u>1st Coat:</u> 80 Galv-Gard	2.5 – 4.0
<u>2nd Coat:</u> 80 Galv-Gard	2.5 – 4.0
	5.0 – 8.0
Minimum 5.0 Mils	

15.6 CONCRETE

K. EXTERIOR – ABOVE GRADE

K.1 System No. 180-1 High Build Acrylic Emulsion – Smooth

Surface Preparation: Surface shall be clean and dry.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 180-Color W.B. Tneme-Crete	4.0 – 6.0*
<u>2nd Coat:</u> 180-Color W.B. Tneme-Crete	4.0 – 6.0*
	8.0 –12.0 Mils
Minimum 10.0 Mils	

*This coating should be spray applied to achieve the recommended DFT. Application by roller would possibly require additional coats to achieve the recommended DFT for the system.

NOTE: Series 180 is a high build decorative acrylic coating in a smooth finish. Substitute Series 181 if a sand texture finish if desired.

K.2 System No. 6-1 Acrylic Emulsion

Surface Preparation: Surface must be clean and dry.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 6-Color Tneme-Cryl	2.0 – 3.0
<u>2nd Coat:</u> 6-Color Tneme-Cryl	2.0 – 3.0
	4.0 – 6.0
Minimum	5.0 Mils

NOTE: If semi-gloss finish is desired, use Series 29 Tuf-Cryl as the 2nd coat @ 1.5 – 2.0 mils DFT.

K.3 System No. 156-1 Modified Acrylic Elastomer

Surface Preparation: Surface must be clean and dry.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 156-Color Enviro-Crete	4.0 – 8.0
<u>2nd Coat:</u> 156-Color Enviro-Crete	4.0 – 8.0
	8.0 – 16.0
Minimum	10.0 Mils

NOTE: If texture is needed, use 157 Enviro-Crete TX (medium texture). For application over previously applied coatings, use TNEMEC Series 151 Elasto-Grip at 1.0 – 2.5 mils DFT prior to the application of Series 156 Enviro-Crete.

K.4 System No. 100 Concrete Stain

Surface Preparation: The surface must be clean, dry, sound, and free of cracks, and paint.

	<u>SF/Gal/Ct</u>
<u>Sealer:</u> Chemprobe Prime A Pell H ₂ O	65-200
<u>Concrete Stain:</u> Two coats of Chemprobe Conformal Stain	75-200

L. EXTERIOR – BELOW GRADE

L.1 System No. 46-61 Coal Tar Pitch Solution

Surface Preparation: Surface must be clean and dry. Allow new concrete to cure at least 28 days.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 46-465 H.B. Tnemecol	8.0 – 12.0
<u>2nd Coat:</u> 46-465 H.B. Tnemecol	8.0 – 12.0
	16.0 - 24.0
Minimum	16.0 Mils

L.2 System No. 46-31 Coal Tar Epoxy

Surface Preparation: Surface shall be clean and dry. Allow New concrete to cure at least 28 days.

One Coat: 46H-413 Hi-Build Tneme-Tar **DFT-Mils**
14.0-20.0

L.3 System No. 100-1 Crystalline Waterproofing

Surface Preparation: Surface to be clean and opened up by Brush Blasting, Acid Etching, or Water Blasting w/Turbo Tips. Surface must be pre-wetted prior to application.

1st Coat: XYPEX Concentrate @ (1.5 #/SY)

2nd Coat: XYPEX Modified @ (1.5 #/SY)

NOTE: This system can be applied to concrete that is still wet or hasn't developed final cure. It can be used where wet surface conditions exist or where there is the potential for water intrusion due to hydrostatic pressure. Application shall be per XYPEX specification manual.

M. INTERIOR EXPOSURE (NON-IMMERSION)

M.1 System No. 6-1 Acrylic Emulsion (Interior/Exterior)

Surface Preparation: Surface shall be clean and dry. Allow concrete to cure for 28 days.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 6-Color Tneme-Cryl	2.0 – 3.0
<u>2nd Coat:</u> 6-Color Tneme-Cryl	2.0 – 3.0
	4.0 – 6.0
Minimum	5.0 Mils

NOTE: This system will provide a decorative coating with good exterior durability, color retention, and a high vapor transmission rate. For Semi-Gloss finish, substitute Series 29 Tuf-Cryl for the 2nd coat at 1.5 – 2.0 mils DFT. Apply both the Series 6 & 29 in the same color.

M.2 System No. 66-4 Epoxy-Polyamide (Interior)

Surface Preparation: Surfaces shall be clean and dry. Allow concrete to cure for 28 days.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 66-Color Hi-Build Epoxoline	3.0 – 5.0
<u>2nd Coat:</u> 66-Color Hi-Build Epoxoline	4.0 – 6.0
	7.0–11.0
Minimum	9.0 Mils

M.3 System No. 84-1 High Solids Glazed Epoxy (Interior)

Surface Preparation: Surfaces shall be clean and dry. Allow concrete to cure for 28 days.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 84-Color Ceramlon II	6.0 – 10.0
<u>2nd Coat:</u> 84-Color Ceramlon II	6.0 – 10.0
	12.0 - 20.0
Minimum	14.0 Mils

M.4 System No. 113-2 Acrylic Epoxy Semi-Gloss

Surface Preparation: Surface must be clean and dry.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 113-Color Tneme-Tufcoat	4.0 – 6.0
<u>2nd Coat:</u> 113-Color Tneme-Tufcoat	4.0 – 6.0
	8.0 – 12.0
Minimum 8.0 Mils	

NOTE: Substitute Series 114 Tneme-Tufcoat for gloss finish. Multiple coats may be required if application is by roller.

N. IMMERSION – POTABLE & NON-POTABLE WATER

N.1 System No. 66-4 Epoxy-Polyamide (Non-Potable Water)

Surface Preparation: Allow concrete to cure for 28 days. Abrasive blast clean per SSPC-SP13.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 66-Color Hi-Build Epoxoline	4.0 – 6.0
<u>2nd Coat:</u> 66-Color Hi-Build Epoxoline	4.0 – 6.0
	8.0 – 12.0
Minimum 10.0 Mils	

NOTE: Surface irregularities and bug holes should be filled to a smooth uniform appearance as required with TNEMEC Series 63-1500 Filler & Surfacer. First coat should be spray applied and backrolled.

N.2 System No. 104-5 High Solids Epoxy (Non-Potable Water)

Surface Preparation: Allow concrete to cure for 28 days. Abrasive blast clean per SSPC-SP13.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 104-1255 H.S. Epoxy Primer	6.0 – 10.0
<u>2nd Coat:</u> 104-Color H.S. Epoxy	6.0 – 10.0
	12.0 - 20.0
Minimum 14.0 Mils	

NOTE: Surface irregularities and bug holes should be filled to a smooth uniform appearance as required with TNEMEC Series 63-1500 Filler & Surfacer. First coat should be spray applied and backrolled.

N.3 System No. 46-31 Coal Tar-Epoxy (Non-Potable Water)

Surface Preparation: Allow concrete to cure for 28 days. Abrasive blast clean per SSPC-SP13.

	<u>DFT-Mils</u>
<u>One Coat:</u> 46H-413 Hi-Build Tneme-Tar	14.0 – 20.0

NOTE: May be applied in a two-coat application. Review critical recoat time if utilized. Surface irregularities and bug holes should be filled to a

smooth uniform appearance as required with TNEMEC Series 63-1500 Filler & Surfacers.

N.4 System No. 20-2 Epoxy-Polyamide (Potable Water)

Surface Preparation: Allow concrete to cure for 28 days. Abrasive blast clean per SSPC-SP13.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 20-1255 Pota-Pox	4.0 – 6.0
<u>2nd Coat:</u> 20-15BL Pota-Pox Finish	4.0 – 6.0
	8.0 – 12.0
Minimum	10.0 Mils

NOTE: This system meets American Water Works Association AWWA D 102 Inside System No. 1. Series 20 meets the new requirements of approval for potable water use as established by the National Sanitation Foundation Standard Surface irregularities and bug holes should be filled to a smooth uniform appearance as required with TNEMEC Series 63-1500 Filler & Surfacers. (NSF Standard 61 approved). Substitute Series FC20 for low temperature cure or quick recoats.

N.5 System No. N140-2 Epoxy-Polyamidoamine (Potable Water)

Surface Preparation: Allow concrete to cure for 28 days. Abrasive blast clean per SSPC-SP13.

	<u>DFT-Mils</u>
<u>1st Coat:</u> N140-1255 Pota-Pox Plus	6.0 – 8.0
<u>2nd Coat:</u> N140-15BL Pota-Pox Plus	6.0 – 8.0
	12.0-16.0
Minimum	14.0 Mils

NOTE: Series N140 meets the new requirements of approval for potable water use as established by the National Sanitation Foundation Standard 61. Surface irregularities and bug holes should be filled to a smooth uniform appearance as required with TNEMEC Series 63-1500 Filler & Surfacers. (NSF Standard 61 approved). First coat should be sprayed and backrolled.

N.6 System No. 264-1 Elastomeric Polyurethane

Surface Preparation: Surfaces shall be clean and dry. Allow new concrete to cure for 28 days. Abrasive blast clean per SSPC-SP13 (Surface Preparation of Concrete)

	<u>DFT-Mils</u>
<u>Primer:</u> 20-15BL (Tank White)	5.0 Mils
<u>Coating:</u> 264 Elasto-Shield (Black)	60.0 Mils ±
	65.0 Mils

NOTE: This system is NSF Certified for Potable Water. This flexible liner can be used to rehab tanks with leaks. Multiple passes may be required to

achieve the desired thickness that can range from 50-100 mils. See Elasto-Shield Application Guide for detailed instructions.

**O. INTERIOR EXPOSURE (NON-IMMERSION)
OVER EXISTING COATINGS**

O.1 System No. 6-1 Acrylic Emulsion

Surface Preparation: Surface must be clean and dry.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 6-Color Tneme-Cryl	2.0 – 3.0
<u>2nd Coat:</u> 6-Color Tneme-Cryl	<u>2.0 – 3.0</u>
	4.0 – 6.0
Minimum	5.0 Mils

NOTE: If semi-gloss finish is desired, use Series 29 Tuf-Cryl as the 2nd Coat @ 1.5 – 2.0 mils DFT.

O.2 System No. 113-1 Acrylic-Epoxy Semi-Gloss

Surface Preparation: Surface must be clean and dry.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 113-Color Tneme-Tufcoat	2.0 – 3.0
<u>2nd Coat:</u> 113-Color Tneme-Tufcoat	<u>2.0 – 3.0</u>
	4.0 – 6.0
Minimum	5.0 Mils

NOTE: This system will provide high performance and can be applied directly over existing coatings without lifting. Can be used when low odor is required during application. Specify Series 114 Tneme-Tufcoat for Gloss Finish. This coating can be spray applied in a single coat at 4.0 – 6.0 mils DFT.

15.7 CONCRETE FLOORS

P. EPOXY FLOOR COATING

P.1 System No. 205-1 Epoxy-Polyamide

Surface Preparation: Allow concrete to cure 28 days. Acid Etch or Brush Off Blast Cleaning per SSPC-SP13.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 205 Terra-Tread FC	3.0 – 5.0
<u>2nd Coat:</u> 205 Terra-Tread FC	<u>3.0 – 5.0</u>
	6.0–10.0
Minimum	6.0 Mils

NOTE: This system will provide a durable, longwearing coating that bonds tightly to concrete and stands up under heavy foot traffic, frequent cleaning,

and spillage of water, oil, grease, or chemical. For floors exposed to the sun, add a 3rd coat of Tnemec Series 291 CRU at 2.0 – 3.0 mils DFT.

NOTE: For a skid resistant finish broadcast 50 mesh dry washed silica sand into the 1st coat.

P.2 System No. 287-1 Waterborne Epoxy-Amine

Surface Preparation: Allow concrete to cure 28 days. Acid Etch or Brush Off Blast Cleaning per SSPC-SP13.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 287-Color Enviro-Tread	2.0 – 4.0
<u>2nd Coat:</u> 287-Color Enviro-Tread	2.0 – 4.0
	4.0 – 8.0
Minimum	5.0 Mils

NOTE: For a non-skid finish, add 287-300C skid resistance sand into the first coat. For floors exposed to the sun add a 3rd coat of Tnemec Series 291-CRU at 2.0 – 3.0 mils DFT.

P.3 System No. 291-12 Epoxy/Urethane

Surface Preparation: Allow concrete to cure 28 days. Acid Etch or Brush Off Blast Cleaning per SSPC-SP13.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 66-Color Hi-Build Epoxoline	2.0 – 3.0
<u>2nd Coat:</u> 66-Color Hi-Build Epoxoline	2.0 – 3.0
<u>3rd Coat:</u> 291-Color CRU	2.0 – 3.0
	6.0 – 9.0
Minimum	7.0 Mils

NOTE: This system offers a hard, chemically resistant floor coating with excellent flow properties and color and gloss retention.

P.4 System No. 280-1 High Build Polyamine-Epoxy Glaze Floor

Surface Preparation: Allow concrete to cure 28 days. Abrasive Blast Cleaning (Refer to Installation Guide of manufacturer.)

	<u>DFT-Mils</u>
<u>1st Coat:</u> 201 Epoxoprime	6.0 – 8.0
<u>2nd Coat:</u> 280 Tneme-Glaze	6.0 – 8.0
<u>3rd Coat:</u> 280 Tneme-Glaze	6.0 – 8.0
	18.0 – 24.0
Minimum	18 Mils

Please refer to manufacturer's Installation Guide and Technical Data for proper installation.

P.5 System No. 237/281 Double Broadcast Flooring (Non-Slip)

Surface Preparation: Abrasive Blast Cleaning (Refer to Installation Guide of manufacturer.)

<u>1st Coat:</u>	201 Epoxoprime	<u>DFT-Mils</u>	6.0 – 8.0
<u>2nd Coat:</u>	237 Power-Tread		1/8" (2 cts. @ 1/16" each)
<u>3rd Coat:</u>	280 Tneme-Glaze		8.0 – 12.0
			Minimum 1/4"+

Please refer to manufacturer's Installation Guide and Technical Data for proper installation.

P.6 System No. 222/284 Multi-Color Quartz Broadcast Floor and Cove Base

Surface Preparation: Abrasive blast cleaning (Refer to Tnemec Surface Preparation and Installation Guide).

<u>1st Coat:</u>	222 Deco-Tread	<u>DFT-Mils</u>	1/8" (2 cts. @ 1/16" each)
<u>2nd Coat:</u>	284 Deco-Clear		8.0-10.0
		Total	1/8" +

15.8 POROUS MASONRY

Q. EXTERIOR/INTERIOR EXPOSURE

Q.1 System No. 180-2 Acrylic Emulsion – Smooth

Surface Preparation: Surface shall be clean and dry.

<u>Block Filler:</u>	54-562 Modified Epoxy Masonry Filler	80 SF/Gal	<u>DFT-Mils</u>
<u>1st Coat:</u>	180-Color W.B. Tneme-Crete		4.0 – 8.0
<u>2nd Coat:</u>	180-Color W.B. Tneme-Crete		4.0 – 8.0
			8.0 -16.0*

*Total DFT of topcoats only

NOTE: Also available in Series 181 in a sand finish. The Series 180 has to be spray applied to achieve recommended dry film thickness application; by roller would require additional coats.

Q.2 System No. 6-2 Acrylic Emulsion, Low Sheen

Surface Preparation: Surface shall be clean and dry.

<u>Block Filler:</u>	54-562 Modified Epoxy Masonry Filler	80 SF Gal	<u>DFT-Mils</u>
<u>1st Coat:</u>	6-Color Tneme-Cryl		2.0 – 3.0
<u>2nd Coat:</u>	6-Color Tneme-Cryl		2.0 – 3.0
			*4.0 – 6.0

*Total dry film thickness of topcoats only.

NOTE: This system will fill the block and provide a sealed surface. For semi-gloss finish, use Series 29 Tufcrl (SG) for the 2nd coat @ 1.5 – 2.0 mils DFT.

Q.3 System No. 66-15 Epoxy-Polyamide (Interior)

Surface Preparation: Surface shall be clean and dry.

	<u>DFT-Mils</u>
<u>Block Filler:</u> 54-660 Epoxy Masonry Filler	100 SF Gal
<u>1st Coat:</u> 66-Color Hi-Build Epoxoline	4.0 – 6.0
<u>2nd Coat:</u> 66-Color Hi-Build Epoxoline	4.0 – 6.0
	*8.0–12.0

*Total dry film thickness of topcoats only.

NOTE: Block filler is a polyamide epoxy designed for high moisture.

Q.4 System No. 104-6 High Solids Epoxy (Interior Only)

Surface Preparation: Surface to be clean and dry.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 104-Color H.S. Epoxy	6.0 – 10.0
<u>2nd Coat:</u> 104-Color H.S. Epoxy	6.0 – 10.0
	12.0 – 20.0
	Minimum 14.0 Mils

NOTE: The surface will be tile-like for easy cleaning and will provide protection against chemical attack, corrosive fumes, and high humidity and wash down. Spray and backroll first coat to fill porosity.

Q.5 System No. 113-1 Acrylic-Epoxy Semi-Gloss (Interior Only)

Surface Preparation: Surface must be clean and dry.

	<u>DFT-Mils</u>
<u>Block Filler:</u> 54-562 Modified Epoxy Masonry Filler	80 SF/Gal
<u>1st Coat:</u> 113-Color Tneme-Tufcoat	4.0 – 6.0
<u>2nd Coat:</u> 113-Color Tneme-Tufcoat	4.0 – 6.0
	8.0-12.0

NOTE: Series 113 can be spray applied @ 4.0 – 6.0 mils DFT. Application by brush and roller will require additional coats.

NOTE: Series 113 Tneme-Tufcoat has very low odor and can be used when painting in occupied areas. Specify Series 114 Tneme-Tufcoat for a gloss finish.

Q.6 System No. 156-1 Modified Acrylic Elastomer (Exterior)

Surface Preparation: Surface must be clean and dry.

<u>Block Filler:</u> 54-562 Modified Masonry Filler	<u>DFT-Mils</u> 80 SF/Gal
<u>1st Coat:</u> 156-Color Enviro-Crete	4.0 – 8.0
<u>2nd Coat:</u> 156-Color Enviro-Crete	4.0 – 8.0
	8.0–16.0
	Minimum 10.0 Mils (For 2 nd & 3 rd Coats)

NOTE: If texture is needed, use 157 Enviro-Crete TX (medium texture). For application over previously applied coatings, use TNAMEC 151 Elasto-Grip at 1.0 – 2.5 mils DFT in place of the 54-562 block filler.

15.9 GYPSUM WALLBOARD

R. INTERIOR EXPOSURE R.1 System No. 113-5 Acrylic-Epoxy

Surface Preparation: Surface must be clean and dry.

<u>1st Coat:</u> 51-792 PVA Sealer	<u>DFT-Mils</u> 1.0 – 2.0
<u>2nd Coat:</u> 113 H.B. Tneme-Tufcoat	2.0 – 3.0
<u>3rd Coat:</u> 113 H.B. Tneme-Tufcoat	2.0 – 3.0
	5.0 – 7.0
	Minimum 6.0 Mils

NOTE: Series 113 can be spray applied in a single coat at 4.0 – 6.0 mils

DFT.

Substitute Series 114 if a gloss finish is desired.

R.2 System No. 66-22 Hi-Build Epoxoline

Surface Preparation: Surface must be clean and dry.

<u>1st Coat:</u> 51-792 PVA Sealer	<u>DFT-Mils</u> 1.0 – 2.0
<u>2nd Coat:</u> 66-Color Hi-Build Epoxoline*	4.0 – 6.0
	5.0 – 8.0
	Minimum 5.0 Mils +

NOTE: *Two coats may be required if applied by roller.

R.3 System No. 6-1 Acrylic Emulsion, Low Sheen (Interior / Exterior Exposure)

Surface Preparation: Surface must be clean and dry.

<u>1st Coat:</u> 6-Color Tneme-Cryl	<u>DFT-Mils</u> 2.0 – 3.0
<u>2nd Coat:</u> 6-Color Tneme-Cryl	2.0 – 3.0
	4.0 – 6.0

Minimum 5.0 Mils

NOTE: This system is designed for mild use areas like office walls, laboratory ceilings, stairwells, etc. For semi-gloss finish, use Series 29 Tufcryn at 1.5 – 2.0 mils DFT.

15.10 **WOOD**

S. **EXTERIOR/INTERIOR EXPOSURE**

S.1 **System No. 23-4 Alkyd Semi-Gloss**

Surface Preparation: Surface shall be clean and dry.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 36-603 Undercoater	2.5 – 3.5
<u>2nd Coat:</u> 23 Enduratone	1.5 – 3.5
<u>3rd Coat:</u> 23 Enduratone	1.5 – 3.5
	5.5–10.5
Minimum 6.0 Mils	

NOTE: Specify Series 2H Hi-Build Tneme-Gloss for High Gloss finish.

S.2 **System No. 6-5 Acrylic Latex**

Surface Preparation: Surface shall be clean and dry.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 36 Undercoater	2.0 – 3.5
<u>2nd Coat:</u> 6-Color Tneme-Cryl	2.0 – 3.0
<u>3rd Coat:</u> 6-Color Tneme-Cryl	2.0 – 3.0
	6.0 – 9.5
Minimum 7.5 Mils	

NOTE: Substitute Series 29 Tufcryn for the third coat at 1.5 – 2.0 mils DFT if semi-gloss finish is desired.

15.11 **PVC PIPE**

T. **EXTERIOR OR INTERIOR**

T.1 **System No. 73-23 Epoxy-Polyamide**

Surface Preparation: Solvent clean per SSPC-SP1 & Scarify by Brush Blast or Hand Sanding.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 66-Color Hi-Build Epoxoline	2.0 – 3.0
<u>2nd Coat:</u> 73 Endura-Shield	2.0 – 3.0
Total	4.0 – 6.0
Minimum 5.0 Mils	

15.12 INSULATED PIPE

U. INTERIOR EXPOSURE

U.1 System No. 6-1 Acrylic Emulsion, Low Sheen

Surface Preparation: Surface shall be clean and dry.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 6-Color Tneme-Cryl	2.0 – 3.0
<u>2nd Coat:</u> 6-Color Tneme-Cryl	2.0 – 3.0
	4.0 – 6.0
Minimum	5.0 Mils

NOTE: For semi-gloss finish, use Series 29 Tufcryl for the 2nd coat.

15.13 HIGH HEAT COATING

V. EXTERIOR/INTERIOR EXPOSURE

V.1 System No. 39-2 Silicone Aluminum (1200° F Maximum)

Surface Preparation: SSPC-SP10 Near White Blast Cleaning –
1.0 Mil Surface Profile

	<u>DFT-Mils</u>
<u>1st Coat:</u> 39-1261 Silicone Aluminum	1.0 – 1.5
<u>2nd Coat:</u> 39-1261 Silicone Aluminum	1.0 – 1.5
	2.0 – 3.0
Minimum	2.0 Mils

NOTE: Coating must be heat cured @ 400°F for 1 hour.

V.2 System No. 39-4 Silicone Aluminum (600° F Maximum)

Surface Preparation: SSPC-SP10 Near White Blast Cleaning –
1.0 Mil Surface Profile

	<u>DFT-Mils</u>
<u>1st Coat:</u> 39-661 Silicone Aluminum	1.0 – 1.5
<u>2nd Coat:</u> 39-661 Silicone Aluminum	1.0 – 1.5
	2.0 – 3.0
Minimum	2.0 Mils

NOTE: Coating must be heat cured @ 400°F for 1 hour.

V.3 System No. 90E-92 Inorganic Zinc (750°F Max)

Surface Preparation: SSPC-SP10 Near White Metal Blast Cleaning

	<u>DFT-Mils</u>
<u>Coating:</u> 90E-02 Tneme-Zinc	2.0 – 3.5

NOTE: Coating will have a greenish gray color but will not require curing at elevated temperatures.

15.14 SURFACES EXPOSED TO H₂S/H₂SO₄ (SEVERE EXPOSURE/IMMERSION)

W. CEMENTITIOUS SURFACES

W.1 System No. 120-1 Vinyl Ester (Concrete)

Surface Preparation: Abrasive blast clean per SSPC-SP13 to remove all laitance, fines, and contamination.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 120-5002 Vinester Primer	6.0 – 10.0*
<u>2nd Coat:</u> 120-5003 Vinester F&S	As Required**
<u>3rd Coat:</u> 120-5002 Vinester Primer	12.0 – 18.0
<u>4th Coat:</u> 120-5001 Vinester Topcoat	<u>12.0 – 18.0</u>
	30.0 - 46.0
	Minimum 36.0 Mils +

NOTES:

*First coat to be applied by roller application or spray applied followed by backrolling.

**All surface voids, cracks, pinholes, and other defects must be filled flush with the adjacent surfaces by putty knife, trowel, float, squeegee, or other suitable method.

X. FERROUS METAL SURFACES

X.1 System No. 120-2 Vinyl Ester (Steel)

Surface Preparation: SSPC-SP5 White Metal Blast Cleaning (3.0 Mil Profile)

	<u>DFT-Mils</u>
<u>1st Coat:</u> 120-5002 Vinester Primer	12.0 – 18.0
<u>2nd Coat:</u> 120-5001 Vinester Topcoat	<u>12.0 – 18.0</u>
	24.0 – 36.0
	Minimum 30.0 Mils

NOTE: Application of a stripe coat to all weld seams and plate edges is recommended.

15.15 EXTERIOR OF PRESTRESSED CONCRETE TANKS

Z.1 System No. 156-3 (New Tanks)

Surface Preparation: Surface to be clean and dry.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 156-Color Envirocrete	4.0 – 6.0
<u>2nd Coat:</u> 156-Color Envirocrete	<u>4.0 – 6.0</u>
	8.0–12.0
	Minimum 10.0 Mils

Z.2 System No. 180-3 (New Tanks)

Surface Preparation: Surface to be clean and dry.

	<u>DFT-Mils</u>
<u>1st Coat:</u> Thoroseal or equal	1/16"
<u>2nd Coat:</u> 180 W.B. Tneme-Crete	2.0-4.0
<u>3rd Coat:</u> 180 W.B. Tneme-Crete	2.0-4.0
	1/16"+

Z.3 System No. 6-6 (New Tanks)

Surface Preparation: Surfaces to be clean and dry.

	<u>DFT-Mils</u>
<u>1st Coat:</u> Thoroseal or equal	1/16"
<u>2nd Coat:</u> 6-Tneme-Cryl	2.0-3.0
<u>3rd Coat:</u> 6 Tneme-Cryl	2.0-3.0
	1/16"+

Z.4 System No. 156-4 Existing Tanks (Previously Painted)

Surface Preparation: Remove all dirt, oil, grease, chalk, and loose paint per High Pressure Water Blast (Min 3500 PSI).

	<u>DFT-Mils</u>
<u>1st Coat:</u> 151 Elasto-Grip	1.0–2.5
<u>Stripe Coat:</u> Stripe all hairline cracks with a	3.0–5.0
Brushed coat of Series 156 Envirocrete	
<u>Topcoat:</u> 156-Envirocrete	4.0–6.0
	(Cracks) 8.0–13.5
	(Other) 5.0– 8.5

Z.5 System 180-4 Existing Tanks (Previously Painted)

Surface Preparation: Remove all dirt, oil, grease, chalk, and loose paint per High Pressure Water Blast (Min 3500 PSI).

	<u>DFT-Mils</u>
<u>Stripe Coat:</u> 180 W.B. Tneme-Crete	2.0-4.0
Applied by roller to all	
Visible cracks	
<u>1st Coat:</u> 180 W.B. Tneme-Crete	2.0-4.0
<u>2nd Coat:</u> 180 W.B. Tneme-Crete	2.0-4.0
	4.0-8.0
	Minimum 5.0 mils (2 coats)

NOTE: May be spray applied in a single coat at 4.0 – 8.0 mils.

15.16 SECONDARY CONTAINMENT AREAS

AA.1 System No. 61-4 Epoxy Polyamide (For Fuel Oils)

Surface Preparation: Surface shall be clean and dry. Allow new concrete to cure for 28 days. Abrasive Blast Clean per SSPC-SP7 (Brush Off Blast).

	<u>DFT-Mils</u>
<u>Primer:</u> 61-5002 Tneme-Liner (Beige)	4.0 – 6.0
<u>Topcoat:</u> 61-5001 Tneme-Liner (Gray)	4.0 – 6.0
	8.0–12.0
Minimum	10.0 Mils

NOTE: This system will provide excellent resistance to most chemicals including petrochemicals. Use Tnemec Series 63-1500 between coats as a filler and surfacer wherever it is required.

AA.2 System No. 61-1 Amine Epoxy (For Caustics)

Surface Preparation: Surfaces shall be clean and dry. Allow new concrete to cure for 28 days. Abrasive Blast Clean per SSPC-SP6 (Brush Off Blast).

	<u>DFT-Mils</u>
<u>Primer:</u> 61-5002 Tneme-Liner (Beige)	8.0 – 12.0
<u>Topcoat:</u> 61-5001 Tneme-Liner (Gray)	8.0 – 12.0
	16.0 - 24.0

NOTE: This system offers superior chemical resistance to a wide range of chemicals. Use Tnemec Series 63-1500 between coats as a filler and surfacer wherever it is required.

AA.3 System 262-1 Flexible Polyurethane

Surface Preparation: Surfaces shall be clean and dry. Allow new concrete to cure for 28 days. Abrasive Blast Clean per SSPC-SP7 (Brush Off Blast).

	<u>DFT-Mils</u>
<u>Primer:</u> 66 Hi-Build Epoxoline	5 Mils
<u>Coating:</u> 262 Elasto-Shield (Black)	50 Mils
Total	55

NOTE: Multiple passes may be required to achieve recommended film thickness. See Elasto-Shield Application Guide for additional instructions. This product is only available in black. Repair all cracks, bugholes, and spalled areas with Series 265 Elasto-Shield TG prior to application of Series 262.

AA.4 System No. 120-3 Vinyl Ester (For Acids)

Surface Preparation: Abrasive blast clean per SSPC-SP13.

	<u>DFT-Mils</u>
<u>Filler Surfacer:</u> 120-5003 Vinester F & S	as Required
<u>1st Coat:</u> 120-5002 Vinester Primer	15.0-18.0

2nd Coat: 120-5001 Vinester Topcoat 15.0-18.0
30.0-36.0
Minimum 30.0 Mils

NOTES: Use 120-5003 Vinester F & S to fill all cracks, bugholes, and other surface voids, and smooth all rough areas.

AA.5 System No. 275 Fiber Reinforced Novolac Epoxy

Surface Preparation: Allow new concrete to cure 28 days. Abrasive blast clean per SSPC-SP13.

Filler Surfer: Fill all voids with Tnemec Series 201 Epoxoprime mixed with fumed silica.

Prime Coat: Tnemec Series 201 Epoxoprime @ 6.0 – 8.0 mils DFT.

Body Coat: Tnemec Series 275 Stranlok (Fiber Reinforced Novolac Epoxy) applied by spray or trowel at 30-35 mils DFT.

Topcoat: Tnemec Series 282 Tneme-Glaze (Novolac Epoxy) applied at 6.0 – 8.0 mils DFT.

15.17 CLEAR WATER REPELLENT FOR CONCRETE, MASONRY & BRICK

BB.1 Silane/Siloxane Sealer (Water Based)

Surface Preparation: Allow new concrete to cure 28 days. Clean surfaces to be sealed by abrasive blasting or waterblasting.

COATING: BRICK, CONCRETE

Chemprobe PRIME A PELL H₂O 125-200 SF/GAL

SPLIT FACED OR POROUS MASONRY

Chemprobe PRIME A PELL H₂O. 65-100 SF/GAL

BB.2 Silane/Siloxane Sealer w/Concrete Stain

Sealer: Chemprobe Prime A Pell H₂O 65-200 SF/Gal

Concrete Stain: Two Coats of Chemprobe 75-200 SF/Gal/Ct
Conformal Stain

15.18 MANHOLES, WET WELLS & LIFT STATIONS

CC.1 System No. 120-1 Vinyl Ester

Surface Preparation: Abrasive blast clean to remove all laitance, fines, and contamination.

	<u>DFT-Mils</u>
<u>1st Coat:</u> 120-5002 Vinester Primer	6.0 – 10.0*
<u>2nd Coat:</u> 120-5003 Vinester F&S	As required**
<u>3rd Coat:</u> 120-5002 Vinester Primer	12.0 – 18.0
<u>4th Coat:</u> 120-5001 Vinester Topcoat	<u>12.0 – 18.0</u> 30.0 – 46.0

Minimum 36.0 Mils +

*First coat to be applied by roller application or spray applied followed by backrolling.

**All surface voids, cracks, pinholes, and other defects must be filled flush with the adjacent surfaces by putty knife, trowel, float, squeegee, or other suitable method.

CC.2 System No. 100-1 Crystalline Waterproofing

Surface Preparation: Surface to be clean and roughened by Brush Blasting, Acid Etching, or High Pressure Water Blasting (3500 PSI) with turbo tips.

1st Coat: XYPEX Concentrate @ (1.5#/SY) – 1/16"±

2nd Coat: XYPEX Modified @ (1.5#/SY) – 1/16"±

NOTE: This system can be applied to concrete that is still wet or hasn't developed final cure. It can be used where wet surface conditions exist or where there is the potential for water intrusion due to hydrostatic pressure.

15.19 CANAL PIPE CROSSINGS

DD.1 System 90-97 Zinc/Epoxy/Urethane for New Pipe or Pipe Requiring Removal of Existing Coatings

Surface Preparation: SSPC-SP6 Commercial Blast Cleaning

	<u>DFT-Mils</u>
<u>Primer:</u> 90-97 Theme-Zinc	2.5 – 3.5
<u>2nd Coat:</u> 66-Color Hi-Build Epoxoline	2.0 – 3.0
<u>3rd Coat:</u> 73-Color Endura-Shield	2.0 – 3.0
	6.5 – 9.5

Minimum 8.0 Mils

DD.2 System No. 135-2 High Build, High Gloss Urethane for Marginally Cleaned Surfaces or Topcoating Over Existing Systems

Surface Preparation: High Pressure Water Blast (Min 3500 PSI) or Solvent Clean (SSPC-SP1) and Spot Hand and Power Tool Clean (SSPC-SP2 & 3) or Brush Blast (SSPC-SP7). Existing coatings must be clean, dry, and tightly adhering prior to application of coatings.

	<u>DFT-Mils</u>
<u>Spot Primer:</u> 135 Chembuild	3.0 – 4.0 (Spots)
<u>Tie Coat:</u> 135 Chembuild	3.0 – 4.0
<u>2nd Coat:</u> 73-Color Endura-Shield	2.0 – 3.0
	5.0 – 7.0

Minimum 5.0 Mils

NOTE: A test Patch is always recommended to insure proper adhesion to existing coatings without lifting of existing coatings.

15.20 REPAINTING OF METAL BUILDING PANELS

EE.1 Exterior of Metal Building Panels

Surface Preparation: Pressure clean (3000 PSI) and spot SP2 & 3 Hand and Power Tool Cleaning.

	<u>DFT-Mils</u>
<u>Spot Primer:</u> 135 Chembuild	3.0 – 5.0
<u>1st Coat:</u> 30 Spra-Saf EN	2.0 – 4.0
<u>2nd Coat:</u> 30 Spra-Saf EN	2.0 – 4.0
	4.0 – 8.0
Minimum	4.0 Mils

NOTE: Test patch is strongly recommended.

EE.2 Exterior Miscellaneous Metal Trim

Surface Preparation: Pressure clean (3000 PSI) or solvent clean per SSPC-SP1. Spot SP2 & 3 Hand & Power Tool Cleaning.

	<u>DFT-Mils</u>
<u>Spot Primer:</u> 135 Chembuild	2.0 – 4.0
<u>Tie Coat:</u> 135 Chembuild	2.0 – 4.0
<u>Topcoat:</u> 73 Endura-Shield	2.0 – 3.0
Total	4.0 – 7.0

NOTE: Test patch is strongly recommended.

COATING SCHEDULE

SUBSTRATE	SUBSTRATE & SERVICE	SURFACE PREPARATION	COAT [SERIES # (DFT-MILS)]			
			1 st CT	2 nd CT	3 rd CT	4 th CT

END OF SECTION

SECTION 26 05 00
COMMON WORK RESULTS FOR ELECTRICAL

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

- A. Description of Work. Extent of electrical connections (EICn) for equipment is indicated by drawings and schedules. Electric connections are hereby defined to include, but not necessarily limited to, connections for providing electrical power to equipment.
- B. The foregoing "General Requirements" form a part of this contract and all the requirements set forth shall be binding upon this subcontractor.
- C. The work required under this Division shall include all materials, labor and auxiliaries required to install a complete and properly operating electrical system. The electrical system required under this Division consists basically of, but is not limited to the following:
 - 1. Complete distribution system including the necessary feeders, branch circuits, lighting fixtures, control switches and receptacles.
 - 2. Complete distribution system for power including raceways, wiring, and connections to motors, instruments, control system components and other equipment as required.
 - 3. Underground feeders to panelboards, motor control centers including necessary risers, etc.
 - 4. Painting (of special equipment).
 - 5. Electrical specialties.
 - 6. Concrete work for pad mounted equipment, encased raceways, or grade mounted lighting.
 - 7. Grounding system.
- D. Extent of electrical related work required by this section is indicated on drawings and schedules, and/or specified in other sections.
- E. Types of electrical related work specified in this section include the following:
 - 1. Access to Electrical Work.
 - 2. Access doors in walls, ceiling, and floors.
 - 3. Removable cover plates in walls, ceilings, and floors.

4. Excavating for Electrical Work:
 - a. Underground electrical wiring and service tunnels.
 - b. Power and lighting poles.
5. Concrete for Electrical Work:
 - a. Electrical equipment foundations and mounting pads.
 - b. Patching concrete which has been cut to accommodate electrical work.
6. Priming and Electrical Work:
 - a. Ferrous metal surfaces (does not include stainless steel).
 - b. Exterior cast-iron handhole and manhole covers and similar units are excluded from work to be painted.
 - c. Aluminum, which is not specifically anodized as final finish is so indicated.
 - d. Concealed work is excluded from painting, except for interior work in "high humidity" areas.

PART 2 – MATERIALS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 26 05 03
SPECIAL REQUIREMENTS

PART 1 – GENERAL

1.01 AUXILIARIES AND ACCESSORIES

- A. The foregoing "Project Requirements", Div.1, Section 01 00 00, form a part of this contract and all the requirements set forth shall be binding upon this subcontractor.
- B. Include all auxiliaries and accessories for complete and properly operating systems.

1.02 LAYOUT OF WORK

- A. Drawings are diagrammatic. Correlate final equipment locations with governing Architectural and Structural drawings. Lay out before installation so that all trades may install equipment in spaces available. Provide coordination as required for installation in a neat and workmanlike manner.

1.03 INVESTIGATION OF SITE

- A. Check site and existing conditions thoroughly before bidding. Advise ENGINEER in writing of discrepancies or questions noted.

1.04 SUPERVISION OF THE WORK

- A. Provide field superintendent who has had a minimum of four (4) years previous successful experience on projects of comparable sizes and complexity. At least one (1) member of the Electrical Contracting Firm shall hold a State Master Certificate of Competency.

1.05 COORDINATION

- A. Provide all required coordination and supervision where work connects to or is affected by work of others and comply with all requirements affecting this Division. Work required under other divisions, specifications, or drawings to be performed by this Division shall be coordinated with the CONTRACTOR and such work performed at no additional cost to OWNER.

1.06 BASIS FOR WIRING DESIGN

- A. The drawings and specifications describe specific sizes of switches, breakers, fuses, conduits, conductors, motor starters, and other items of wiring equipment. Wherever the CONTRACTOR provides power consuming equipment which differs from drawings and specifications, the wiring and associated circuit components for such equipment shall be changed to proper sizes to match at no additional expense to the OWNER.

1.07 PROVISIONS FOR OPENINGS

- A. Locate all openings required for work performed under this section. Provide sleeves, guards, or other approved methods to allow passage of items installed under this section.

1.08 CONCRETE PADS

- A. Furnish and install reinforced concrete pads for transformers, and motor control centers, of size as shown on the drawings or required. Unless otherwise noted, pads shall be four inches (4") high and shall exceed dimensions of equipment being set on them, including future sections, by six inches (6") on all sides, except when equipment is flush against a wall, then the side or sides against the wall shall be flush against a wall, then the side or sides against the wall shall be flush with the equipment. Chamfer top edges one-half inch (1/2") with forms. Trowel all surface smooth.

1.09 SURFACE MOUNTED EQUIPMENT

- A. Surface mount fixtures, outlets, cabinets, conduit, panels, etc., shall have finish or shall be painted as directed by ENGINEER. Paint shall be in accordance with other applicable sections of these specifications.

1.10 MATERIALS

- A. Reference: "General Requirements of the Contract", Div. 1.

1.11 SUBSTITUTIONS

- A. Reference: "General Requirements of the Contract", Div. 1.

1.12 ADDITIONAL REQUIREMENTS

- A. Keep two (2) sets of white prints on the job, and neatly marked up design drawings each day as components are installed. Different colored pencils shall be used as directed for different systems. Cost of prints shall be included under this Division. All items on Progress Drawings shall be shown in actual location installed. Change any equipment schedules to agree with items actually furnished.
- B. Prior to request for final payment furnish a set of neatly marked prints of drawings to General Contractor.
- C. Submit for checking a specific set of written Operating Instructions on each item which required instructions to operate. After approval, provide one (1) additional copy for insertion in each Technical Information Brochure.
- D. Submit for approval Maintenance Information consisting of manufacturer's printed instructions and parts lists for each major item of equipment. After approval, insert information in each Technical Information Brochure.
- E. The work required under this Division shall include a one (1)-year guarantee unless otherwise noted. This guarantee shall be by the CONTRACTOR to the OWNER for

any defective workmanship or material which has been furnished under this Contract at no cost to the OWNER for a period of one (1) year from the date of substantial completion of the System. This guarantee shall not include light bulbs in service after one (1) month from date of Substantial Completion of the System. Explain the provisions of guarantee to the OWNER at the "Demonstration of Completed System".

- F. All work on the System shall be completed, and all forms and other information shall be submitted for approval one (1) week before the request for final inspection of the building.

1.13 CUTTING AND PATCHING

- A. Reference: "General Requirements of the Contract", Div. 1.
- B. Supplementary Requirements: Any cutting of work in place shall be patched and decorated by such mechanics and in such a manner that the quality of workmanship and finish shall be compatible with that of adjacent construction.

1.14 PROPRIETARY NAMES

- A. For convenience of description and as a standard for grade, type, quality, and performance characteristics, proprietary names are included with some description. This does not imply preference to specific manufacturers (except where multiple choice is specified or where otherwise noted to match existing conditions), but minimum requirements with approval to be made by the ENGINEER.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 26 05 04
DEMONSTRATION OF COMPLETED ELECTRICAL SYSTEMS

PART 1 – GENERAL

1.01 SCOPE

A. Demonstrate the essential features of the following electrical systems:

1. Communications systems.
 - a. Alarms and bells.
2. Electrical entrance equipment.
 - a. Circuit breakers.
 - b. Fuses and fuse holders.
 - c. Meter.
3. Electrical systems, controls, and equipment.
 - a. Electrical power equipment.
 - b. Motor control devices.
 - c. Relays.
 - d. Special transformers.
 - e. Starting devices.
4. Lighting fixtures (include relamping and replacing lenses).
 - a. Fixtures, indoor and outdoor.
5. Panel boards.
 - a. Distribution panels.
 - b. Lighting panels.
 - c. Load centers.
 - d. Main panels, power panels.
6. Standby Electrical Equipment.
 - a. Batteries.
 - b. Battery Chargers.
 - c. Motor-generator sets.
 - d. Transfer switch.
 - e. Day Tank.
 - f. Controls and alarms.
7. Wiring devices.
 - a. Face plates.

- b. Low-voltage controls.
- c. Outlets: convenience, special purpose.
- d. Switches: regular, time.

B. Each system shall be demonstrated once only, after completion of testing.

1.02 TIME

- A. The demonstration shall be held upon completion of all systems at a date to be agreed upon in writing by the OWNER or his representative.

1.03 ATTENDING PARTIES

- A. The demonstration shall be held by this CONTRACTOR in the presence of the OWNER, and the manufacturer's representative.

1.04 DEMONSTRATION

- A. Demonstrate the function and location (in the structure) of each system and indicate its relationship to the riser diagrams and drawings.
- B. Demonstrate by "start-stop operation" how to work the controls, how to reset protective devices, how to replace fuses, and what to do in the case of emergency.

1.05 CERTIFICATE OF COMPLETED DEMONSTRATION

- A. Submit five (5) copies of "Certificate of Completed Demonstration", memo signed by the CONTRACTOR, Subcontractor, and OWNER and insert one (1) copy in each Technical Information Brochure.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 26 05 06
ELECTRICAL CONNECTION FOR EQUIPMENT

PART 1 – GENERAL

- A. Type of electrical power connections specified in this section includes the following:
 - 1. To motors,
 - 2. To motor starters and/or variable frequency drive,
 - 3. From motor starters and/or drives to motors,
 - 4. To lighting fixtures,
 - 5. To transformers, rheostats, and similar current adjustment features of equipment,
 - 6. To ground, and
 - 7. To units of communication, signal, alarm, etc.

PART 2 – QUALITY ASSURANCE

2.01 NEC COMPLIANCE.

- A. Comply with applicable portions of NEC as to type products used and installation of electrical power connections (terminals and splices), for junction boxes, motor starters, and disconnect switches.
- B. NEMA Compliance. Comply with applicable portions of NEMA standards pertaining to electrical connections for equipment.
- C. ANSI Compliance. Comply with applicable ANSI standards pertaining to products and installation of electrical connections.
- D. Splices and terminations of types indicated.

2.02 METAL CONDUIT, TUBING, AND FITTINGS

- A. General. Provide metal conduit, tubing and fittings of types, grades, sizes, and weights (wall thicknesses) indicated for each type service. Where types and grades are not indicated, provide proper selection as determined for installer to fulfill wiring requirements; comply with NEC requirements for raceways. Provide products complying with Division 26 basic materials and methods section "Raceways", and in accordance with the following listing of metal conduit, tubing, and fittings:
 - 1. Rigid Steel Conduit Flexible Metal Conduit Fittings.

2. Rigid Metal Conduit Fittings Liquid-Tight Flexible Metal Conduit.
3. Electrical Metallic Tubing Liquid-Tight Flexible Metal Conduit Fittings.
4. Flexible Metal Conduit.

2.03 WIRE, CABLE, AND CONNECTORS

- A. General. Provide wires, cables and connectors complying with Division 26 basic materials and methods section "Wire and Cables".
- B. Wire. Unless otherwise indicated, provide wires/conductors for electrical connections which match wires/conductors of wiring of wiring supplying power.
- C. Connectors and Terminals. Provide electrical connectors and terminals as recommended by connector and terminal manufacturer for intended applications.

2.04 ELECTRICAL CONNECTION ACCESSORIES

- A. Provide electrical insulating tape, heat-shrinkable insulating tubing and boots, solder, electrical soldering flux, wire nuts and cable ties as recommended for use by accessories manufacturers for type services indicated.

PART 3 – EXECUTION

3.01 INSTALLATION OF ELECTRICAL CONNECTIONS

- A. Install electrical connections as indicated; in accordance with connector manufacturer's written instructions and with recognized industry practices and complying with requirements of NEC and NECA's "Standard of Installation" to ensure that products fulfill requirements.
- B. Connect electrical power supply conductors to equipment conductors in accordance with equipment manufacturer's written instructions and wiring diagrams. Wherever possible, mate and match conductors of electrical connections for proper interface between electrical power supplies and installed equipment.
- C. Coordinate installation of electrical connections for equipment with equipment installation work.
- D. Cover splices with electrical insulation equivalent to, or of higher rating, than insulation on conductors being spliced.
- E. Prepare cables and wires by cutting and stripping covering armor, jacket, and insulation properly to ensure uniform and neat appearance where cables and wires are terminated.
- F. Trim cables and wires as short as practical and arrange routing to facilitate inspection, testing and maintenance.
- G. Tighten wire-binding connector screws firmly.
- H. Provide flexible conduit for motor connections and for other electrical equipment connections where subject to movement and vibration.

- I. Provide liquid-tight flexible conduit for connection of motors and for other electrical equipment where subject to movement and vibration, and also where subjected to one or more of the following conditions:
 - 1. Exterior location.
 - 2. Moist or humid atmosphere where condensate can be expected to accumulate.
 - 3. Corrosive atmosphere.
 - 4. Subjected to water spray.
 - 5. Subjected to dripping oil, grease, or water.
- J. Refer to basic materials and methods section for identification of electrical power supply conductor terminations with markers approved as to types, colors, letter, and marker sizes, by Architect/Engineer. Affix markers at each point of termination, as close as possible to each point of connection.

END OF SECTION

SECTION 26 05 13
WIRES AND CABLES

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

- A. Extent of electrical wire and electrical cable work is indicated by drawings and schedules.
- B. Types of wire, cable and connectors in this section include the following:
 - 1. Copper Conductors.
 - 2. Tab Type Connectors.
 - 3. Split-Bolt Connectors.
- C. Applications for wire, cable and connectors required for project as follows:
 - 1. Power Distribution circuitry.
 - 2. Lighting Circuitry.
 - 3. Appliance and Equipment circuitry.
 - 4. Motor-Branch Circuitry.

PART 2 – QUALITY ASSURANCE

2.01 COMPLIANCE

- A. Comply with NEC as applicable to construction and installation of electrical wire, cable, and connectors.
- B. UL Compliance. Comply with UL standards pertaining to wire, cable and connectors.
- C. UL Labels. Provide electrical wires, cables and connectors which have been UL listed and labeled.
- D. NEMA/ICEA Compliance. Comply with applicable portions of NEMA/Insulated Cable Engineers Association standards pertaining to material, construction and testing of wire and cable.
- E. ANSI/ASTM. Comply with applicable portions of ANSI/ASTM standards pertaining to construction of wire and cable.

PART 3 – EXECUTION

3.01 ACCEPTABLE MANUFACTURERS

- A. Manufacturers. Subject to compliance with requirements, provide products of one of the following (for each type of wire, cable, and connector):
 - 1. Wire and Cable.
 - a. General Cable Corporation.
 - b. Southwire Company.
 - c. Triangle PWC, Inc.
 - 2. Connectors.
 - a. AMP, Inc.
 - b. Burndy Corporation.
 - c. Ideal Industries, Inc.
 - d. Thomas and Betts Company.

3.02 WIRE, CABLE, AND CONNECTORS

- A. General. Except as otherwise indicated, provide wire, cable, and connectors of manufacturer's standard materials, as indicated by published product information; designed and constructed as recommended by manufacturer, and as required for installation.
- B. Wire. Provide factory-fabricated wire of sizes, ratings, materials, and types indicated for each service. Where not indicated, provide proper selection as determined by installer to comply with project's installation requirements and NEC standards. Select from the following types, materials, conductors, configurations, insulation, and coverings:
 - 1. UL Type: THHN.
 - 2. UL Type: THWN.
- C. Material: Copper.
 - 1. Conductors: Solid (AWG 20 to AWG 8 only).
 - 2. Conductors: Concentric-lay-stranded (standard flexibility).
 - 3. Outer Covering: Thermoplastic.
- D. Cable. Provide factory-fabricated, metal connectors of sizes, ratings, materials, types, and classes as indicated for each service. Where not indicated, provide proper selection as determined by installer to comply with installation requirements and NEC standards.

3.03 CONNECTORS

- A. Provide factory-fabricated, metal connectors of sizes, ratings, material, types, and classes as indicated for each service. Where not indicated, provide proper selection as determined by installer to comply with installation requirements and NEC standards. Select from the following types, classes, kinds, and styles.
 - 1. Type: Pressure.
 - 2. Class: Non-insulated.
 - 3. Kind: Copper (for Cu to Cu connection).
 - 4. Style: Butt connection.
 - 5. Style: Split-bolt parallel connection.
 - 6. Style: Tap connection.
 - 7. Style: Pigtail connection.

PART 4 – INSTALLATION

1.01 GENERAL

- A. Install electrical cables, wires and connectors as indicated, in compliance with manufacturer's written instruction, applicable requirements of NEC and NECA's "Standard of Installation", and in accordance with recognized industry practices.
- B. Coordinate cable and wire installation work with electrical raceway and equipment installation work, as necessary for proper interface.
- C. Use pulling compound or lubricant, where necessary; compound must not deteriorate conductor or installation.
- D. Keep conductor splices to a minimum.
- E. Install splices and tapes which have mechanical strength and insulation rating equivalent-or-better than conductor.
- F. Field Quality Control. Prior to delivery, test cable and wire for continuity of circuitry, and also for short circuits. Correct malfunctions when detected.
- G. Subsequent to wire and cable hook-ups, energize circuitry and demonstrate functioning in accordance with requirements.

END OF SECTION

SECTION 26 05 26

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes grounding and bonding systems and equipment.

1.3 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with UL 467 for grounding and bonding materials and equipment.

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. Burndy; Part of Hubbell Electrical Systems.
 - 2. ERICO International Corporation.
 - 3. Harger Lightning and Grounding.

2.2 SYSTEM DESCRIPTION

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with UL 467 for grounding and bonding materials and equipment.

2.3 CONDUCTORS

- A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.
- B. Bare Copper Conductors:
 - 1. Solid Conductors: ASTM B 3.
 - 2. Stranded Conductors: ASTM B 8.
 - 3. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG conductor, 1/4 inch (6 mm) in diameter.
 - 4. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.
 - 5. Bonding Jumper: Copper tape, braided conductors terminated with copper ferrules; 1-5/8 inches (41 mm) wide and 1/16 inch (1.6 mm) thick.

2.4 CONNECTORS

- A. Listed and labeled by an NRTL acceptable to authorities having jurisdiction for applications in which used and for specific types, sizes, and combinations of conductors and other items connected.
- B. Bolted Connectors for Conductors and Pipes: Copper or copper alloy.
- C. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.
- D. Bus-Bar Connectors: Mechanical type, cast silicon bronze, solderless compression-type wire terminals, and long-barrel, two-bolt connection to ground bus bar.

2.5 GROUNDING ELECTRODES

- A. Ground Rods: Copper-clad steel; 3/4 inch by 10 feet (19 mm by 3 m).

PART 3 - EXECUTION

3.1 APPLICATIONS

- A. Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger unless otherwise indicated.
- B. Underground Grounding Conductors: Install bare copper conductor, No. 2/0 AWG minimum.
 - 1. Bury at least 24 inches (600 mm) below grade.
- C. Conductor Terminations and Connections:
 - 1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.

2. Underground Connections: Welded connectors except at test wells and as otherwise indicated.
3. Connections to Ground Rods at Test Wells: Bolted connectors.
4. Connections to Structural Steel: Welded connectors.

3.2 GROUNDING AT THE SERVICE

- A. Equipment grounding conductors and grounding electrode conductors shall be connected to the ground bus. Install a main bonding jumper between the neutral and ground buses.

3.3 GROUNDING SEPARATELY DERIVED SYSTEMS

- A. Generator: Install grounding electrode(s) at the generator location. The electrode shall be connected to the equipment grounding conductor and to the frame of the generator.

3.4 EQUIPMENT GROUNDING

- A. Install insulated equipment grounding conductors with all feeders and branch circuits.
- B. Poles Supporting Outdoor Lighting Fixtures: Install grounding electrode and a separate insulated equipment grounding conductor in addition to grounding conductor installed with branch-circuit conductors.

3.5 INSTALLATION

- A. Grounding Conductors: Route along shortest and straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.
- B. Ground Rods: Drive rods until tops are 2 inches (50 mm) below finished floor or final grade unless otherwise indicated.
 1. Interconnect ground rods with grounding electrode conductor below grade and as otherwise indicated. Make connections without exposing steel or damaging coating if any.
- C. Test Wells: Ground rod driven through drilled hole in bottom of handhole.
 1. Test Wells: Install at least one test well for each service unless otherwise indicated. Install at the ground rod electrically closest to service entrance. Set top of test well flush with finished grade or floor.
- D. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance except where routed through short lengths of conduit.
 1. Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.

2. Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install bonding so vibration is not transmitted to rigidly mounted equipment.
3. Use exothermic-welded connectors for outdoor locations; if a disconnect-type connection is required, use a bolted clamp.

E. Grounding and Bonding for Piping:

1. Metal Water Service Pipe: Install insulated copper grounding conductors, in conduit, from building's main service equipment, or grounding bus, to main metal water service entrances to building. Connect grounding conductors to main metal water service pipes; use a bolted clamp connector or bolt a lug-type connector to a pipe flange by using one of the lug bolts of the flange. Where a dielectric main water fitting is installed, connect grounding conductor on street side of fitting. Bond metal grounding conductor conduit or sleeve to conductor at each end.
2. Water Meter Piping: Use braided-type bonding jumpers to electrically bypass water meters. Connect to pipe with a bolted connector.
3. Bond each aboveground portion of gas piping system downstream from equipment shutoff valve.

F. Ground Ring: Install a grounding conductor, electrically connected to each building structure ground rod and to each steel column, extending around the perimeter of building.

1. Install copper conductor not less than No. 2/0 AWG for ground ring and for taps to building steel.
2. Bury ground ring not less than 24 inches (600 mm) from building's foundation.

3.6 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Tests and Inspections:

1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.
2. Inspect physical and mechanical condition. Verify tightness of accessible, bolted, electrical connections with a calibrated torque wrench according to manufacturer's written instructions.
3. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal and at ground test wells. Make tests at ground rods before any conductors are connected.
 - a. Measure ground resistance no fewer than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.
 - b. Perform tests by fall-of-potential method according to IEEE 81.

- C. Grounding system will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports.
- E. Report measured ground resistances that exceed the following values:
 - 1. Power and Lighting Equipment or System with Capacity of 500 kVA and Less: 10 ohms.
 - 2. Power and Lighting Equipment or System with Capacity of 500 to 1000 kVA: 5 ohms.
 - 3. Power and Lighting Equipment or System with Capacity More Than 1000 kVA: 3 ohms.
- F. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Architect promptly and include recommendations to reduce ground resistance.

END OF SECTION

SECTION 26 05 33.13
CONDUIT FOR ELECTRICAL SYSTEMS

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

- A. General. Provide metal conduit, tubing and fittings of types, grades, sizes, and weights (wall thicknesses) for each service indicated. Where types and grades are not indicated, provide proper selection determined by installer to fulfill wiring requirements, and comply with applicable portions of NEC for raceways.
 - 1. Rigid Steel Conduit. FS WW-C-0581 and ANSI C80.1.
 - 2. Rigid Metal Conduit Fittings. FS W-F-408.
 - 3. Use Type 1 Fittings for rain-tight connections.
 - 4. Use Type 1 Fittings for concrete tight connections.
 - 5. Use Type 3 Fittings for other miscellaneous connections.
 - 6. Electrical Metallic Tubing (EMT). FS WW-C-563 and ANSI C80.3.
- B. EMT Fittings. FS W-F-408.
 - 1. Use Type 1 Fittings for rain-tight connections.
 - 2. Use Type 2 Fittings for concrete tight connections.
 - 3. Use Type 3 Fittings for other miscellaneous connections.
- C. Flexible Metal Conduits. FW WW-C-566, of the following type:
 - 1. Type 2. Zinc-coated steel.
 - 2. Flexible Metal Conduit Fittings. FS W-F-406, Type 1, Class 1, and Style A.
 - 3. Liquid-Tight Flexible Metal Conduit. Provide liquid-tight flexible metal conduit; construct of single strip, flexible, continuous, interlocked, and double-wrapped steel; galvanized inside and outside; coat with liquid-tight jacket of flexible polyvinyl chloride (PVC).

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 26 05 33.16
BOXES FOR ELECTRICAL SYSTEMS

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

- A. Extent of electrical box and electrical fittings work is indicated by drawings and schedules.
- B. Types of electrical boxes and fittings in this section include the following:
 - 1. Outlet Boxes.
 - 2. Junction Boxes.
 - 3. Pull Boxes.
 - 4. Conduit Bodies.
 - 5. Bushings.
 - 6. Knockout Closures.

PART 2 – QUALITY ASSURANCE

2.01 COMPLIANCE

- A. Comply with NEC as applicable for construction and installation of electrical wiring boxes and fittings.
- B. UL Compliance. Provide electrical boxes and fittings which have been UL listed and labeled.
- C. ANSI/NEMA Standards Compliance. Comply with ASNI 134.1 (NEMA Standards PUB No. OS 1) as applicable to sheet-steel outlet boxes, device boxes, covers, and box supports.

2.02 FABRICATED MATERIALS

- A. Interior Outlet Boxes.
 - 1. Provide galvanized flat rolled sheet steel interior outlet wiring boxes, of types, shapes, and sizes, including box depths, to suit each respective location and installation; construct with stamped knockouts in back and sides, and with thread screw holes with corrosion-resistant screws for securing box covers and wiring devices.

2. Manufacturer. Subject to compliance with requirements, provide interior outlet boxes of one of the following:

- a. Adalet-PLM Div., Scott and Fetzer Co.
- b. Appleton Electric Company.
- c. Bell Electric/Square D Co.
- d. RACO, Inc.
- e. Steel City/Midland-Ross Corp.

B. Weatherproof Outlet Boxes.

1. Provide corrosion-resistant cast metal weatherproof outlet wiring boxes, of types, shapes, and sizes, including depth of boxes, with threaded conduit ends, cast-metal face plates and spring-tipped waterproof caps suitably configured for each application, including face plate gaskets and corrosion-resistant fasteners.
2. Manufacturer. Subject to compliance with requirements, provide weatherproof outlet boxes of one of the following:
 - a. Bell Electric/Square D Co.
 - b. Harvey Hubbel, Inc.
 - c. O-Z/ Gedney Co.

C. Junction and Pull Boxes.

1. Provide galvanized code-gauge sheet junction and pull boxes, with screw-on covers; of types, shapes, and sizes, to suit each respective location and installation; with welded seams and equipped with stainless steel nuts, bolts, screws, and washers.
2. Manufacturer. Subject to compliance with requirements, provide junction and pull boxes of one of the following:
 - a. Adelet-PLM Div., Scott Fetzer Co.
 - b. Appleton Electric Co.
 - c. Bell Electric/ Square D Co.
 - d. Spring City Elect. Mfg. Co.

D. Conduit Bodies.

1. Provide galvanized cast-metal conduit bodies, of types, shapes, and sizes, to suit respective location, construct with thread-conduit-entrance ends, removable covers, and corrosion-resistant screws.
2. Manufacturer. Subject to compliance with requirements, provide conduit bodies of one of the following:
 - a. Appleton Electric Co.
 - b. Killark Electric Mfg. Co.
 - c. O-Z/Gedney Co.

E. Bushings, Knockout Closures, and Locknuts.

1. Provide corrosion-resistant punched-steel box knockout closures, conduit locknuts and malleable iron conduit bushings, offset connectors, of types and sizes, to suit respective uses and installations.

PART 3 – EXECUTION

3.01 INSTALLATION OF ELECTRICAL BOXES AND FITTINGS

A. General.

1. Install electrical boxes and fittings where indicated, complying with manufacturer's written instruction, applicable requirements of NEC and NECA's "Standard of Installation", and in compliance with recognized industry practices to ensure that products fulfill requirements.
2. Coordinate installation of electrical boxes and fittings with wire/cable and raceway installation work.
3. Provide weatherproof outlets for interior and exterior locations exposed to weather and moisture.
4. Provide knockout closure to cap unused knockout holes where blanks have been removed.
5. Install boxes and conduit bodies in those locations to ensure ready accessibility of electrical wiring.
6. Avoid using round boxes where conduit must enter box through side of box, which would result in difficult and insecure connections when fastened with locknut or bushing on rounded surface.
7. Fasten boxes rigidly to substrates or structural to which attached, or solidly embedded electrical boxes in concrete or masonry.
8. Provide electrical connections for installed boxes.

END OF SECTION

SECTION 26 05 43
UNDERGROUND DUCTS AND RACEWAYS FOR ELECTRICAL SYSTEMS

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

A. Underground Duct Lines.

1. Description of Assembly

- a. Underground duct lines where shown shall be of individual conduits encased in concrete. The conduit shall be of plastic, unless indicated or specified otherwise. The conduit used shall not be smaller than four inches (4") in diameter, inside, unless otherwise noted. The concrete encasement surrounding the duct bank shall be reinforced as shown and rectangular in cross-section, having a minimum concrete thickness of three inches (3"). Conduit shall be separated by a minimum concrete thickness of three inches (3").
- b. The concrete work shall conform to Sections on "Concrete". The top of the concrete envelope shall be not less than 18 inches (18") below grade. Concrete shall be installed in a continuous pour to eliminate joints in the duct run. Duct lines shall have a continuous slope downward toward manholes and away from buildings with a pitch of not less than 3 inches (3") in 100 feet (100'). Changes in direction of runs exceeding a total of 10 degrees (10°) either vertical or horizontal, shall be accomplished by long sweep bends having a minimum radius of curvature of 25 feet (25'), except that manufactured bends may be made up of one or more curved or straightened sections or combinations thereof. Manufactured bends shall have a minimum radius of 36 inches (36"). Right angle bends shall be rigid steel black mastic coated.
- c. Conduits shall terminate in end-bells where duct lines enter manholes. Separators shall be of precast concrete, high impact polystyrene, steel, or any combination of these. The joints of the conduits shall be staggered by rows so as to provide a duct line having the maximum strength. During construction, partially complete duct lines shall be protected from the entrance of debris, such as mud, sand, and dirt by means of suitable conduit plugs. As the duct line is completed, a testing mandrel not less than 13 inches (13") long with a diameter 1/4 inch (1/4") less than the size of the stiff bristles shall be drawn through until the conduit is clear of all particles of earth, sand, or gravel; conduit plug shall then be immediately installed.
- d. Plastic conduit, fittings and joints shall not have been stored in the sun or weather. In any excessively heated space, or unevenly supported during storage. Use and installation shall be in accordance with NEC requirements for the installation of non-

metallic rigid conduit. Plastic conduit shall be protected against the direct rays of the sun prior to installation. Conduit shall be Carlon Type EB, Queen City Plastics, or equal. Conduit shall be U.L. listed and conform to NEMA Standard TC6-1972.

- e. Trenches for duct banks shall be completely dry before setting conduits or pouring concrete. Well pointing as required will be provided if necessary, to keep trench dry.
- f. Wires and cables in manhole shall be placed on cable racks. Manhole shall be cleaned of all loose materials, dirt, and debris immediately after completion of new work and shall be in a clean condition with insulators. Racks shall be McGraw Edison NOB-LOC type, Chance, or equal.
- g. Backfilling shall be in layers not more than 8 inches (8") deep and shall be thoroughly tamped. The first layer shall be earth or sand, free from particles that would be retained on a 1/4" inch (1/4") sieve. The succeeding layers shall be excavated material having stones no larger than would pass through a 4-inch (4") ring. The backfill shall be level with adjacent surface, except that in sodded or paved areas, a space equal to the thickness of the sod or paving shall be left.
- h. The surface disturbed during the installation of duct shall be restored to its original elevation and condition if not refinished in connection with site work.
- i. All unused conduit openings shall be plugged or capped with a suitable device designed for the purpose; caulking compound shall not be used for plugging conduit openings.
- j. One (1) No. 4 bare stranded copper counterpoise shall be run above all duct banks and shall be run into all manholes and handholes and grounded. Counterpoise shall run to building and be grounded at each building service ground.

B. Raceways.

- 1. Extent of raceways is indicated by drawings and schedules. Types of raceways in this section include the following:
 - a. Electrical Metallic Tubing.
 - b. Flexible Metal Conduit.
 - c. Intermediate Metal Conduit.
 - d. Liquid-Tight Flexible Metal Conduit.
 - e. Rigid Metal Conduit.
 - f. Rigid Nonmetallic Conduit.
 - g. Surface Metal Raceways.
- 2. NEMA Compliance. Comply with applicable requirements to NEMA standards pertaining to raceways.

3. UL Compliance and Labeling. Comply with provisions of UL safety standards pertaining to electrical raceway systems; and provide products and components which have been UL listed and labeled.
4. NEC Compliance. Comply with requirements as applicable to construction and installation of raceway systems.

1.02 WIREWAYS

- A. General. Provide electrical raceways of types, grades, sizes, weights (wall thicknesses), number of channels, for each type service indicated. Provide complete assembly of raceway including, but not necessarily limited to, couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps and other components and accessories as needed for complete system. Where types and grades are not indicated, provide proper selection as determined by installer to fulfill wiring requirements, and comply with applicable provisions of NEC for electrical raceways.

1.03 SUBMITTALS

- A. Submit shop drawings or cut sheets on:
 1. Conduit.
 2. Fittings.
 3. Separators.
 4. PVC solvent.

PART 2 – PRODUCTS

2.01 INSTALLATION OF ELECTRICAL RACEWAYS

- A. Install electrical raceways where indicated; in accordance with manufacturer's written instructions, applicable requirements of NEC and NECA "Standard of Installation" and comply with recognized industry practices.
- B. Coordinate with other work, including metal can concrete deck work, as necessary to interface installation of electrical raceways and components with other work.
- C. Coat under floor metal raceways with bitumastic type protective coating prior to placing concrete.
- D. Level and square raceway runs, and install at proper elevations/heights.
- E. Complete installation of electrical raceways before starting installation of cables/wires within raceways.
- F. Install PVC-coated conduit and fittings in highly corrosive atmospheres, and elsewhere as indicated.

- G. Install flexible conduit for motor connections and for other electrical equipment connections where subject to movement and vibration.
- H. Install liquid-tight flexible conduit for connection of motors and for other electrical equipment where subject to movement and vibration and also where subject to one or more of the following conditions:
 - 1. Exterior location, moist or humid atmosphere where condensate can be expected to accumulate, corrosive atmosphere, subjected to water spray, subjected to dripping oil, grease, or water.
- I. Wherever possible, install horizontal raceway runs above water and steam piping.

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 26 05 53
ELECTRICAL IDENTIFICATION

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

- A. Extent of electrical identification work is indicated by drawings and schedules.
- B. Types of electrical identification work specified in this section include the following:
 - 1. Electrical Power, Control and Communication Conductors, and Danger Signs.
 - 2. Refer to appropriate section "Identification System", for equipment and system nameplates, and performance data, not work of this section.

PART 2 – PRODUCTS

2.01 Acceptable Manufacturers.

- A. Subject to compliance with requirements, provide electrical identification products of one of the following (for each type of marker):
 - 1. W.H. Brady Co.
 - 2. Ideal Industries, Inc.

2.02 Cable/Conductor Identification Bands.

- A. General. Provide manufacturer's standard vinyl-cloth, self-adhesive cable/conductor markers of wrap-around type, either pre-numbers plastic coated/type, or write-on type with clear plastic self-adhesive cover flap; numbered to show circuit identification.

PART 3 – EXECUTION

3.01 EQUIPMENT/SYSTEM IDENTIFICATION

- A. General.
 - 1. Install engraved plastic-laminate sign on each major unit of electrical equipment in building; including central or master unit of each electrical system including communication/control/signal systems, unless unit is specified, with its own identification. Provide single line text, one-half inch (1/2") high lettering on one and a half foot (1-1/2') high sign, and white lettering in black field. Provide text matching terminology and numbering of the contract documents and shop drawings. Provide signs for each unit of the following categories or electrical work.

2. Panelboards, electrical cabinets, and enclosures. Access panel/doors to electrical facilities; major electrical switchgear; motor control centers and transformers.
3. Install signs at locations indicated or, where not otherwise indicated, at location for best convenience of viewing without interference with operation and maintenance of equipment. Secure to substrate with fasteners, except use adhesive where fasteners should not or cannot penetrate substrate.

END OF SECTION

SECTION 26 27 26 WIRING DEVICES

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

- A. The extent of wiring device work is indicated by drawings and schedules. Wiring devices are defined as single discrete units of electrical distribution systems which are intended to carry but not utilize electric energy.
- B. Types of electrical wiring devices in this section include the following:
 - 1. Receptacles.
 - 2. Switch.
 - 3. Wall Plates.
 - 4. Plugs.
 - 5. Plug Connectors.

PART 2 – QUALITY ASSURANCE

2.01 COMPLIANCE.

- A. Comply with NEC as applicable to construction and installation of electrical wiring devices.
- B. UL Compliance and Labeling. Provide electrical wiring devices which have been UL listed and labeled.
- C. NEMA Compliance. Comply with NEMA standards for general and specific purpose wiring devices.
- D. Submittals.
 - 1. Product Data. Submit manufacturer's data on electrical wiring devices.

PART 3 – PRODUCTS

3.01 MANUFACTURER

- A. Subject to compliance with requirements, provide products of one of the following (for each type of wiring device):
 - 1. Harvey Hubbell, Inc.
 - 2. Levington Mfg. Co.

B. Fabricated Wiring Devices

1. General. Provide factory-fabricated wiring devices, in types colors, and electrical rating, for applications indicated, and complies with NEMA Standards Pub. No. WD1. Where types and grades are not indicated, provide proper selection as determined by installer to fulfill wiring requirements, and complying with NEC and NEMA standards for wiring devices. Provide ivory color devices and wall plates except as otherwise selected; color selection to be verified by CONTRACTOR with ENGINEER.

3.02 RECEPTACLES

- A. Heavy-Duty Duplex. Provide heavy-duty duplex receptacles, two (2)-pole, three (3)-wire grounding, 20-amperes, 125-volts, with metal plaster ears, back wiring, NEMA configuration 5-20R, unless otherwise indicated.
- B. Ground Fault Interrupter. Provide general-duty duplex receptacles, ground-fault circuit interrupters; feed-thru type, capable of protecting connected downstream receptacles on single circuit, grounding type UL-rated Class A, Group 1, 20-amperes rating, 120-volts, 60 Hz; with solid-state ground-fault sensing and signaling; with five (5) milliamperes ground-fault trip level; equip with 20-ampere plug configuration, NEMA 5-20R.

3.03 PLUGS AND CONNECTORS

- A. Plugs. Provide 15-amperes, 125-volts, 3-wire grounding, armored cap plugs, parallel blades with cord clamp, and four-tenths inch (0.4") cord hole; match NEMA configuration with power sources.
- B. Connectors. Provide 15-amperes, 125-volts, bakelite-body armored connectors three (3)-wire grounding, parallel blades, double wipe contact, with cord clamp, and four-tenths inch (0.4") cord hole, match NEMA configuration to mating plugs.

3.04 SWITCHES

- A. Snap. Provide general-duty flush single-pole toggle switches, 20-ampere, 277-volts AC, with mounting yoke insulated from mechanism, equip with plaster ears, switch handle, and side wired screw terminals.

PART 4 – WIRING DEVICES

4.01 INSTALLATION

- A. Install wiring devices as indicated, in compliance with manufacturer's written instructions, applicable requirements of NEC and NECA's "Standard of Installation", and in accordance with recognized industry practices to fulfill project requirements.
- B. Coordinate with other work; include painting, electrical box, and wiring work, necessary to interface installation of wiring devices with other work.

- C. Install wiring devices only in electrical boxes which are clean, free from excess building materials, dirt, and debris.
- D. Install galvanized steel wall plates in unfinished spaces.
- E. Delay installation of wiring devices until wiring work is completed.
- F. Delay installation of wall plates until after painting work is completed.

4.02 GROUNDING.

- A. Provide electrically continuous, tight grounding connections for wiring devices, unless otherwise indicated.

4.03 TESTING.

- A. Prior to energizing circuitry, test wiring devices for electrical continuity and proper polarity connections. After energizing circuitry, test wiring devices to demonstrate compliance with requirements.

END OF SECTION

SECTION 26 29 23

VARIABLE-FREQUENCY MOTOR CONTROLLERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes separately enclosed, preassembled, combination VFCs, rated 600 V and less, for speed control of three-phase, squirrel-cage induction motors.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type and rating of VFC indicated.
 - 1. Include dimensions and finishes for VFCs.
 - 2. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.
- B. Shop Drawings: For each VFC indicated.
 - 1. Include mounting and attachment details.
 - 2. Include details of equipment assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 - 3. Include diagrams for power, signal, and control wiring.

1.4 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Floor plans, drawn to scale, showing dimensioned layout on which, the following items are shown and coordinated with each other, using input from installers of the items involved:
 - 1. Required working clearances and required area above and around VFCs.
 - 2. Show VFC layout and relationships between electrical components and adjacent structural and mechanical elements.
 - 3. Show support locations, type of support, and weight on each support.
 - 4. Indicate field measurements.
- B. Product Certificates: For each VFC from manufacturer.

- C. Harmonic Analysis Report: Provide Project-specific calculations and manufacturer's statement of compliance with IEEE 519.
- D. Source quality-control reports.
- E. Field quality-control reports.
- F. Sample Warranty: For special warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For VFCs to include in emergency, operation, and maintenance manuals.
 - 1. In addition to items specified in Section 017823 "Operation and Maintenance Data," include the following:
 - a. Manufacturer's written instructions for setting field-adjustable overload relays.
 - b. Manufacturer's written instructions for testing, adjusting, and reprogramming microprocessor control modules.
 - c. Manufacturer's written instructions for setting field-adjustable timers, controls, and status and alarm points.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Power Fuses: Equal to 10 percent of quantity installed for each size and type, but no fewer than three of each size and type.
 - 2. Control Power Fuses: Equal to 10 percent of quantity installed for each size and type, but no fewer than two of each size and type.
 - 3. Indicating Lights: Two of each type and color installed.
 - 4. Auxiliary Contacts: Furnish one spare(s) for each size and type of magnetic controller installed.
 - 5. Power Contacts: Furnish three spares for each size and type of magnetic contactor installed.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. If stored in space that is not permanently enclosed and air conditioned, remove loose packing and flammable materials from inside controllers and install temporary electric heating, with at least 250 W per controller.
- B. Product Selection for Restricted Space: Drawings indicate maximum dimensions for VFCs, including clearances between VFCs, and adjacent surfaces and other items.

1.8 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace VFCs that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period: Five years from date of Substantial Completion.

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. Danfoss Inc; Danfoss Drives Div.
 - 2. Rockwell Automation, Inc; Allen-Bradley Brand.
 - 3. Yaskawa Electric America, Inc.

2.2 SYSTEM DESCRIPTION

- A. General Requirements for VFCs:
 - 1. VFCs and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
 - 2. Comply with NEMA ICS 7, NEMA ICS 61800-2, and UL 508A.
- B. Application: Constant torque and variable torque <Insert application>.
- C. VFC Description: Variable-frequency motor controller, consisting of power converter that employs pulse-width-modulated inverter, factory built and tested in an enclosure, with integral disconnecting means and overcurrent and overload protection; listed and labeled by an NRTL as a complete unit; arranged to provide self-protection, protection, and variable-speed control of one or more three-phase induction motors by adjusting output voltage and frequency.
 - 1. Units suitable for operation of inverter-duty motors as defined by NEMA MG 1, Section IV, Part 31, "Definite-Purpose Inverter-Fed Polyphase Motors."
 - 2. Listed and labeled for integrated short-circuit current (withstand) rating by an NRTL acceptable to authorities having jurisdiction.
- D. Design and Rating: Match load type, such as fans, blowers, and pumps; and type of connection used between motor and load such as direct or through a power-transmission connection.
- E. Output Rating: Three phase; 10 to 60 Hz, with voltage proportional to frequency throughout voltage range; maximum voltage equals input voltage.
- F. Unit Operating Requirements:

1. Input AC Voltage Tolerance: Plus 10 and minus 10 percent of VFC input voltage rating.
 2. Input AC Voltage Unbalance: Not exceeding 3 percent.
 3. Input Frequency Tolerance: Plus or minus 3 percent of VFC frequency rating.
 4. Minimum Efficiency: 96 percent at 60 Hz, full load.
 5. Minimum Displacement Primary-Side Power Factor: 96 percent under any load or speed condition.
 6. Minimum Short-Circuit Current (Withstand) Rating: 22 kA.
 7. Stop Modes: Programmable; includes fast, free-wheel, and dc injection braking.
- G. Inverter Logic: Microprocessor based, 32 bit, isolated from all power circuits.
- H. Isolated Control Interface: Allows VFCs to follow remote-control signal over a minimum 40:1 speed range.
1. Signal: Electrical.
- I. Internal Adjustability Capabilities:
1. Minimum Speed: 5 to 25 percent of maximum rpm.
 2. Maximum Speed: 80 to 100 percent of maximum rpm.
 3. Acceleration: 0.1 to 999.9 seconds.
 4. Deceleration: 0.1 to 999.9 seconds.
 5. Current Limit: 30 to minimum of 150 percent of maximum rating.
- J. Self-Protection and Reliability Features:
1. Surge Suppression: Factory installed as an integral part of the VFC, complying with UL 1449 SPD, Type 1 or Type 2.
 2. Loss of Input Signal Protection: Selectable response strategy, including speed default to a percent of the most recent speed, a preset speed, or stop; with alarm.
 3. Under- and overvoltage trips.
 4. Inverter overcurrent trips.
 5. VFC and Motor-Overload/Overtemperature Protection: Microprocessor-based thermal protection system for monitoring VFCs and motor thermal characteristics, and for providing VFC overtemperature and motor-overload alarm and trip; settings selectable via the keypad.
 6. Critical frequency rejection, with three selectable, adjustable deadbands.
 7. Instantaneous line-to-line and line-to-ground overcurrent trips.
 8. Loss-of-phase protection.
 9. Reverse-phase protection.
 10. Short-circuit protection.
 11. Motor-overtemperature fault.
- K. Automatic Reset/Restart: Attempt three restarts after drive fault or on return of power after an interruption and before shutting down for manual reset or fault correction; adjustable delay time between restart attempts.

- L. Power-Interruption Protection: To prevent motor from re-energizing after a power interruption until motor has stopped, unless "Bidirectional Autospeed Search" feature is available and engaged.
- M. Torque Boost: Automatically varies starting and continuous torque to at least 1.5 times the minimum torque to ensure high-starting torque and increased torque at slow speeds.
- N. Motor Temperature Compensation at Slow Speeds: Adjustable current fall-back based on output frequency for temperature protection of self-cooled, fan-ventilated motors at slow speeds.

2.3 CONTROLS AND INDICATION

- A. Status Lights: Door-mounted LED indicators displaying the following conditions:
 - 1. Power on.
 - 2. Run.
 - 3. Overvoltage.
 - 4. Line fault.
 - 5. Overcurrent.
 - 6. External fault.
- B. Panel-Mounted Operator Station: Manufacturer's standard front-accessible, sealed keypad and plain-English-language digital display; allows complete programming, program copying, operating, monitoring, and diagnostic capability.
 - 1. Keypad: In addition to required programming and control keys, include keys for HAND, OFF, and AUTO modes.
 - 2. Security Access: Provide electronic security access to controls through identification and password with at least three levels of access: View only; view and operate; and view, operate, and service.
 - a. Control Authority: Supports at least four conditions: Off, local manual control at VFC, local automatic control at VFC, and automatic control through a remote source.
- C. Historical Logging Information and Displays:
 - 1. Real-time clock with current time and date.
 - 2. Running log of total power versus time.
 - 3. Total run time.
 - 4. Fault log, maintaining last four faults with time and date stamp for each.
- D. Indicating Devices: Digital display mounted flush in VFC door and connected to display VFC parameters including, but not limited to:
 - 1. Output frequency (Hz).
 - 2. Motor speed (rpm).
 - 3. Motor status (running, stop, fault).

4. Motor current (amperes).
5. Motor torque (percent).
6. Fault or alarming status (code).
7. PID feedback signal (percent).
8. DC-link voltage (V dc).
9. Set point frequency (Hz).
10. Motor output voltage (V ac).

E. Control Signal Interfaces:

1. Electric Input Signal Interface:
 - a. A minimum of two programmable analog inputs: 4- to 20-mA dc.
 - b. A minimum of six multifunction programmable digital inputs.
2. Remote Signal Inputs: Capability to accept any of the following speed-setting input signals from the BAS or other control systems:
 - a. 0- to 10-V dc.
 - b. 4- to 20-mA dc.
 - c. Potentiometer using up/down digital inputs.
 - d. Fixed frequencies using digital inputs.
3. Output Signal Interface: A minimum of one programmable analog output signal(s) (4- to 20-mA dc), which can be configured for any of the following:
 - a. Output frequency (Hz).
 - b. Output current (load).
 - c. DC-link voltage (V dc).
 - d. Motor torque (percent).
 - e. Motor speed (rpm).
 - f. Set point frequency (Hz).
4. Remote Indication Interface: A minimum of two programmable dry-circuit relay outputs (120-V ac, 1 A) for remote indication of the following:
 - a. Motor running.
 - b. Set point speed reached.
 - c. Fault and warning indication (overtemperature or overcurrent).
 - d. PID high- or low-speed limits reached.

F. PID Control Interface: Provides closed-loop set point, differential feedback control in response to dual feedback signals. Allows for closed-loop control of fans and pumps for pressure, flow, or temperature regulation.

1. Number of Loops: One.

2.4 LINE CONDITIONING AND FILTERING

- A. Input Line Conditioning: Based on the manufacturer's harmonic analysis study and report, provide input filtering, as required, to limit total demand (harmonic current)

distortion and total harmonic voltage demand at the defined point of common coupling to meet IEEE 519 recommendations.

2.5 OPTIONAL FEATURES

- A. Damper control circuit with end-of-travel feedback capability.
- B. Sleep Function: Senses a minimal deviation of a feedback signal and stops the motor. On an increase in speed-command signal deviation, VFC resumes normal operation.
- C. Motor Preheat Function: Preheats motor when idle to prevent moisture accumulation in the motor.
- D. Remote Indicating Circuit Terminals: Mode selection, controller status, and controller fault.
- E. Remote digital operator kit.
- F. Communication Port: RS-232 port, USB 2.0 port, or equivalent connection capable of connecting a printer and a notebook computer.

2.6 ENCLOSURES

- A. VFC Enclosures: NEMA 250, to comply with environmental conditions at installed location.
 - 1. Outdoor Locations: Type 4X.

2.7 ACCESSORIES

- A. General Requirements for Control-Circuit and Pilot Devices: NEMA ICS 5; factory installed in VFC enclosure cover unless otherwise indicated.
 - 1. Push Buttons: Covered.
 - 2. Pilot Lights: Push to test.
 - 3. Selector Switches: Rotary type.
- B. Reversible NC/NO bypass contactor auxiliary contact(s).
- C. Control Relays: Auxiliary and adjustable solid-state time-delay relays.
- D. Phase-Failure, Phase-Reversal, and Undervoltage and Overvoltage Relays: Solid-state sensing circuit with isolated output contacts for hard-wired connections. Provide adjustable undervoltage, overvoltage, and time-delay settings.
 - 1. Current Transformers: Continuous current rating, basic impulse insulating level (BIL) rating, burden, and accuracy class suitable for connected circuitry. Comply with IEEE C57.13.
- E. Supplemental Digital Meters:

1. Elapsed-time meter.
 2. Kilowatt meter.
 3. Kilowatt-hour meter.
- F. Breather and drain assemblies, to maintain interior pressure and release condensation in NEMA 250, Type 4X enclosures installed outdoors or in unconditioned interior spaces subject to humidity and temperature swings.
- G. Space heaters, with NC auxiliary contacts, to mitigate condensation in NEMA 250, Type 4X enclosures installed outdoors or in unconditioned interior spaces subject to humidity and temperature swings.
- H. Cooling Fan and Exhaust System: For NEMA 250, Type 4X; UL 508 component recognized: Supply fan, with stainless-steel intake and exhaust grills and filters; 120-V ac; obtained from integral CPT.
- I. Sun shields installed on fronts, sides, and tops of enclosures installed outdoors and subject to direct and extended sun exposure.
- J. Spare control-wiring terminal blocks; unwired.

2.8 SOURCE QUALITY CONTROL

- A. Testing: Test and inspect VFCs according to requirements in NEMA ICS 61800-2.
1. Test each VFC while connected to a motor that is comparable to that for which the VFC is rated.
 2. Verification of Performance: Rate VFCs according to operation of functions and features specified.
- B. VFCs will be considered defective if they do not pass tests and inspections.
- C. Prepare test and inspection reports.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas, surfaces, and substrates to receive VFCs, with Installer present, for compliance with requirements for installation tolerances, and other conditions affecting performance of the Work.
- B. Examine VFC before installation. Reject VFCs that are wet, moisture damaged, or mold damaged.
- C. Examine roughing-in for conduit systems to verify actual locations of conduit connections before VFC installation.

- D. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work
- E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Wall-Mounting Controllers: Install with tops at uniform height and with disconnect operating handles not higher than 79 inches (2000 mm) above finished floor, unless otherwise indicated, and by bolting units to wall or mounting on lightweight structural-steel channels bolted to wall.
- B. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from enclosures and components.
- C. Install fuses in each fusible-switch VFC.
- D. Install fuses in control circuits if not factory installed. Comply with requirements in Section 262813 "Fuses."
- E. Install heaters in thermal-overload relays. Select heaters based on actual nameplate full-load amperes after motors are installed.
- F. Install, connect, and fuse thermal-protector monitoring relays furnished with motor-driven equipment.
- G. Comply with NECA 1.

3.3 CONTROL WIRING INSTALLATION

- A. Install wiring between VFCs and remote devices. Comply with requirements in Section 260523 "Control-Voltage Electrical Power Cables."
- B. Bundle, train, and support wiring in enclosures.
- C. Connect selector switches and other automatic-control devices where applicable.
 - 1. Connect selector switches to bypass only those manual- and automatic-control devices that have no safety functions when switches are in manual-control position.
 - 2. Connect selector switches with control circuit in both manual and automatic positions for safety-type control devices such as low- and high-pressure cutouts, high-temperature cutouts, and motor-overload protectors.

3.4 IDENTIFICATION

- A. Identify VFCs, components, and control wiring. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

1. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs.
 2. Label each VFC with engraved nameplate.
 3. Label each enclosure-mounted control and pilot device.
- B. Operating Instructions: Frame printed operating instructions for VFCs, including control sequences and emergency procedures. Fabricate frame of finished metal, and cover instructions with clear acrylic plastic. Mount on front of VFC units.

3.5 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.
- B. Perform tests and inspections with the assistance of a factory-authorized service representative.
- C. Acceptance Testing Preparation:
1. Test insulation resistance for each VFC element, bus, component, connecting supply, feeder, and control circuit.
 2. Test continuity of each circuit.
- D. Tests and Inspections:
1. Inspect VFC, wiring, components, connections, and equipment installation.
 2. Test insulation resistance for each VFC element, component, connecting motor supply, feeder, and control circuits.
 3. Test continuity of each circuit.
 4. Verify that voltages at VFC locations are within 10 percent of motor nameplate rated voltages. If outside this range for any motor, notify Owner before starting the motor(s).
 5. Test each motor for proper phase rotation.
 6. Perform tests according to the Inspection and Test Procedures for Adjustable Speed Drives stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
 7. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
 8. Test and adjust controls, remote monitoring, and safeties. Replace damaged and malfunctioning controls and equipment.
- E. VFCs will be considered defective if they do not pass tests and inspections.
- F. Prepare test and inspection reports, including a certified report that identifies the VFC and describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations made after remedial action.

3.6 STARTUP SERVICE

- A. Engage a factory-authorized service representative to perform startup service.
 - 1. Complete installation and startup checks according to manufacturer's written instructions.

3.7 ADJUSTING

- A. Program microprocessors for required operational sequences, status indications, alarms, event recording, and display features. Clear events memory after final acceptance testing and prior to Substantial Completion.

3.8 PROTECTION

- A. Temporary Heating: Apply temporary heat to maintain temperature according to manufacturer's written instructions until controllers are ready to be energized and placed into service.
- B. Replace VFCs whose interiors have been exposed to water or other liquids prior to Substantial Completion.

3.9 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, reprogram, and maintain VFCs.

END OF SECTION

SECTION 26 32 13
ENGINE GENERATORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes packaged engine-generator sets for standby power supply with the following features:
 - 1. Diesel engine.
 - 2. Unit-mounted cooling system.
 - 3. Unit-mounted control and monitoring.
 - 4. Outdoor enclosure.
- B. Related Sections include the following:
 - 1. Section 263600 "Transfer Switches" for transfer switches including sensors and relays to initiate automatic-starting and -stopping signals for engine-generator sets.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of packaged engine generator indicated. Include rated capacities, operating characteristics, and furnished specialties and accessories. In addition, include the following:
 - 1. Thermal damage curve for generator.
 - 2. Time-current characteristic curves for generator protective device.
- B. Shop Drawings: Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 - 1. Dimensioned outline plan and elevation drawings of engine-generator set and other components specified.
 - 2. Vibration Isolation Base Details: Signed and sealed by a qualified professional engineer. Detail fabrication, including anchorages and attachments to structure and to supported equipment. Include base weights.
 - 3. Wiring Diagrams: Power, signal, and control wiring.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For manufacturer.
- B. Source quality-control test reports.
 - 1. Certified summary of prototype-unit test report.
 - 2. Certified Test Reports: For components and accessories that are equivalent, but not identical, to those tested on prototype unit.
 - 3. Certified Summary of Performance Tests: Certify compliance with specified requirement to meet performance criteria for sensitive loads.
 - 4. Report of factory test on units to be shipped for this Project, showing evidence of compliance with specified requirements.
 - 5. Report of sound generation.
 - 6. Report of exhaust emissions showing compliance with applicable regulations.
 - 7. Certified Torsional Vibration Compatibility: Comply with NFPA 110.
- C. Field quality-control test reports.
- D. Warranty: Special warranty specified in this Section.

1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For packaged engine generators to include in emergency, operation, and maintenance manuals. In addition to items specified in Section 017823 "Operation and Maintenance Data," include the following:
 - 1. List of tools and replacement items recommended to be stored at Project for ready access. Include part and drawing numbers, current unit prices, and source of supply.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Fuses: One for every 10 of each type and rating, but no fewer than one of each.
 - 2. Indicator Lamps: Two for every six of each type used, but no fewer than two of each.
 - 3. Filters: One set each of lubricating oil, fuel, and combustion-air filters.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
 - 1. Maintenance Proximity: Not more than four hours' normal travel time from Installer's place of business to Project site.

- B. Manufacturer Qualifications: A qualified manufacturer. Maintain, within 200 miles (321 km) of Project site, a service center capable of providing training, parts, and emergency maintenance repairs.
- C. Source Limitations: Obtain packaged generator sets and auxiliary components through one source from a single manufacturer.
- D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- E. Comply with ASME B15.1.
- F. Comply with NFPA 37.
- G. Comply with NFPA 99.
- H. Comply with NFPA 110 requirements for Level [1] [2] emergency power supply system.
- I. Comply with UL 2200.
- J. Engine Exhaust Emissions: Comply with applicable state and local government requirements.
- K. Noise Emission: Comply with applicable state and local government requirements for maximum noise level at adjacent property boundaries due to sound emitted by generator set including engine, engine exhaust, engine cooling-air intake and discharge, and other components of installation.

1.8 COORDINATION

- A. Coordinate size and location of concrete bases for package engine generators. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified with concrete.

1.9 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of packaged engine generators and associated auxiliary components that fail in materials or workmanship within specified warranty period.

- 1. Warranty Period: 2 years from date of Substantial Completion.

1.10 MAINTENANCE SERVICE

- A. Initial Maintenance Service: Beginning at Substantial Completion, provide 12 months' full maintenance by skilled employees of manufacturer's designated service organization. Include quarterly exercising to check for proper starting, load transfer, and running under load. Include routine preventive maintenance as recommended by

manufacturer and adjusting as required for proper operation. Provide parts and supplies same as those used in the manufacture and installation of original equipment.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- 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:

1. Caterpillar; Engine Div.
2. MTU/Detroit Diesel

2.2 ENGINE-GENERATOR SET

- A. Factory-assembled and -tested, engine-generator set.
- B. Mounting Frame: Maintain alignment of mounted components without depending on concrete foundation; and have lifting attachments.
1. Rigging Diagram: Inscribed on metal plate permanently attached to mounting frame to indicate location and lifting capacity of each lifting attachment and generator-set center of gravity.
- C. Capacities and Characteristics:
1. Power Output Ratings: Nominal ratings as indicated.
 2. Output Connections: Three-phase, four wire.
 3. Nameplates: For each major system component to identify manufacturer's name and address, and model and serial number of component.
- D. Generator-Set Performance:
1. Steady-State Voltage Operational Bandwidth: 3 percent of rated output voltage from no load to full load.
 2. Transient Voltage Performance: Not more than 20 percent variation for 50 percent step-load increase or decrease. Voltage shall recover and remain within the steady-state operating band within three seconds.
 3. Steady-State Frequency Operational Bandwidth: 0.5 percent of rated frequency from no load to full load.
 4. Steady-State Frequency Stability: When system is operating at any constant load within the rated load, there shall be no random speed variations outside the steady-state operational band and no hunting or surging of speed.
 5. Transient Frequency Performance: Less than 5 percent variation for 50 percent step-load increase or decrease. Frequency shall recover and remain within the steady-state operating band within five seconds.

6. Output Waveform: At no load, harmonic content measured line to line or line to neutral shall not exceed 5 percent total and 3 percent for single harmonics. Telephone influence factor, determined according to NEMA MG 1, shall not exceed 50 percent.
7. Sustained Short-Circuit Current: For a 3-phase, bolted short circuit at system output terminals, system shall supply a minimum of 250 percent of rated full-load current for not less than 10 seconds and then clear the fault automatically, without damage to generator system components.
8. Start Time: Comply with NFPA 110, Type 10, system requirements.

2.3 ENGINE

- A. Fuel: Fuel oil, Grade DF-2.
- B. Rated Engine Speed: 1800 rpm.
- C. Maximum Piston Speed for Four-Cycle Engines: 2250 fpm (11.4 m/s).
- D. Lubrication System: The following items are mounted on engine or skid:
 1. Filter and Strainer: Rated to remove 90 percent of particles 5 micrometers and smaller while passing full flow.
 2. Thermostatic Control Valve: Control flow in system to maintain optimum oil temperature. Unit shall be capable of full flow and is designed to be fail-safe.
 3. Crankcase Drain: Arranged for complete gravity drainage to an easily removable container with no disassembly and without use of pumps, siphons, special tools, or appliances.
- E. Engine Fuel System:
 1. Main Fuel Pump: Mounted on engine. Pump ensures adequate primary fuel flow under starting and load conditions.
 2. Relief-Bypass Valve: Automatically regulates pressure in fuel line and returns excess fuel to source.
- F. Coolant Jacket Heater: Electric-immersion type, factory installed in coolant jacket system. Comply with NFPA 110 requirements for Level 1 equipment for heater capacity.
- G. Governor: Adjustable isochronous, with speed sensing.
- H. Cooling System: Closed loop, liquid cooled, with radiator factory mounted on engine-generator-set mounting frame and integral engine-driven coolant pump.
 1. Coolant: Solution of 50 percent ethylene-glycol-based antifreeze and 50 percent water, with anticorrosion additives as recommended by engine manufacturer.
 2. Size of Radiator: Adequate to contain expansion of total system coolant from cold start to 110 percent load condition.

3. Expansion Tank: Constructed of welded steel plate and rated to withstand maximum closed-loop coolant system pressure for engine used. Equip with gage glass and petcock.
 4. Temperature Control: Self-contained, thermostatic-control valve modulates coolant flow automatically to maintain optimum constant coolant temperature as recommended by engine manufacturer.
 5. Coolant Hose: Flexible assembly with inside surface of nonporous rubber and outer covering of aging-, ultraviolet-, and abrasion-resistant fabric.
 - a. Rating: 50-psig (345-kPa) maximum working pressure with coolant at 180 deg F (82 deg C), and noncollapsible under vacuum.
 - b. End Fittings: Flanges or steel pipe nipples with clamps to suit piping and equipment connections.
- I. Muffler/Silencer: Critical type, sized as recommended by engine manufacturer and selected with exhaust piping system to not exceed engine manufacturer's engine backpressure requirements.
1. Minimum sound attenuation of 25 dB at 500 Hz.
 2. Sound level measured at a distance of 10 feet (3 m) from exhaust discharge after installation is complete shall be 85 dBA or less.
- J. Air-Intake Filter: Standard-duty, engine-mounted air cleaner with replaceable dry-filter element and "blocked filter" indicator.
- K. Starting System: 12-V electric, with negative ground.
1. Components: Sized so they will not be damaged during a full engine-cranking cycle with ambient temperature at maximum specified in Part 1 "Project Conditions" Article.
 2. Cranking Motor: Heavy-duty unit that automatically engages and releases from engine flywheel without binding.
 3. Cranking Cycle: As required by NFPA 110 for system level specified.
 4. Battery: Adequate capacity within ambient temperature range to provide specified cranking cycle at least three times without recharging.
 5. Battery Cable: Size as recommended by engine manufacturer for cable length indicated. Include required interconnecting conductors and connection accessories.
 6. Battery Compartment: Factory fabricated of metal with acid-resistant finish and thermal insulation. Thermostatically controlled heater shall be arranged to maintain battery above 10 deg C regardless of external ambient temperature within range specified in Part 1 "Project Conditions" Article. Include accessories required to support and fasten batteries in place.
 7. Battery-Charging Alternator: Factory mounted on engine with solid-state voltage regulation and 35-A minimum continuous rating.
 8. Battery Charger: Current-limiting, automatic-equalizing and float-charging type. Unit shall comply with UL 1236 and include the following features:
 - a. Operation: Equalizing-charging rate of 10 A shall be initiated automatically after battery has lost charge until an adjustable equalizing voltage is achieved at battery terminals. Unit shall then be automatically switched to

- a lower float-charging mode and shall continue to operate in that mode until battery is discharged again.
- b. Automatic Temperature Compensation: Adjust float and equalize voltages for variations in ambient temperature from minus 40 deg C to plus 60 deg C to prevent overcharging at high temperatures and undercharging at low temperatures.
- c. Automatic Voltage Regulation: Maintain constant output voltage regardless of input voltage variations up to plus or minus 10 percent.
- d. Ammeter and Voltmeter: Flush mounted in door. Meters shall indicate charging rates.
- e. Safety Functions: Sense abnormally low battery voltage and close contacts providing low battery voltage indication on control and monitoring panel. Sense high battery voltage and loss of ac input or dc output of battery charger. Either condition shall close contacts that provide a battery-charger malfunction indication at system control and monitoring panel.
- f. Enclosure and Mounting: NEMA 250, Type 1, wall-mounted cabinet.

2.4 FUEL OIL STORAGE

- A. Comply with NFPA 30.
- B. Day Tank: Comply with UL 142, freestanding, factory-fabricated fuel tank assembly, with integral, float-controlled transfer pump and the following features:
 - 1. Containment: Integral rupture basin with a capacity of 150 percent of nominal capacity of day tank.
 - a. Leak Detector: Locate in rupture basin and connect to provide audible and visual alarm in the event of day-tank leak.
 - 2. Tank Capacity: As recommended by engine manufacturer for an uninterrupted period of 4 hours' operation at 100 percent of rated power output of engine-generator system without being refilled.
 - 3. Pump Capacity: Exceeds maximum flow of fuel drawn by engine-mounted fuel supply pump at 110 percent of rated capacity, including fuel returned from engine.
 - 4. Low-Level Alarm Sensor: Liquid-level device operates alarm contacts at 25 percent of normal fuel level.
 - 5. High-Level Alarm Sensor: Liquid-level device operates alarm and redundant fuel shutoff contacts at midpoint between overflow level and 100 percent of normal fuel level.
 - 6. Piping Connections: Factory-installed fuel supply and return lines from tank to engine; local fuel fill, vent line, overflow line; and tank drain line with shutoff valve.
 - 7. Redundant High-Level Fuel Shutoff: Actuated by high-level alarm sensor in day tank to operate a separate motor device that disconnects day-tank pump motor. Sensor shall signal solenoid valve, located in fuel suction line between fuel storage tank and day tank, to close. Both actions shall remain in shutoff state

until manually reset. Shutoff action shall initiate an alarm signal to control panel but shall not shut down engine-generator set.

- C. Base-Mounted Fuel Oil Tank: Factory installed and piped, complying with UL 142 fuel oil tank. Features include the following:
 - 1. Tank level indicator.
 - 2. Capacity: Fuel for 48 hours' continuous operation at 100 percent rated power output.
 - 3. Vandal-resistant fill cap.
 - 4. Containment Provisions: Comply with requirements of authorities having jurisdiction.

2.5 CONTROL AND MONITORING

- A. Automatic Starting System Sequence of Operation: When mode-selector switch on the control and monitoring panel is in the automatic position, remote-control contacts in one or more separate automatic transfer switches initiate starting and stopping of generator set. When mode-selector switch is switched to the on position, generator set starts. The off position of same switch initiates generator-set shutdown. When generator set is running, specified system or equipment failures or derangements automatically shut down generator set and initiate alarms. Operation of a remote emergency-stop switch also shuts down generator set.
- B. Manual Starting System Sequence of Operation: Switching on-off switch on the generator control panel to the on position starts generator set. The off position of same switch initiates generator-set shutdown. When generator set is running, specified system or equipment failures or derangements automatically shut down generator set and initiate alarms. Operation of a remote emergency-stop switch also shuts down generator set.
- C. Configuration: Operating and safety indications, protective devices, basic system controls, and engine gages shall be grouped in a common control and monitoring panel mounted on the generator set. Mounting method shall isolate the control panel from generator-set vibration.
- D. Indicating and Protective Devices and Controls:
 - 1. AC voltmeter.
 - 2. AC ammeter.
 - 3. AC frequency meter.
 - 4. DC voltmeter (alternator battery charging).
 - 5. Engine-coolant temperature gage.
 - 6. Engine lubricating-oil pressure gage.
 - 7. Running-time meter.
 - 8. Ammeter-voltmeter, phase-selector switch(es).
 - 9. Generator-voltage adjusting rheostat.
 - 10. Start-stop switch.
 - 11. Overspeed shutdown device.
 - 12. Coolant high-temperature shutdown device.

13. Coolant low-level shutdown device.
 14. Oil low-pressure shutdown device.
 15. Fuel tank derangement alarm.
 16. Fuel tank high-level shutdown of fuel supply alarm.
 17. Generator overload.
- E. Supporting Items: Include sensors, transducers, terminals, relays, and other devices and include wiring required to support specified items. Locate sensors and other supporting items on engine or generator, unless otherwise indicated.
- F. Connection to Data Link: A separate terminal block, factory wired to Form C dry contacts, for each alarm and status indication is reserved for connections for data-link transmission of indications to remote data terminals.
- G. Common Remote Audible Alarm: Signal the occurrence of any events listed below without differentiating between event types. Connect so that after an alarm is silenced, clearing of initiating condition will reactivate alarm until silencing switch is reset.
1. Engine high-temperature shutdown.
 2. Lube-oil, low-pressure shutdown.
 3. Overspeed shutdown.
 4. Remote emergency-stop shutdown.
 5. Engine high-temperature prealarm.
 6. Lube-oil, low-pressure prealarm.
 7. Fuel tank, low-fuel level.
 8. Low coolant level.

2.6 GENERATOR OVERCURRENT AND FAULT PROTECTION

- A. Generator Circuit Breaker: Insulated-case, electronic-trip type; 100 percent rated; complying with UL 489.
1. Tripping Characteristics: Adjustable long-time and short-time delay and instantaneous.
 2. Trip Settings: Selected to coordinate with generator thermal damage curve.
 3. Shunt Trip: Connected to trip breaker when generator set is shut down by other protective devices.
 4. Mounting: Adjacent to or integrated with control and monitoring panel.
- B. Generator Protector: Microprocessor-based unit shall continuously monitor current level in each phase of generator output, integrate generator heating effect over time, and predict when thermal damage of alternator will occur. When signaled by generator protector or other generator-set protective devices, a shunt-trip device in the generator disconnect switch shall open the switch to disconnect the generator from load circuits. Protector shall perform the following functions:
1. Initiates a generator overload alarm when generator has operated at an overload equivalent to 110 percent of full-rated load for 60 seconds. Indication for this alarm is integrated with other generator-set malfunction alarms.

2. Under single or three-phase fault conditions, regulates generator to 300 percent of rated full-load current for up to 10 seconds.
 3. As overcurrent heating effect on the generator approaches the thermal damage point of the unit, protector switches the excitation system off, opens the generator disconnect device, and shuts down the generator set.
 4. Senses clearing of a fault by other overcurrent devices and controls recovery of rated voltage to avoid overshoot.
- C. Ground-Fault Indication: Comply with NFPA 70, "Emergency System" signals for ground-fault. Integrate ground-fault alarm indication with other generator-set alarm indications.

2.7 GENERATOR, EXCITER, AND VOLTAGE REGULATOR

- A. Comply with NEMA MG 1.
- B. Drive: Generator shaft shall be directly connected to engine shaft. Exciter shall be rotated integrally with generator rotor.
- C. Electrical Insulation: Class H or Class F.
- D. Stator-Winding Leads: Brought out to terminal box to permit future reconnection for other voltages if required.
- E. Construction shall prevent mechanical, electrical, and thermal damage due to vibration, overspeed up to 125 percent of rating, and heat during operation at 110 percent of rated capacity.
- F. Enclosure: Dripproof.
- G. Instrument Transformers: Mounted within generator enclosure.
- H. Voltage Regulator: Solid-state type, separate from exciter, providing performance as specified.
 1. Adjusting rheostat on control and monitoring panel shall provide plus or minus 5 percent adjustment of output-voltage operating band.
- I. Strip Heater: Thermostatically controlled unit arranged to maintain stator windings above dew point.
- J. Windings: Two-thirds pitch stator winding and fully linked amortisseur winding.
- K. Subtransient Reactance: 12 percent, maximum.

2.8 OUTDOOR GENERATOR-SET ENCLOSURE

- A. Description: Vandal-resistant, weatherproof steel housing, wind resistant up to 150 mph. Multiple panels shall be lockable and provide adequate access to components

requiring maintenance. Panels shall be removable by one person without tools. Instruments and control shall be mounted within enclosure.

- B. Engine Cooling Airflow through Enclosure: Maintain temperature rise of system components within required limits when unit operates at 110 percent of rated load for 2 hours with ambient temperature at top of range specified in system service conditions.
 - 1. Louvers: Fixed-engine, cooling-air inlet and discharge. Storm-proof and drainable louvers prevent entry of rain and snow.
 - 2. Automatic Dampers: At engine cooling-air inlet and discharge. Dampers shall be closed to reduce enclosure heat loss in cold weather when unit is not operating.
- C. Interior Lights with Switch: Factory-wired, vapor proof-type fixtures within housing; arranged to illuminate controls and accessible interior. Arrange for external electrical connection.
 - 1. AC lighting system and connection point for operation when remote source is available.
 - 2. DC lighting system for operation when remote source and generator are both unavailable.

2.9 VIBRATION ISOLATION DEVICES

- A. Elastomeric Isolator Pads: Oil- and water-resistant elastomer or natural rubber, arranged in single or multiple layers, molded with a nonslip pattern and galvanized-steel baseplates of sufficient stiffness for uniform loading over pad area, and factory cut to sizes that match requirements of supported equipment.

2.10 FINISHES

- A. Indoor and Outdoor Enclosures and Components: Manufacturer's standard finish over corrosion-resistant pretreatment and compatible primer.

2.11 SOURCE QUALITY CONTROL

- A. Prototype Testing: Factory test engine-generator set using same engine model, constructed of identical or equivalent components and equipped with identical or equivalent accessories.
 - 1. Tests: Comply with NFPA 110, Level 1 Energy Converters and with IEEE 115.
- B. Project-Specific Equipment Tests: Before shipment, factory test engine-generator set and other system components and accessories manufactured specifically for this Project. Perform tests at rated load and power factor. Include the following tests:
 - 1. Test components and accessories furnished with installed unit that are not identical to those on tested prototype to demonstrate compatibility and reliability.
 - 2. Full load run.

3. Maximum power.
4. Voltage regulation.
5. Transient and steady-state governing.
6. Single-step load pickup.
7. Safety shutdown.
8. Provide 14 days' advance notice of tests and opportunity for observation of tests by Owner's representative.
9. Report factory test results within 10 days of completion of test.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas, equipment bases, and conditions, with Installer present, for compliance with requirements for installation and other conditions affecting packaged engine-generator performance.
- B. Examine roughing-in of piping systems and electrical connections. Verify actual locations of connections before packaged engine-generator installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Comply with packaged engine-generator manufacturers' written installation and alignment instructions and with NFPA 110.
- B. Install packaged engine generator to provide access, without removing connections or accessories, for periodic maintenance.
- C. Install packaged engine generator with elastomeric isolator pads having a minimum deflection of 1 inch (25 mm) on 4-inch- (100-mm-) high concrete base. Secure sets to anchor bolts installed in concrete bases.
- D. Electrical Wiring: Install electrical devices furnished by equipment manufacturers but not specified to be factory mounted.

3.3 CONNECTIONS

- A. Piping installation requirements are specified in other Sections. Drawings indicate general arrangement of piping and specialties.
- B. Connect fuel, cooling-system, and exhaust-system piping adjacent to packaged engine generator to allow service and maintenance.
- C. Connect engine exhaust pipe to engine with flexible connector.
- D. Connect fuel piping to engines with a gate valve and union and flexible connector.

- E. Ground equipment according to Section 260526 "Grounding and Bonding for Electrical Systems."

3.4 IDENTIFICATION

- A. Identify system components according to Section 260553 "Identification for Electrical Systems."

3.5 FIELD QUALITY CONTROL

- A. Perform tests and inspections and prepare test reports.
 - 1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
- B. Tests and Inspections:
 - 1. Perform tests recommended by manufacturer and each electrical test and visual and mechanical inspection for "AC Generators and for Emergency Systems" specified in NETA Acceptance Testing Specification. Certify compliance with test parameters.
 - 2. NFPA 110 Acceptance Tests: Perform tests required by NFPA 110 that are additional to those specified here including, but not limited to, single-step full-load pickup test.
 - 3. Battery Tests: Equalize charging of battery cells according to manufacturer's written instructions. Record individual cell voltages.
 - a. Measure charging voltage and voltages between available battery terminals for full-charging and float-charging conditions. Check electrolyte level and specific gravity under both conditions.
 - b. Test for contact integrity of all connectors. Perform an integrity load test and a capacity load test for the battery.
 - c. Verify acceptance of charge for each element of the battery after discharge.
 - d. Verify that measurements are within manufacturer's specifications.
 - 4. Battery-Charger Tests: Verify specified rates of charge for both equalizing and float-charging conditions.
 - 5. System Integrity Tests: Methodically verify proper installation, connection, and integrity of each element of engine-generator system before and during system operation. Check for air, exhaust, and fluid leaks.
 - 6. Exhaust-System Back-Pressure Test: Use a manometer with a scale exceeding 40-inch wg (120 kPa). Connect to exhaust line close to engine exhaust manifold. Verify that back pressure at full-rated load is within manufacturer's written allowable limits for the engine.
 - 7. Exhaust Emissions Test: Comply with applicable government test criteria.

8. Voltage and Frequency Transient Stability Tests: Use recording oscilloscope to measure voltage and frequency transients for 50 and 100 percent step-load increases and decreases and verify that performance is as specified.
 9. Harmonic-Content Tests: Measure harmonic content of output voltage under 25 percent and at 100 percent of rated linear load. Verify that harmonic content is within specified limits.
 10. Noise Level Tests: Measure A-weighted level of noise emanating from generator-set installation, including engine exhaust and cooling-air intake and discharge, at four locations on the property line, and compare measured levels with required values.
- C. Coordinate tests with tests for transfer switches and run them concurrently.
 - D. Test instruments shall have been calibrated within the last 12 months, traceable to standards of NIST, and adequate for making positive observation of test results. Make calibration records available for examination on request.
 - E. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
 - F. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.
 - G. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
 - H. Remove and replace malfunctioning units and retest as specified above.
 - I. Report results of tests and inspections in writing. Record adjustable relay settings and measured insulation resistances, time delays, and other values and observations. Attach a label or tag to each tested component indicating satisfactory completion of tests.

3.6 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain packaged engine generators.

END OF SECTION

SECTION 26 36 00
TRANSFER SWITCHES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes transfer switches rated 600 V and less, including the following:
 - 1. Automatic transfer switches.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include rated capacities, weights, operating characteristics, furnished specialties, and accessories.
- B. Shop Drawings: Dimensioned plans, elevations, sections, and details showing minimum clearances, conductor entry provisions, gutter space, installed features and devices, and material lists for each switch specified.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For manufacturer.
- B. Field quality-control reports.

1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For each type of product to include in emergency, operation, and maintenance manuals. In addition to items specified in Section 017823 "Operation and Maintenance Data," include the following:
 - 1. Features and operating sequences, both automatic and manual.
 - 2. List of all factory settings of relays; provide relay-setting and calibration instructions, including software, where applicable.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Maintain a service center capable of providing training, parts, and emergency maintenance repairs within a response period of less than eight hours from time of notification.
- B. Source Limitations: Obtain automatic transfer switches through one source from a single manufacturer.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- D. Comply with NEMA ICS 1.
- E. Comply with NFPA 99.
- F. Comply with NFPA 110.
- G. Comply with UL 1008 unless requirements of these Specifications are stricter.

1.7 COORDINATION

- A. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified in Section 033000 "Cast-in-Place Concrete."

PART 2 - PRODUCTS

2.1 MANUFACTURED UNITS

- A. Automatic Transfer Switches:
 - 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. Caterpillar; Engine Div.
 - b. Emerson; ASCO Power Technologies, LP.
 - c. MTU / Detroit Diesel.

2.2 GENERAL TRANSFER-SWITCH PRODUCT REQUIREMENTS

- A. Indicated Current Ratings: Apply as defined in UL 1008 for continuous loading and total system transfer, including tungsten filament lamp loads not exceeding 30 percent of switch ampere rating, unless otherwise indicated.

- B. Tested Fault-Current Closing and Withstand Ratings: Adequate for duty imposed by protective devices at installation locations in Project under the fault conditions indicated, based on testing according to UL 1008.
 - 1. Where transfer switch includes internal fault-current protection, rating of switch and trip unit combination shall exceed indicated fault-current value at installation location.
- C. Solid-State Controls: Repetitive accuracy of all settings shall be plus or minus 2 percent or better over an operating temperature range of minus 20 to plus 70 deg C.
- D. Resistance to Damage by Voltage Transients: Components shall meet or exceed voltage-surge withstand capability requirements when tested according to IEEE C62.41. Components shall meet or exceed voltage-impulse withstand test of NEMA ICS 1.
- E. Electrical Operation: Accomplish by a nonfused, momentarily energized solenoid or electric-motor-operated mechanism, mechanically and electrically interlocked in both directions.
- F. Switch Characteristics: Designed for continuous-duty repetitive transfer of full-rated current between active power sources.
 - 1. Switch Action: Double throw; mechanically held in both directions.
 - 2. Contacts: Silver composition or silver alloy for load-current switching. Conventional automatic transfer-switch units, rated 225 A and higher, shall have separate arcing contacts.
- G. Neutral Terminal: Solid and fully rated, unless otherwise indicated.
- H. Heater: Equip switches exposed to outdoor temperatures and humidity, and other units indicated, with an internal heater. Provide thermostat within enclosure to control heater.
- I. Battery Charger: For generator starting batteries.
 - 1. Float type rated 10 A.
 - 2. Ammeter to display charging current.
 - 3. Fused ac inputs and dc outputs.
- J. Factory Wiring: Train and bundle factory wiring and label, consistent with Shop Drawings, either by color-code or by numbered or lettered wire and cable tape markers at terminations. Color-coding and wire and cable tape markers are specified in Section 260553 "Identification for Electrical Systems."
 - 1. Designated Terminals: Pressure type, suitable for types and sizes of field wiring indicated.
 - 2. Power-Terminal Arrangement and Field-Wiring Space: Suitable for top, side, or bottom entrance of feeder conductors as indicated.
 - 3. Control Wiring: Equipped with lugs suitable for connection to terminal strips.

- K. Enclosures: General-purpose NEMA 250, Type 3R, complying with NEMA ICS 6 and UL 508, unless otherwise indicated.

2.3 AUTOMATIC TRANSFER SWITCHES

- A. Comply with Level 1 equipment according to NFPA 110.
- B. Switching Arrangement: Double-throw type, incapable of pauses or intermediate position stops during normal functioning, unless otherwise indicated.
- C. Manual Switch Operation: Unloaded. Control circuit automatically disconnects from electrical operator during manual operation.
- D. Transfer Switches Based on Molded-Case-Switch Components: Comply with NEMA AB 1, UL 489, and UL 869A.
- E. Automatic Transfer-Switch Features:
 - 1. Undervoltage Sensing for Each Phase of Normal Source: Sense low phase-to-ground voltage on each phase. Pickup voltage shall be adjustable from 85 to 100 percent of nominal, and dropout voltage is adjustable from 75 to 98 percent of pickup value. Factory set for pickup at 90 percent and dropout at 85 percent.
 - 2. Adjustable Time Delay: For override of normal-source voltage sensing to delay transfer and engine start signals. Adjustable from zero to six seconds, and factory set for one second.
 - 3. Voltage/Frequency Lockout Relay: Prevent premature transfer to generator. Pickup voltage shall be adjustable from 85 to 100 percent of nominal. Factory set for pickup at 90 percent. Pickup frequency shall be adjustable from 90 to 100 percent of nominal. Factory set for pickup at 95 percent.
 - 4. Time Delay for Retransfer to Normal Source: Adjustable from 0 to 30 minutes, and factory set for 10 minutes to automatically defeat delay on loss of voltage or sustained undervoltage of emergency source, provided normal supply has been restored.
 - 5. Test Switch: Simulate normal-source failure.
 - 6. Switch-Position Pilot Lights: Indicate source to which load is connected.
 - 7. Source-Available Indicating Lights: Supervise sources via transfer-switch normal- and emergency-source sensing circuits.
 - a. Normal Power Supervision: Green light with nameplate engraved "Normal Source Available."
 - b. Emergency Power Supervision: Red light with nameplate engraved "Emergency Source Available."
 - 8. Unassigned Auxiliary Contacts: Two normally open, single-pole, double-throw contacts for each switch position, rated 10 A at 240-V ac.
 - 9. Transfer Override Switch: Overrides automatic retransfer control so automatic transfer switch will remain connected to emergency power source regardless of condition of normal source. Pilot light indicates override status.
 - 10. Engine Starting Contacts: One isolated and normally closed, and one isolated and normally open; rated 10 A at 32-V dc minimum.

11. Engine Shutdown Contacts: Time delay adjustable from zero to five minutes, and factory set for five minutes. Contacts shall initiate shutdown at remote engine-generator controls after retransfer of load to normal source.
12. Engine-Generator Exerciser: Solid-state, programmable-time switch starts engine generator and transfers load to it from normal source for a preset time, then retransfers and shuts down engine after a preset cool-down period. Initiates exercise cycle at preset intervals adjustable from 7 to 30 days. Running periods are adjustable from 10 to 30 minutes. Factory settings are for 7-day exercise cycle, 20-minute running period, and 5-minute cool-down period. Exerciser features include the following:
 - a. Exerciser Transfer Selector Switch: Permits selection of exercise with and without load transfer.
 - b. Push-button programming control with digital display of settings.
 - c. Integral battery operation of time switch when normal control power is not available.

2.4 SOURCE QUALITY CONTROL

- A. Factory test and inspect components, assembled switches, and associated equipment. Ensure proper operation. Check transfer time and voltage, frequency, and time-delay settings for compliance with specified requirements. Perform dielectric strength test complying with NEMA ICS 1.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Floor-Mounting Switch: Anchor to floor by bolting.
 1. Concrete Bases: 4 inches (100 mm) high, reinforced, with chamfered edges. Extend base no more than 4 inches (100 mm) in all directions beyond the maximum dimensions of switch, unless otherwise indicated or unless required for seismic support. Construct concrete bases according to Section 260529 "Hangers and Supports for Electrical Systems."
- B. Identify components according to Section 260553 "Identification for Electrical Systems."
- C. Set field-adjustable intervals and delays, relays, and engine exerciser clock.

3.2 CONNECTIONS

- A. Ground equipment according to Section 260526 "Grounding and Bonding for Electrical Systems."

3.3 FIELD QUALITY CONTROL

- A. Perform the following tests and inspections with the assistance of a factory-authorized service representative:
 - 1. After installing equipment and after electrical circuitry has been energized, test for compliance with requirements.
 - 2. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
 - 3. Measure insulation resistance phase-to-phase and phase-to-ground with insulation-resistance tester. Include external annunciation and control circuits. Use test voltages and procedure recommended by manufacturer. Comply with manufacturer's specified minimum resistance.
 - a. Check for electrical continuity of circuits and for short circuits.
 - b. Inspect for physical damage, proper installation and connection, and integrity of barriers, covers, and safety features.
 - c. Verify that manual transfer warnings are properly placed.
 - d. Perform manual transfer operation.
 - 4. After energizing circuits, demonstrate interlocking sequence and operational function for each switch at least three times.
 - a. Simulate power failures of normal source to automatic transfer switches and of emergency source with normal source available.
- B. Coordinate tests with tests of generator and run them concurrently.
- C. Report results of tests and inspections in writing. Record adjustable relay settings and measured insulation and contact resistances and time delays. Attach a label or tag to each tested component indicating satisfactory completion of tests.
- D. Remove and replace malfunctioning units and retest as specified above.
- E. Prepare test and inspection reports.

3.4 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain transfer switches and related equipment as specified below. Refer to Section 017900 "Demonstration and Training."
- B. Coordinate this training with that for generator equipment.

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 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 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 (0.10') above or below the established grade; in other areas, the finished grade shall be not more than 0.15 foot (0.15') 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 inches (6") 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.

3.02 EMBANKMENT

- A. On hillsides in which the existing slope is steeper than four (4) to one (1), 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 inches (9") 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 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 inches (6") in depth and thoroughly compacted by mechanical tampers.
- D. Where rock only is available, it shall be placed in loose layers not exceeding two feet (2') 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 inches (8") 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 inches (8") 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 AND FILL

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 be 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 12 inches (12") 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 12 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 12 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 12 inches (12") nor more than 16 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 ninety degrees (90°) of the circumference of the pipe, i.e., so that one-fourth (1/4) 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 ninety degrees (90°) 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 20 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 stones 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 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 extent 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 two hundred 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 – PRODUCTS

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 (Divisions II and III) and 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 OWNER/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/ENGINEER or their authorized representative.

PART 2 – MATERIALS

2.01 SUBBASE

- A. 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

- A. 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 OWNER/ENGINEER and supplied by the CONTRACTOR.
- B. The limerock base material shall have a minimum of 70 percent (70%) carbonates, calcium, and magnesium and no more than three percent (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 be large amounts of extremely hard pieces of clay pockets.
- C. 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 “FDOT Standards and Specifications for Road and Bridge Construction”, latest edition, 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 OWNER/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 (1") greater than the base course thickness shown on the plans.
- D. Asphalt base courses shall have a bituminous material content of asphalt cement, viscosity Grade AC-20 or AC-30, meeting the requirements of "FDOT Standards and Specifications for Road and Bridge Construction", latest 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 OWNER/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 OWNER/ENGINEER.). The constituents of the mixture shall be combined to produce a mixture having Marshal properties within the limits of Appropriate Table of the "FDOT Standards and Specifications for Road and Bridge Construction", latest edition.
- E. Coquina shell used in the base course shall have an organic material of not greater than 0.5 percent (0.5%) or contain significant quantities of sand or other impurities which would prevent bonding. At least 97 percent (97%) of the coquina used shall pass through a three and one-half inch (3-1/2") ring.
- F. Recycled concrete aggregate used in the base course shall conform to Appropriate Section, graded aggregate base, of the latest revision of the "FDOT 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 SS-I, CSS-I, SS-1H or CSS-1H diluted in equal proportion with water or other types and grades of bituminous material specified or approved by the OWNER/ENGINEER.
- C. The tack coat shall be RA-500 heated to a temperature of 250° to 300°F for undiluted Emulsified Asphalt, Grades RS-1 or RS-2 heated to a temperature of 140° to 180°F.
- D. A cover material must be placed on the prime coat to ensure 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 SP-9.5 Super Pave asphaltic concrete shall be used as the paving material, unless otherwise indicated.

- B. The asphaltic mixture shall be transported to the site at a temperature of 300° to 350°F. Mixtures that have cooled below 270°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 (2) 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 OWNER/ENGINEER.

PART 3 – EXECUTION

3.01 SUBBASE

- A. Prior to installation of base material, the area shall be graded to within plus or minus 0.2 feet ($\pm 0.2'$), and soft, spongy, or mucky material removed. Sufficient stabilizing material shall be cut in to achieve a Florida Bearing Value (FBV) in excess of 75 psi or limerock bearing ratio (LBR) greater than 40 pounds at a minimum density of 98 percent (98%) of a maximum density as defined and measured in AASHTO T 180 (Modified Proctor), to a six inch (6") minimum depth.
- B. Density test for subbase materials shall be taken at 300 foot (300') intervals and around structures as required. If compaction procedures allow testing requirements may be reduced at the OWNER/ENGINEER's discretion.

3.02 BASE COURSE.

- A. 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 OWNER/ENGINEER. Any deviations not approved by the OWNER/ENGINEER shall be repaired to the satisfaction of the OWNER/ENGINEER at no expense to the OWNER.
- B. 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 (6"), the base shall be constructed in two (2) courses. The thickness of the first course shall be one-half (1/2) 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 (2) courses 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 98 percent (98%) of maximum density as determined by AASHTO T 180. Density tests shall be taken in at least three (3) 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 OWNER/ENGINEER.
3. The finished surface of the base course shall be checked with a template cut to the required crown and a 15-foot (15') straight edge laid parallel to the center line of the road. All irregularities greater than one-quarter inch (1/4") shall be corrected to the satisfaction of the OWNER/ENGINEER.
4. The base material shall extend at least 12 inches (12") outside the edge of the finished paved surface, unless otherwise indicated. Thickness of the base shall be measured at 200 foot (200') intervals at various points in the cross section. Where the compacted thickness is deficient by one-half inch (1/2") or more, the CONTRACTOR shall correct the deficiency by scarifying and adding rock for a distance of 100 feet (100') 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 top half of the base does not exceed 90 percent (90%) of the optimum moisture of the base material.

C. 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 60 minutes after the cement has been applied. Processing may be to full depth in one (1) 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 percent (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 (6").

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 two percent (2%) less than the specified optimum moisture content during finishing operations. The finished surface shall be smooth, dense, and 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 (15') straight edge. All irregularities greater than one-quarter inch (1/4") shall be corrected to the satisfaction of the OWNER/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 0.15 to 0.20 gallons per square yard; or a mixture of emulsified asphalt and water applied at a rate of 0.20 to 0.25 gallons per square yard. If the OWNER/ENGINEER deems it necessary, the surface shall be sanded using 10 pounds of clean sand per yard.

D. Asphalt Base Course

1. Asphalt base courses shall be applied in accordance with "FDOT Standards and Specifications for Road and Bridge Construction", latest edition, appropriate section. The job mix formula approved for the project shall be used. Any deviation from the approved mix must be submitted to the OWNER/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 40°F 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 string line method, with the exception of areas adjacent to curb and gutter or other true edges. The temperature of the mix shall be between 300° and 350°F. 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.

E. Recycled Concrete Base Course

1. Recycled concrete base course shall be transported, spread compacted and finished per Appropriate Section, of the latest revision of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

2. The depth of all layers shall be checked every 50 feet (50'). 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.

F. Compaction.

1. After the asphalt mixture has been spread to the proper lines, grades, and cross sections, compaction operations may begin. The CONTRACTOR shall establish rolling procedures and submit his sequence of compaction operations to the OWNER/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 (30') at various locations in the cross section. Additional testing around manholes or other structures may be required.
3. Testing and density requirements shall not apply to the following construction activities: Asphalt patching courses, leveling and intermediate course less than one inch (1") thick, overbuild courses less than one-inch thick and open graded friction courses.

G. 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 (3) 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 (15') straight edge. All irregularities greater than one-quarter inch (1/4") shall be corrected to the satisfaction of the OWNER/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 SP-9.5 Super Pave Asphaltic Concrete. A job mix formula shall be submitted to the OWNER/ENGINEER for approval at least two (2) 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 OWNER/ENGINEER. The temperature shall be at least 40°F and rising. No paving operations will be permitted if it is raining or rain is imminent. The mix shall be between 270° and 350°F.
- 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 string line method. The depth of each layer shall be checked every 50 feet (50').
- D. The mixture shall be compacted to its final depth, no less than one and one-quarter inch (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 six inches (6") to 12 inches (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 (15') rolling straight edge. Any irregularities shall be repaired to the satisfaction of the OWNER/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 OWNER/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 31 13
CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. This Section includes furnishing and installing the chain link fence as shown on the Drawings and as specified.

1.02 QUALITY ASSURANCE

- A. Manufacturer. A company specializing in commercial quality chain link fencing with a minimum of two years experience.

1.03 SUBMITTALS

- A. Submit layout.
- B. Submit samples if requested by the Engineer.

PART 2 - MATERIALS AND EQUIPMENT

2.01 MATERIALS

- A. Fabric. No. 9 gage (0.148-inch) steel wires, 2-inch mesh, with top and bottom selvages twisted and barbed. Furnish one-piece fabric width.
 - 1. Select fabric finish to be used for this product
 - 2. Coordinate with tension wire and barbed wire
- B. Fabric finish shall be galvanized conforming to ASTM A392, Class II, galvanized after weaving, with a minimum weight of 2.0 oz. per square foot of wire surface.
- C. Framework. Galvanized steel, ASTM A120, with not less than 1.8 oz. zinc per sq. ft.
- D. Hardware and Accessories. Galvanized, ASTM A153, with zinc weights as per Table 1.

2.02 FRAMING AND ACCESSORIES

- A. End, Corner and Pull Posts. Minimum sizes and weights as follows:
 - 1. Up to 6-foot fabric height, 2.875-inch OD pipe, 5.79 lbs. per lin. ft.
- B. Line Posts. Space 10-foot o.c. maximum, unless otherwise shown, of following minimum sizes and weights.

1. Up to 6-foot fabric height, 2.375-inch OD steel pipe. 3.65 lbs. per lin. ft.
- C. Gate Posts. Furnish posts for supporting single gate leaf for nominal gate widths as follows:
1. Up to 6-feet in width, 2.875-inch OD steel pipe.
 2. From 6-feet up to 13-feet in width, 4.00-inch OD steel pipe.
 3. From 13-feet up to 18-feet in width, 6.625-inch OD steel pipe.
 4. Over 18-feet in width, 8.625-inch OD steel pipe.
- D. Top Rail. 1-5/8-inch OD pipe, manufacturer's longest lengths, with expansion type couplings, approximately 6-inches long, for each joint. Provide fittings for attaching top rail securely to each gate, corner, pull, and end post.
- E. Post Brace Assembly. Manufacturer's standard adjustable brace at gate posts and at both sides of corner and pull posts, with horizontal brace located at mid-height of fabric.
1. Use 1-5/8-inch OD pipe for horizontal brace and 3/8-inch diameter adjustable diagonal truss rod.
- F. Post Tops. Weathertight closure cap (for tubular posts,) one cap for each post.
1. Furnish caps with openings to permit passage of top rail and arms to accept barbed wire. Caps shall be set screw retained.
- G. Stretcher Bars. One piece lengths equal to full height of fabric, galvanized, with minimum cross-section of 3/16-inch x 3/4-inch. Provide one stretcher bar for each gate and end post, and two for each corner and pull post, except where fabric is integrally woven into post.
- H. Stretcher Bar Bands. Space not over 15-inches o.c., to secure stretcher bars to end, corner, pull, and gate posts.
- I. Tension Wire. Single strand spring coil steel wire, 6-gage, [galvanized.] [aluminum coated.]
- J. Extension Arms. Cast steel to accommodate 3 strands of barbed wire, sloped 45 degrees. Provide single, double or vertical arm as shown on the drawings.
- K. Barbed Wire. Three strands of 12-1/2 gauge, twisted [galvanized] [aluminum coated] wires with 14 gauge, four point barbs at 4-1/2 or 5-1/2 inches on center (including gate).
- L. Wire Ties. For tying fabric to line posts, use wire ties spaced 12-inch o.c. For tying fabric to rails and braces, use wire ties spaced 24-inch o.c. For tying fabric to tension wire, use hog rings spaced 24-inch o.c. Manufacturer's standard procedure will be accepted if of equal strength and durability.
- M. Gates. Gates shall be swing [or rolling] as shown on the drawings and shall be complete with latches, stops, keepers, hinges [rollers] and when shown, provision for 3-strands of barbed wire above the fabric.

- N. Gate Frames. Gate frames shall be constructed of tubular members and, shall be constructed in a manner such as to provide a rigid frame and ample strength and gate shall be free from sag and twist. Where a barbed wire top is specified, the end members of gate frames shall be extended approximately 1 foot above the top member and arranged for attaching three uniformly spaced strands of barbed wire and furnished with bands or other suitable method for securely attaching the wire.
- O. Latches, [Padlocks,] Stops and Keepers. Provide latches, [padlocks], stops and keepers for all gates. Latches shall have the plunger bar arranged to engage the gate stop, except that for single gates for openings less than 10-feet wide a forked latch may be provided. Latches shall be arranged for padlocking. [Padlocks shall be Type ED, brass, with 2 keys, conforming to Fed. Spec. FF-P-101.] Center stops shall consist of a device arranged to be set in concrete and to engage the plunger of the bar latch of double gates. No stop is required for single gates. Keepers shall consist of a mechanical device for securing the free end of the gate when in the full open position.
- P. Rolling Gate. Provide a rolling gate where shown on the drawings. Furnish horizontal and vertical members to ensure proper gate operation and for attachment of fabric, hardware and accessories. Fabricate perimeter frames of tubular members to form a gate 6-feet high and up to 36-feet wide as follows:
1. Steel Pipe: 2-inch OD.
 2. Assemble gate frames by welding or with special fittings and rivets for rigid connections. Use same fabric and gage as for fence. Install fabric with stretcher bars at vertical edges. Bars may also be used at top and bottom edges. Attach hardware to provide security against removal or breakage.
 3. Where manufacturer's design requires, provide diagonal cross-bracing to ensure frame rigidity without sag or twist.
 4. Provide rubber wheels for ground contact and metal wheels to roll on pipe support.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Installer must examine the condition under which the fence and gates are to be installed and notify the Contractor in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.

3.02 INSTALLATION

- A. Do not begin installation and erection before final grading is completed, unless otherwise permitted.

- B. Excavation. Drill holes for posts of diameters and spacings shown, in firm, undisturbed or compacted soil.
- C. Setting Posts. Center and align posts in concrete with clearance as shown on the drawings. Place concrete around posts and vibrate or tamp for consolidation. Check each post for vertical and top alignment, and hold in position during placement and finishing operations.
- D. Top Rails. Run rail continuously through post caps, bending to radius for curved runs. Provide expansion couplings as recommended by fencing manufacturer.
- E. Center Rails. Provide center rails only where shown. Install in one piece between posts and flush with post on fabric side, using special offset fittings where necessary.
- F. Brace Assemblies. Install braces so posts are plumb when diagonal rod is under proper tension.
- G. Fabric. Leave approximately 2-inches between finish grade and bottom selvage, unless otherwise indicated. Pull fabric taut and tie to posts, rails, and tension wires. Install fabric on security side of fence, and anchor to framework so that fabric remains in tension after pulling force is released.
- H. Stretcher Bars. Thread through or clamp to fabric 4-inches o.c., and secure to posts with metal bands spaced 15-inches o.c.
- I. Tie Wires. Use U-shaped wire, conforming to diameter of pipe to which attached, clasping pipe and fabric firmly with ends twisted at least two full turns. Bend wire to minimize hazard to persons or clothing.
- J. Fasteners. Install nuts for tension bands and hardware bolts on side of fence opposite fabric side. Peen ends of bolts or score thread to prevent removal of nuts.
- K. Gates. Install gates plumb, level, and secure for full opening without interference. Install ground-set items in concrete for anchorage as recommended by the fence manufacturer. Adjust hardware for smooth operation and lubricate where necessary.

3.03 TOUCH-UP PAINT

- A. Coat all exposed surfaces resulting from field cuts, welding and other installation activities.
- B. Touch up paint shall be inorganic zinc rich coating. Zinc-Lock 351 from Porter Paint Company is an acceptable product. Equivalent products may be submitted.

END OF SECTION

SECTION 32 92 00
GRASSING, MULCHING, AND SODDING

PART 1 – GENERAL

1.01 WORK INCLUDED

- A. The work specified in this section consists of grassing, or of grassing and mulching on slopes, shoulders, and other areas. The work of grassing shall include seeding and fertilizing; also, watering as required. Any of the items of work covered by this section may be eliminated from the contract, at the discretion of the ENGINEER. Sodding is included herewith and shall conform to the lines and grades as shown on the plans.

PART 2 – MATERIALS AND EQUIPMENT

2.01 MATERIALS AND EQUIPMENT

- A. The materials used for the work in this section shall conform to the requirements hereinafter specified.

2.02 SOD

- A. Sod shall be well matted with roots. St. Augustine shall be used in residential areas. Bahia shall be used in the right-of-way areas, not covered by St. Augustine grass.
- B. The sod shall be taken up in commercial-size rectangles, preferably 12-inch by 12-inch (12" x 12"), except where 6-inch (6") strip sodding is called for.
- C. 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. It shall be planted as soon as possible after being dug and shall be shaded and kept moist from the time it is dug until it is planted. The sod shall be approved by the ENGINEER before placing.
- D. Source Requirements for Sod and Mulch. No mulch material or sod shall be used which is not certified as being free of the imported fire ant, and before any mulch or sod is brought to the project, the CONTRACTOR will be required to furnish the ENGINEER a written certification and clearance, from pest control officials of either the State or the Federal Department of Agriculture, verifying that the materials are being obtained from an area outside of the zone of quarantine of the imported fire ant, or that they are free of the imported fire ant.

2.03 WATER

- A. The water used in the grassing operations may be obtained from the reclaimed water system.
- B. 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.
- C. Salt water shall not be used.

2.04 EQUIPMENT

A. Fertilizer Spreader

1. The device for spreading dry fertilizer or for spraying liquid fertilizer shall meet the approval of the ENGINEER.

B. Seed Spreader.

1. The seed spreader shall be an approved mechanical head spreader or other approved type of spreader and may be integral with the cultipacker roller equipment specified below.

C. Equipment for Cutting Mulch into Soil.

1. The mulching equipment shall be a rotovator, or other equipment determined by the ENGINEER to be equally suitable for cutting the specified materials uniformly into the soil and to the required controlled depth.
2. Harrows will not be allowed.

D. Rollers

1. A cultipacker, traffic roller, or other roller approved by the ENGINEER, will be required for rolling the grassed and mulched areas.

E. Water-Metering Devices

1. 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.

PART 3 – EXECUTION

3.01 TIME OF BEGINNING OPERATIONS

- A. Whenever a suitable length of roadway is completed and ready for planting the CONTRACTOR shall, if directed by the ENGINEER, proceed at once with the planting of the available shoulder or embankment areas.

3.02 WEATHER AND SOIL LIMITATIONS

- A. Fertilizing, seeding or mulching operations will not be permitted when wind velocities exceed 15 miles per hour (mph).
- B. Seed shall be sowed only when the soil is moist and in proper condition to induce growth.

3.03 SOIL MANIPULATION

- A. All soil manipulation shall be done at right angles to the direction of slope.

3.04 WATERING

- A. The soil shall be maintained in a moist condition for a period of at least two (2) weeks after the planting.

3.05 APPLYING AND MIXING FERTILIZER

A. Rate of Application

1. At the CONTRACTOR's option, either dry or liquid commercial grade fertilizer may be used.
2. The rate of application for dry fertilizer shall be 800 to 1,000 pounds per acre, with application in the upper range for sandy soils in the lower range for loamy soils. The exact rate will be set by the ENGINEER.
3. Liquid fertilizer shall be applied at an equivalent rate which will provide the same amount of plant food as required for dry fertilizer (or at approximately 74 to 92 gallons per acre).

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 (4").
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 (7) days after the seed is in place.

3.06 MULCHING

A. When Dry Mulch is Used:

1. When mulching is called for, approximately two inches (2") loose thickness, of the straw or hay material shall then be applied uniformly over the grassing area, and the mulch material cut into the soil with the equipment specified, so as to produce a loose mulch thickness of three to four inches (3-4").
2. Care shall be exercised so that the materials are not cut too deeply into the soil.

B. When Green Mulch is Used:

1. When green mulch is used, the green mulch shall be incorporated into the soil not later than two (2) days after being cut, and not artificial watering shall be done before the mulch is applied.
2. It shall be spread in a layer of approximately two inches (2") loose thickness, and cut into the soil with the equipment specified.
3. The material shall not be cut too deeply into the soil.

3.07 SEEDING

- A. Soon after the mulch material has been cut into the soil, and while the soil is still loose and moist, the seed shall be scattered uniformly over the grassing area.

The rate of spread for the seed shall be as follows:

1. Where mulching is not called for, or where dry mulch is used, the rate shall be 60 pounds per acre. In the period from March 15 to October 15 the seed mixture shall be 30 pounds of Bahia and 30 pounds of Bermuda. In the remainder of the year, the mixture shall be 20 pounds each of Bahia, Bermuda, and rye seed.
2. When green mulch is used, the required rate of spread shall be reduced to 45 pounds per acre, because of the faster growing rate of the green mulch as compared with that of the seeds. The seed mixture shall be 22-1/2 pounds of Bahia and 22-1/2 pound of Bermuda, except that in the period October 15 to March 15 the mixture shall be 15 pounds each of Bahia, Bermuda, and rye grass seed.
3. Seeding may be done in conjunction with the rolling if the equipment used is designed for that purpose.
4. Rolling. Immediately after completion of the seeding, the entire grassed or mulched area shall be rolled thoroughly with the equipment specified. At least two (2) trips over the entire area will be required.

3.08 SODDING

- A. Wherever sodding is indicated on the plans, it shall include all of the requirements of this section except "Mulching".

3.09 MAINTENANCE

- A. The CONTRACTOR shall be responsible for keeping the ground moist by watering until an acceptable stand of grass is grown. The CONTRACTOR will also be required to repair at his own expense any damage due to washouts, erosion or other causes which might occur prior to final acceptance of this work.

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.

B. Related Sections:

1.02 UNIT PRICE - MEASUREMENT AND PAYMENT

A. Sodded Areas:

1. Basis of Measurement: By square yard.
2. Basis of Payment: Includes preparation of subsoil, placing topsoil, sodding, watering and maintenance to specified time limit.

1.03 REFERENCES

A. ASTM International:

1. ASTM C602 - Standard Specification for Agricultural Liming Materials.

B. Turfgrass Producers International:

1. TPI - Guideline Specifications to Turfgrass Sodding.

1.04 DEFINITIONS

- A. Weeds: Vegetative species other than specified species to be established in given area.

1.05 SUBMITTALS

- A. Product Data: Submit data for sod grass species, fertilizer, mulch, and other accessories.
- B. Submit minimum 10 oz sample of topsoil proposed. Forward sample to approved testing laboratory in sealed containers to prevent contamination.

- C. Test Reports: Indicate topsoil nutrient and pH levels with recommended soil supplements and application rates.
- D. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

1.06 CLOSEOUT SUBMITTALS

- A. Section 01 77 00 - Closeout Procedures: Requirements for submittals.
- B. Operating and Maintenance Data: Submit maintenance instructions, cutting method and maximum grass height; types, application frequency, and recommended coverage of fertilizer.

1.07 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.

1.08 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.

1.09 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 – Material and Equipment: Product storage and handling 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 24 hours.

1.10 COORDINATION

- A. Section 01 00 00 - Project Requirements: Requirements for coordination.
- B. Coordinate with installation of underground sprinkler system piping and watering heads when applicable.

1.11 MAINTENANCE SERVICE

- A. Section 01 77 00 - Closeout Procedures: Maintenance service.
- 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 35 – Testing and Testing Laboratories: Testing, inspection and analysis requirements.
- 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 35 00 – Location, Scope & Special Requirements: Verification of existing conditions before starting work.
- B. 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 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 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 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 00 00
UTILITIES

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. The Contractor shall furnish and install complete and ready for use, all the equipment, machinery, apparatus, motors, drives, tools, meters, charts and other accessories, and shall perform such operations and tests, all as specified herein, and as indicated on the drawings.
- B. The materials of construction of all equipment furnished and permanently installed on the project shall be of best quality. The workmanship of construction, finish and fit shall be equal to the highest industry standards. All equipment and/or components thereof shall be new and shall not have been in service at any other installation.
- C. The desired standard of quality for each item of equipment is established by reference on the drawings and in the specifications to specific manufacturer's products. Materials of construction and/or fabrication shall equal or exceed the standard of the referenced product. The Contractor's attention is called to Article 1.06.

1.02 EQUIPMENT WARRANTY

- A. All mechanical and electrical equipment, together with devices of whatever nature and all components, which are furnished and/or installed by the Contractor shall be guaranteed against manufacturing and/or design inadequacies, materials and workmanship not in conformity with the paragraph above, improper assembly, hidden damage, failure of devices and/or components, excessive leakage or other circumstances which would cause the equipment to fail under normal design and/or specific operating conditions for a period of two years or such longer period as may be shown and/or specified from and after the date of acceptance of the equipment by the Owner. Each piece of equipment, device or components thereof which shall fail within the above specified term of the guarantee shall be replaced and installed with reasonable promptness by the Contractor without cost to the Owner.
- B. Rotating machinery shall be designed and fabricated to provide satisfactory operation without excessive wear and without excessive maintenance during its operating life. Rotating parts shall be statically and dynamically balanced and shall operate without excessive vibration.
- C. On all equipment ample mean of lubrication shall be provided for all bearings and other metal parts in sliding contact.
- D. The minimum design criteria for lubrication of moving parts of the equipment shall include one (1) week of continuous operation during which no lubricants shall be added to the system. The system shall also be designed to receive lubricants

whether in operation or shut down and shall not leak or waste lubricants under either condition. The manufacturer's recommendations of grade and quality and a supply of lubricants so recommended in quantities sufficient to conduct startup and testing operations shall be furnished with the equipment. Alemite industrial-type fittings, or equal, shall be used for grease lubrication except as noted.

1.03 SPECIAL TOOLS

- A. Special tools, wrenches and thickness or depth gauges required for removing parts and for making adjustment shall be included with each item of equipment having wearing parts and requiring repairs or adjustments. All accessories such as indicating gauges, indicators and lubrication devices necessary for the proper maintenance and operation of the equipment shall be furnished and stored safely at the site of the work and delivered to the Owner after the equipment is accepted.

1.04 SAFETY REQUIREMENTS

- A. Screens, guards or cages shall be provided for all exposed, rotating or moving parts in accordance with accepted practices of applicable governmental regulatory agencies.

1.05 NAMEPLATES

- A. Each major component of equipment shall have the manufacturer's name, catalog and/or model number, and serial number on a corrosion-resistant plate securely attached to the item of equipment.

1.06 INITIAL OPERATION AND TESTS

- A. Upon completion of all the mechanical work, in a manner satisfactory to the Engineer, the Contractor shall designate a day for initial testing of the equipment. Prior to such completion date, the Contractor shall give the Owner seven (7) days notice thereof in writing, and the Owner will then appoint the personnel which will operate the plant equipment, and on the test day designated, the Contractor shall make the initial test to determine the performance using the personnel designated by the Owner and such personnel of his own as is specified or as he deems necessary to complete the tests.
- B. The initial tests shall be limited to a period of twenty-four (24) hour's duration and during this time the mechanical performance of all equipment shall be tested and demonstrated by the Contractor. If the demonstration and tests indicate satisfactory mechanical performance in the operation of the equipment, the Contractor will then be given a three (3) day notice by the Engineer to make a final guarantee test of the plant equipment under normal operation. During the initial tests and the three (3) day period between the initial tests and the final tests, the Contractor's personnel shall supervise the operation of the plant equipment, assist and train the Owner's operating personnel in their duties. Experts on equipment installation and operation, as specified or necessary as well as complete, written, detailed erection, operation and maintenance instructions, shall be furnished by the Contractor to insure proper training and instruction of the Owner's personnel.

A minimum of six (6) complete sets of operation and maintenance instructions shall be provided.

- C. The final guarantee tests shall be for a period of twenty-four (24) hours duration, except as otherwise provided, and shall be made at the conclusion of the three (3) day period of operation and training. These tests shall be made under normal operating conditions under the supervision of the Contractor's personnel. This test is for the purpose of demonstrating that all performance and efficiency guarantees of the equipment and other requirements in compliance with these specifications have been met, that the operation of all equipment is coordinated and that all controls operate satisfactorily in coordination with the equipment installed.
- D. In the event the initial or final guarantee testing and demonstration of equipment and controls does not meet the guarantee conditions or is not demonstrated to the satisfaction of the Engineer, the Contractor shall, at his own expense, make such changes and adjustments in the equipment which he deems necessary and shall conduct further tests until full satisfaction is indicated by the Engineer and written certification is received thereof.

1.07 SHOP PAINT

- A. All ferrous metal on plant equipment, unless otherwise specified or directed by the Engineer, shall receive shop paint compatible with field costs provided by the Contractor, in accordance with the requirements of the section of the specifications entitled, "Painting and Special Coatings in Part A of Technical Specifications.

PART 2 - MATERIALS AND EQUIPMENT

2.01 EQUIPMENT

- A. Equipment Requiring Variations from Structures Shown on the Plans.
- B. It is the intent that the Contractor shall furnish equipment which may be installed and shall operate properly in the structure as shown. Should the Contractor select alternate equipment resulting in an alteration to, addition to, enlargement of, or any other changes from the lines, dimensions and grades shown on the drawings, the Contractor shall make such changes or alterations as are required and no additional payment will be made by the Owner for changes in structures occasioned by the selection of alternate equipment. All such variations shall be subject to review and acceptance by the Engineer.
- C. Equipment requiring supplemental services in addition to those shown or specified in order to fulfill the operating objectives and including additional mechanisms, operating steps and/or controls as compared with specified equipment will not be acceptable.

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 and Fill

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 80 percent 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. Reduces 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 ANSI/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 ASTM D-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 and 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 ANSI/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 C-905 with a minimum DR of 25, pressure rating of 165 psi, with gasketed integral bell ends. Pipe shall be designed for maximum working pressure of not less than 150 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 deflecting 22.5° 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 ANSI/AWWA C111/A21.11. Restraint devices shall be Uni-Flange 1300 series or other approved restrained joint devices.

2.04 WALL SLEEVES, SEALS, PIPES AND NON-STANDARD CASTINGS

- A. Wall Sleeves: Wall sleeves shall be of cast iron, ductile iron or carbon steel. The sleeve shall be hot dipped galvanized after fabrication and shall have a waterstop located in the center of the wall. Sleeves shall be provided with seals and shall be sized as required for the installation of seals. Sleeves shall terminate flush with finished surfaces of walls and ceilings, and shall extend 2 inches above the finished floor unless otherwise shown on the Drawings.
 1. Wall sleeves shall be installed for all piping passing through building walls and floors, except where noted on the Drawings. Sleeves shall be of sufficient size to pass the pipe without binding. Escutcheons shall be provided at walls and floor to completely conceal the sleeves smaller than 3 inches. Escutcheons shall be 304 SS split-type.
- B. Wall Sleeve Seals: Wall sleeve seals shall be modular mechanical type consisting of interlocking synthetic rubber links shaped to continuously fill the annular space between the pipe and wall sleeve. Links shall be loosely assembled with bolts to form a continuous rubber belt around the pipe with a pressure plate under each bolt head and nut. After the seal assembly is positioned in the sleeve, tightening of the bolts shall cause the rubber sealing elements to expand and provide an absolutely water-tight seal between the pipe and wall sleeve. The synthetic rubber shall be suitable for exposure to sludge and groundwater. Bolts, nuts and hardware shall be 18-8 stainless steel. The seals shall be Link Seal as manufactured by Thunderline Corporation or equal, and the wall sleeve and seal shall be sized as recommended by the seal manufacturer.
- C. Wall Pipes: Wall pipes shall be of the size and types indicated on the Drawings. All wall pipes shall be of ductile iron and shall have a central fin not less than 2 inch thick and the same diameter as the bolting flange cast midway of the length to form a waterstop. Each wall pipe shall be of the same grade, thickness and interior coating as the piping to which it is joined. Those portions of the wall pipes that are buried shall have a coal tar epoxy outside coating.
- D. Non-Standard Fittings and Castings: Fittings having non-standard dimensions and cast especially for this project shall be of an approved design. Fittings shall be

manufactured to meet the requirements of the same specifications and shall have the same diameter and thickness as standard fittings but laying lengths and types of ends shall be determined by positions in the pipelines and by the particular piping to which it is connected. Flange facing and drilling shall conform to the 125 pound American National Standards Institute. Where require, flanges shall be drilled and tapped for studs. Other dimensions shall be substantially equal to corresponding parts of standard bell and spigot fittings.

2.05 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.

2.06 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.

2.07 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 ANSI/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.

2.08 PINCH CHECK VALVES

- A. Valves are to be of the flow operated check type with flanged joint ends on both check sleeve and metal body. Port areas shall be 100% of the mating pipe port area. The port area shall contour down to a duckbill which shall allow passage of flow in one direction and prevent reverse flow in the other direction. The flexible duckbill sleeve shall be one piece rubber construction with fabric reinforcement. The flange shall be drilled to ANSI B16.1, Class 125/ANSI B16.5 Class 150 standard. Valve body shall be drilled and tapped for flushing connection on top and bottom of the housing. Valve body shall be two piece split body construction. The two halves shall be sealed by diamond shaped cross section rubber gaskets permanently locked by a groove cast in the valve body. Company name and location shall be cast onto the valve body. The valve shall be designed for a maximum back pressure of 100 psi. The valve shall be red valve series 33 or equal.
- B. 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 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.
- C. 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.

2.09 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 DeZurik 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.

2.10 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).

2.11 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 be 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.

2.12 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 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 unidirectional grip ring and shall be designed for "press-on" or "stab-on" installation, and manufactured by Ford Meter Box Company.

2.13 SOLENOID VALVES

- A. Solenoid valves shall be 2 way type for normally closed operation designed for not less than a 150 psi water working pressure. The valves shall have forged stainless steel Series 300 bodies for 3/4 inch and smaller and brass bodies for 1 inch and larger with NPT threaded ends, Buna N seals/disks and NEMA 4X Red hat II solenoid enclosures. The valves shall operate on 120 VAC power, shall have threaded conduit hubs, standby manual operators and shall not require a minimum operating pressure differential for standby operation. The valves shall be provided with a manual override. The valves shall be Series 8210G for 3/4 inch and smaller and Series 8221G for one inch and larger as manufactured by Automatic Switch Company or approved equal.

2.14 FLEXIBLE EXPANSION JOINTS

- A. Flexible expansion joints shall be of the molded wide arch design manufactured of chloroprene (neoprene) rubber with polyester reinforcement. Chloroprene (neoprene) body shall be supplied with a hypalon coating. Joints shall be flanged suitable for 150 psi water working pressure and in accordance with ANSI B16.1 dimensions and bolting patterns. Flanged ends shall be furnished and galvanized, split ductile iron retaining rings.
- B. Provide limit restraint bolts on all pump suction and discharge lines. Expansion joints 6 inches and larger in size shall have a minimum of four limit restraint bolts. Restraint bolts and nuts shall be Type 304 stainless steel.
- C. Minimum performance for flexible expansion joints shall be as follows:

Size (in.)	Axial Compression (inches)	Axial Elongation (inches)	Lateral Deflection (inches)	Angular Deflection (degrees)
2	1-3/4	3/4	3/4	30
3	d.o.	d.o.	d.o.	30
4	d.o.	d.o.	d.o.	25
5	d.o.	d.o.	3/4	25
6	d.o.	d.o.	1	20
8	d.o.	d.o.	d.o.	20

- D. Flexible expansion joints shall be Style 1015 Maxi-Joint as manufactured by General Rubber Corporation, Style 100 Metrasphere as manufactured by the Metraflex Company or an equal approved by the Engineer. Flexible joints for pump suction and discharge piping shall be designed for leachate service at 250 degrees F.

2.15 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.

2.16 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 5 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 3 feet below final grade.

2.17 PIPE AND VALVE IDENTIFICATION SYSTEMS

- A. Not Included

2.18 GLOBE VALVES AND ANGLE VALVES

- A. Globe valves and angle valves shall be suitable for throttling flows of liquid, oil, gas and air lines. Valves shall have end connections as indicated on the Drawings and shall be suitable for a working pressure of not less than 150 psi.
- B. Each valve shall have self-lubricating TFE-impregnated asbestos packing to provide a tight stem steel. Valves shall have a removable bonnet in order to facilitate dismantling and reassembly of the valves.
- C. Globe valves shall be Crane Model No. 1, Stockham Valves Figures B-16, or equal. Angle valves shall be Crane Model No. 2, Stockham Valves Figure B-216, or equal.

2.19 PRESSURE REGULATING VALVE

- A. Pressure regulating valves shall be of bronze body construction, seat shall be of stainless steel, diaphragm shall be Buna N.
- B. Regulator shall have a maximum pressure limit of 100 psi and the pressure reduction range shall be to 5 psi for all the services except for belt washwater. The maximum and minimum pressure variation range for the belt washwater shall be per gravity belt supplier's recommendations. The regulator shall be a direct acting, spring loaded, diaphragm type for hydraulic operation, and shall be capable of delivering a constant pressure. An adjusting screw shall be easily accessible for changing the outlet pressure.
- C. Valves shall be installed in strict accordance with the manufacturer's recommendations. The manufacturer shall be Watts, or equal.

2.20 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.

2.21 REDUCED PRESSURE BACKFLOW PREVENTERS

- A. Standards of Construction: Backflow prevention devices shall be manufactured in accordance with AWWA C506, latest revision, American Society of Sanitary Engineering Standards, and the University of Southern California Foundation for Cross Connection Control and Hydraulic Research "Manual of Cross Connection Control", latest edition.
- B. Product Handling: Exercise care in transporting and handling backflow preventers to avoid damage. Inside of backflow preventers shall be kept free of dirt and debris.
- C. Reduced pressure principle backflow preventers shall include an integral sensing system that will automatically open a relief valve whenever the differential pressure between the inlet supply and the reduced pressure zone drops to 2 psi. The relief valve shall remain open until a positive pressure differential of 2 psi is re-established. If pressure upstream of the first check valve drops to atmospheric or below, the relief valve shall remain fully open providing an internal air gap between the first check valve and the water level in the reduced pressure zone. The unit shall also be constructed such that any minor leakage of the second check valve will result in visible flow from the relief valve, even if the first check valve is totally disabled.
- D. Reduced pressure principle backflow preventers shall have all bronze bodies for sizes 22 inches and smaller and all ductile iron bodies for sizes 3 inches and larger. Ductile iron bodies shall be coated with a fusion bonded thermosetting epoxy coating in accordance with AWWA C550 with a minimum, holiday free, coating thickness of 12 mils. The reduced pressure backflow preventer shall consist of two independently operated, spring loaded, wye pattern, poppet type check valves designed for installation in a normal horizontal flow attitude. An independent spring loaded relief valve shall be located between the two check valves. Check valve assemblies, springs and seats and all other internal parts shall be constructed of Type 316 stainless steel. Relief valve body and trim shall be constructed of bronze. Check valve and relief valve seats shall be field replaceable without removing the device from the service line. Backflow preventers shall be designed for a working pressure of 200 psi and a temperature range of 32°F to 140°F. The backflow preventer shall be manufactured as a complete unit including test cocks, and upstream and downstream isolation valves. The test cocks shall be manufactured of bronze and shall be arranged such that the unit can be tested without removing the unit from the line.

- E. Isolation Valves: Reduced pressure backflow preventers shall be furnished complete with isolation valves, For sizes 22 inches and smaller, the isolation valves shall be all bronze ball valves with Buna N O-rings and valve seats, and a lever operating handle. Ball valves shall be in accordance with AWWA C80, latest revision. For sizes 3 inches and larger, the isolation valves shall be resilient seated gate valves with flanged ends and OS&Y handwheel operators. Gate valves shall be as specified and described hereinbefore.
- F. Exterior Coating: The exterior ferrous surfaces of the reduced pressure backflow preventer and the isolation 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 compatible with the finish coats. Following installation, the backflow preventer unit and aboveground piping shall be finish painted in accordance with manufacturer's recommendations. All surfaces to be coated shall be clean, dry and free of rust, oil and grease.
- G. Acceptable Manufacturers: Reduced pressure principle backflow preventers shall Model 825 as manufactured by Febco, or an equal approved by the Engineer.

2.22 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.

2.23 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.

2.24 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.

2.25 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 Insert Valve 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 pipe 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 80 percent 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 or 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 10 percent 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 6 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, reseal 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 an additional cost to the Owner.

- E. The Owner shall be notified at least 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 coats, 10 mils DFT per coat, of coal tar epoxy equal to Kop-Coat Bitumastic No. 300-M.

3.12 INSTALLATION OF REDUCED PRESSURE BACKFLOW PREVENTERS

- A. Backflow preventers shall be installed at the locations shown on the Drawings. Backflow preventers shall be installed in accordance with the manufacturer's written installation instructions and as shown on the Drawings.
- B. Reduced pressure principle backflow preventers shall be installed horizontally with an 18 inch minimum clearance between the finished grade and the lowest point on the bottom of the unit. Reduced pressure backflow preventers shall be installed with provisions for a suitable drain arrangement to drain off discharges from the relief valve, so that discharges are not objectionable. Backflow preventers shall be installed such that they are easily accessible for testing, maintenance and repair.
- C. Piping and fittings for units 3 inches and larger in size shall have flanged joints. Piping, fittings and valves shall be properly supported with pipe support stands as shown on the Drawings.
- D. Following installation of the reduced pressure backflow preventer, piping, fittings and valves, the entire aboveground assembly shall be finished painted in accordance with manufacturer's recommendations.

END OF SECTION

SECTION 33 01 30.83
WETWELL LINING SYSTEMS

PART 1 – GENERAL

1.01 SITE ACCESS

- A. Accessibility to the master lift station shall be the responsibility of the CONTRACTOR, and all expenses associated with work site accessibility should be taken into consideration as part of the CONTRACTOR's bid preparation. Damage to existing pavement surfaces and base courses, and/or other surface improvements, as a result of the CONTRACTOR's activities, shall be restored to like-new condition by the CONTRACTOR at his sole expense. The CONTRACTOR shall implement all required measures to provide the OWNER's personnel and equipment with complete access to all work site areas during the entire course of performing this project.

1.02 SCOPE OF WORK

- A. The major elements of the proposed project work are summarized as follows: furnish all labor, materials, and equipment necessary to rehabilitate the interior surface areas of an existing sewer lift station structure using a structural composite liner system. The composite liner system shall consist of both a high strength structural cementitious build-up layer and a corrosion resistant 100 percent (100%) solids epoxy coating system. The work includes mobilization, bypass pumping (as Additional Pricing), removal of any existing deteriorated coating, preparation of lift station structure to be lined, furnishing and applying the specified cementitious and epoxy coating materials to the interior surface areas of the lift station, applicable QA/QC testing, clean-up, and demobilization.

1.03 INSPECTION OF THE WORK

- A. The ENGINEER will provide construction observation services to monitor project quality and determine conformance of the work with the specifications. Each step of the work described herein is subject to inspection and approval by the ENGINEER prior to proceeding with subsequent phases of the work.

1.04 MATERIALS AND EQUIPMENT

- A. All materials, equipment, and types of construction shall be in accordance with these Technical Specifications and shall conform to the requirements of all applicable laws, ordinances, and codes.
- B. All materials and equipment to be incorporated into the work shall be new, unused, and properly designed for the use intended. Materials and/or equipment which, in the opinion of the ENGINEER are inferior or of a lower grade than specified, or required, will not be accepted and shall be removed immediately from the project site.

1.05 EQUIVALENT PRODUCTS AND MATERIALS

- A. If "Or Equal" products are allowed herein, then all material or equipment submitted for consideration as "Or Equal" to that specified must include sufficient written information and data to demonstrate that the material or equipment conforms to the Contract Document requirements. The ENGINEER shall be the sole judge as to whether or not such material or equipment is equal to that specified or required herein.
- B. Upon rejection of any material or equipment submitted as the equivalent of that specifically named in the Contract, the CONTRACTOR shall furnish the specified material or equipment at no additional cost to the OWNER.
- C. Neither the approval by the ENGINEER of any alternate material or equipment as being equivalent to that specified, nor the furnishing of the material or equipment specified, shall in any way relieve the CONTRACTOR of responsibility for failure of the material or equipment, due to faulty design, material, or workmanship, to perform the functions required by the Contract Documents.

1.06 MATERIAL AND EQUIPMENT DELIVERY AND STORAGE

- A. The CONTRACTOR shall deliver materials in sufficient quantities to ensure the most timely and uninterrupted progress of the work. All materials and equipment shall be stored in strict accordance with the manufacturer's recommendations. Products shall also be stored and handled according to their Material Safety Data Sheets (MSDS).

1.07 SPILL OR DISCHARGE OF WASTEWATER

- A. The discharge of wastewater into the environment is prohibited. All spills or discharges of wastewater shall be immediately reported to the ENGINEER, the OWNER, and the F.D.E.P. The CONTRACTOR also shall immediately control, contain, and stop the spill or discharge and shall repair any damage at no additional cost to the OWNER.
- B. The CONTRACTOR is solely responsible for all fines and labor, materials, and equipment costs incurred by the OWNER for wastewater spills or discharges to the environment resulting from the CONTRACTOR's actions or the CONTRACTOR's negligence.

1.08 TECHNICAL REFERENCES

- A. ASTM – The published standards of the American Society for Testing and Materials, West Conshohocken, PA.
- B. NACE – The published standards of National Association of Corrosion Engineers (NACE International), Houston, TX.
- C. SSPC – The published standards of the Society of Protective Coatings, Pittsburgh, PA.
- D. Los Angeles County Sanitation District – Evaluation of Protective Coatings for Concrete.
- E. ASTM C 109 – Compressive Strength of Hydraulic Cement Mortars.
- F. ASTM C 293 – Flexural Strength of Concrete.
- G. ASTM C 321 – Bond Strength of Chemical Resistant Mortars.
- H. ASTM C 666 – Resistance of Concrete to Rapid Freezing/Thawing.
- I. ASTM C 596 – Drying Shrinkage of Mortar Containing Cement.
- J. AASHTO –T277 – Rapid Chloride Permeability of Cement.
- K. ASTM C 1244 – Concrete Sewer Manholes by Negative Air Pressure (Vacuum) Test.
- L. ASTM D 638 – Tensile Properties of Plastics.
- M. ASTM D 790 – Flexural Properties of Unreinforced and Reinforced Plastics.
- N. ASTM D 695 – Compressive Properties of Rigid Plastics.
- O. ASTM D 4541 – Pull-off Strength of Coatings Using a Portable Adhesion Tester.
- P. ASTM D 2584 – Volatile Matter Content.
- Q. ASTM D 2240 – Durometer Hardness, Type D.
- R. ASTM D 543 – Resistance of Plastics to Chemical Reagents.
- S. ASTM C 109 – Compressive Strength Hydraulic Cement Mortars.
- T. ACI 506.2-77 – Specifications for Materials, Proportioning, and Application of Shotcrete.
- U. ASTM C 579 – Compressive Strength of Chemically Setting Silicate and Silica Chemical Resistant Mortars.

- V. NACE 6/SSPC SP13 – Joint Surface Preparation Standard - Surface Preparation of Concrete.

1.09 SUBMITTALS

- A. Product Data.

1. Technical data sheet on each product proposed to be furnished demonstrating compliance with these specifications including independent ASTM test results indicating the product conforms to the published technical data.
2. MSDS for each product proposed to be furnished.

- B. Application Guidelines.

1. Project specific guidelines and recommendations.
2. Proof of any required federal, state or local permits or licenses necessary for the project.
3. Design details for any ancillary systems and equipment to be used in site and surface preparation, application, and testing.
4. Written warranty.

- C. Certifications.

1. Submit all Applicator Qualifications specified in Part 1.10 A.

- D. “Or Equal” Submittal. In order to be considered as an equal product, said product will have to meet the minimum physical properties of the approved products as referenced in Paragraph 2.4 as measured by the applicable ASTM standards referenced in Paragraph 1.8. Testing results must be performed and presented by a third-party testing laboratory.

- E. “Or Equal” products shall be submitted to the ENGINEER a minimum of two (2) weeks prior to bid date. In order for a product to be considered “equal” the submitted product must receive written approval via addendum to the current bid documents prior to the bid date. Only applicators that have been trained and certified by the approved liner system manufacturers are allowed to install the structural liner system specified herein.

1.10 QUALITY ASSURANCE

- A. Applicator Qualifications.

1. Manufacturer certification that Applicator has been trained and approved in the handling, mixing, and application of the products to be used.

2. Certification that the equipment to be used for applying the products has been manufactured or approved by the cement or epoxy coating manufacturer and Applicator personnel have been trained and certified for proper use of the equipment.
3. Applicator shall initiate and enforce quality control procedures consistent with applicable ASTM, NACE, and SSPC standards and both the cementitious and epoxy material manufacturer's recommendations.
4. The installer/applicator shall submit a list of at least five (5) project references including project name, location, work performed, contract amount, completion date, contact person and phone number, and where similar work as specified herein has been performed.

1.11 WARRANTY

- A. The Applicator shall warrant all work against defects in materials and workmanship for a period of one (1) year, unless otherwise noted, from the date of final acceptance of the project. Applicator shall, within a reasonable time after receipt of written notice thereof, repair defects in materials or workmanship which may develop during said one (1) year period, and any damage to other work caused by such defects or the repairing of same, at his own expense and without additional cost to the OWNER.

PART 2 – LIFT STATION SURFACE CONDITION ASSESSMENT

2.01 QUALIFICATION OF APPLICABLE SURFACE REPAIR

- A. The existing substrate of the master lift station to be rehabilitated under this project has been subjected to harsh biogenic hydrogen sulfide corrosion during its operational lifetime. It is anticipated that the depth of this corrosive attack and resulting degradation will likely vary by surface region throughout the interior walls, floor, and ceiling of the structure. In consideration of this variance in surface deterioration, the CONTRACTOR, in conjunction with the OWNER will conduct a surface area analysis of the existing substrate areas prior to commencement of any lining application. Surface areas will be classified based on the following condition assessments.
 1. Condition I Surface Areas.
 - a. The surface area, once cleaned and abraded, has experienced only minor biogenic corrosion to the host substrate, and deteriorated areas do not appear to compromise the load bearing integrity of the surface area. The surface loss in the Condition I areas should not exceed one inch (1.0").
 2. Condition II Surface Areas.
 - a. The surface area, once cleaned and abraded, may exhibit corrosion as evidenced in Condition I, but also has some areas with moderate to severe deterioration. Degradation may include

signs of initial structural fatigue; however, the existing surface area should be sufficient to sustain and support both soil and live loading. The surface loss in the Condition II areas should not exceed one and a half inches (1.5").

2.02 APPROPRIATE CONDITION BASED REPAIR METHODS

- A. Subsequent to the aforementioned condition assessment, the CONTRACTOR will execute the application of the appropriate condition based repair method. The appropriate repair method shall be based on the following minimum design.
 - 1. All surface areas identified as Condition I shall receive application of the specified calcium aluminate cementitious structural build-back material at a minimum thickness of one inch (1.0").
 - 2. All surface areas identified as Condition II shall receive application of the specified calcium aluminate cementitious structural build-back material at a minimum thickness of one and a half inches (1.5").
 - 3. All interior surface areas, regardless of area condition assessment, will receive an application of the approved epoxy coating material at a minimum uniform thickness of 150 mils.

PART 3 – PRODUCTS

3.01 EXISTING PRODUCTS

- A. Cementitious patching and repair materials shall not be used unless proof of suitability and compatibility with the herein approved cementitious and epoxy materials is provided in writing by the cementitious and epoxy material manufacturers. Project specific submittals should be provided including application, cure time, and surface preparation procedures that permit optimum bond strength with the epoxy coating.
- B. Remove existing coatings prior to application of the new cementitious lining and/or epoxy coating. Applicator is to maintain strict adherence to all manufacturer's recommendations with regard to proper surface preparation and compatibility with existing coatings.

3.02 CEMENTITIOUS & EPOXY COATING MANUFACTURERS

- A. Raven Lining Systems, Inc., Tulsa, Oklahoma (800)-324-2810 or (918)-584-2810 or FAX (918)-582-4311, or ENGINEER approved equal.

3.03 REPAIR MATERIALS

- A. Patching and infiltration control repair materials shall be used to fill voids, structurally reinforce, and/or rebuild surfaces, etc. as determined necessary by the OWNER and CONTRACTOR. Repair materials must be compatible for use with the specified cement and/or epoxy system and shall be applied in accordance with the manufacturer's recommendations.

- B. The following products may be accepted and approved as compatible repair and infiltration materials for use within the specifications:

1. Infiltration Control.

- a. All fast setting infiltration control materials furnished shall be designed to be applied in dry powder form, with no prior mixing of water, directly to active leaks under hydrostatic pressure in manholes or related structures. Materials shall consist of rapid setting cements, siliceous aggregates, and various accelerating agents. Material shall not contain chlorides, gypsum, or metallic particles.

2. Invert Repair and Patching.

- a. All material furnished shall be designed to fill voids and to repair or reconstruct where no hydrostatic pressure exists. Material shall consist of rapid setting cements, high density non-absorptive aggregates, and various accelerating agents. Material shall not contain chlorides, gypsum, or metallic particles.

3. Structural Cementitious Liner Material.

- a. Material shall consist of a one component, fiber reinforced, fused calcium aluminate mortar, enhanced with a high density, chemically stable monocrystalline quartz aggregate.

4. Epoxy Coating Material.

- a. Material shall consist of a 100 percent (100%) solid, solvent-free two (2)-component epoxy resin system that is thixotropic in nature and filled with select fillers to minimize permeability and provide sag resistance.

Product Type	Amine Cured Epoxy
Color	Light Blue
Solids Content (% volume)	100
Mix Ratio	Three to One (3:1)
Compressive Strength (psi)	18,000
Tensile Strength (psi)	7,600
Tensile Elongation (%)	One and a Half (1.5)
Flexural Strength (psi)	13,000

Hardness, Type D	88
Bond Strength – Concrete	>Tensile Strength of Concrete
Chemical Resistance	
Severe Municipal Sewer	All Types of Service

3.04 CEMENTITIOUS LINING APPLICATION EQUIPMENT

- A. Only manufacturer approved low-velocity cementitious wet spray system shall be used in the application of the specified cementitious liner material. System shall consist of a batch style mixer, progressive cavity (rotor/stator) style mortar pump, and low-velocity spray nozzle. No gunite applications will be allowed.

3.05 EPOXY COATING APPLICATION EQUIPMENT

- A. Only manufacturer approved heated plural component spray equipment shall be used in the application of the specified epoxy coating. No hand or brush application of the epoxy materials will be allowed.

PART 4 – EXECUTION

4.01 APPLICATOR QUALIFICATIONS

- A. Repair material applicators shall be trained to properly apply the cementitious mortar according to manufacturer's recommendations.
- B. All cementitious and epoxy materials must be applied by a Certified Applicator of the product manufacturer and according to manufacturer specifications.

4.02 SURFACE PREPARATION

- A. Applicator shall inspect all specified surfaces prior to surface preparation. Applicator shall notify OWNER of any noticeable disparity in the surfaces that may interfere with the proper preparation or application of the specified repair materials.
- B. Applicator personnel shall directly perform all aspects of surface preparation and shall not subcontract any element of surface preparation.
- C. All contaminants including: oils, grease, incompatible existing coatings, waxes, form release, curing compounds, efflorescence, sealers, salts, or other contaminants shall be removed. All concrete or mortar that is not sound or has been damaged by chemical exposure shall be removed to a sound concrete surface or replaced.
- D. Surface preparation method(s) should be based upon the conditions of the substrate, service environment and the requirements of the appropriate condition

based repair method to be applied. Surfaces to receive repair materials shall be cleaned and abraded to produce a sound surface with adequate profile and porosity to provide a strong bond between the repair materials and the substrate.

- E. Infiltration shall be stopped by using a material that is compatible with the appropriate and selected condition based repair method. All costs associated with minor infiltration control shall be considered inclusive with the cost of the application of the appropriate cement and/or epoxy application. Moderate to severe infiltration control may require the use of chemical injection grouting. If warranted, chemical injection grouting will involve a separate Payment item based of the contract unit price bid in the Itemized Proposal for each grouting application.
- F. All surfaces shall be examined by the Inspector both during and after preparation and before the repair material is applied.

4.03 APPLICATION OF CEMENTITIOUS LINER MATERIAL

- A. For each bag of product, use the amount of water required per manufacturer's recommendations following mixing procedures noted on product container and using the approved equipment for mixing and material application. The cementitious liner material will require only the addition of potable water during mixing. No other materials will be added during the mixing process without prior written consent from the material manufacturer.
- B. Once materials have been mixed to an appropriate consistency, caution should be taken as to not over mix the mortar material.
- C. The surface prior to application of the cementitious liner shall be clean and free of all foreign material and shall be damp without noticeable free water droplets or running water, but totally saturated just prior to application of the liner material. No application shall be made to a dry surface.
- D. The material shall be spray applied in a consistent manner to create a minimum uniform thickness per appropriate surface area condition assessment.
- E. Troweling of the liner material shall begin immediately following the spray voids in the manhole wall, and creating a relatively smooth finish on the surface of the liner material. Precautions should be taken not to over-trowel the material.
- F. Immediately upon completion of the troweling phase, a wet-brush finish shall be applied to all surface areas of the cementitious liner material.
- G. The cementitious liner material shall be cured in accordance with ACI recommendations. A water based curing compound may be used when necessary.
- H. The liner material, once placed, shall have a minimum of eight (8) hours cure time before being subjected to active flow of surcharge.
- I. In high traffic areas, the manhole should be barricaded and traffic withheld for a minimum of 12 hours after application is complete.

- J. Caution should be taken to minimize exposure of applied product to sunlight and air movement. If application of additional materials is to be longer than 15 minutes, the structure shall be covered. At no time, should the finished product be exposed to sunlight or air movement for longer than 15 minutes before covering or closing access. In extremely hot and arid climates, the manhole shall be shaded while reconstruction is in process. In environments where humidity level is below 70 percent (70%), it shall be necessary to keep finished product damp for the first 72 hours.
- K. No application shall be made to frozen surfaces or if freezing is expected to occur within the substrate within 24 hours after the application. Precautions shall be taken to keep the mix temperature at time of the application below 90°F. Mix water temperature shall not exceed 80°F. Mix water may be chilled with ice if necessary.
- L. Payment will be made on the basis of the contract unit price bid in the Itemized Proposal for each square foot of cementitious build-back that is installed.

4.04 APPLICATION OF EPOXY COATING

- A. Application procedures shall conform to the recommendations of the epoxy coating manufacturer, including material handling, mixing, and environmental controls during application, safety, and spray equipment.
- B. The spray equipment shall be specifically designed to accurately ratio and apply the specified epoxy coating materials and shall be regularly maintained and in proper working order.
- C. Testing for soundness of substrate: upon completion of initial surface preparation, Applicator shall make a visual examination of the surfaces that were prepared to identify areas requiring additional preparation. A screwdriver shall be used to scratch the surface. Should the screwdriver easily remove or dig into any portion of the surface, further preparation shall be required. Retest until a screwdriver cannot scratch the surface.
- D. Testing for contaminants: a water drop test shall be used to test the surface for the presence of hydrophobic contaminants. Applicator shall place a drop of water on the surface in at least four representative locations in the manhole and its wetting behavior shall be observed. If the water droplet flattens out and “wets out” the surface, it is likely the surface is not contaminated. If the water droplet beads up and does not “wet out” the surface, it is likely the surface is contaminated. To remove hydrophobic contaminants the Applicator shall either add an epoxy coating manufacturer approved degreaser to the water blasting process and rewash the interior of the manhole, or utilize another process such as steam cleaning, sodium bicarbonate injection, or abrasive blasting for removal of the contaminants. If contaminants are found and removed, retest the contaminated areas using the water drop test until the contaminants are gone.
- E. Ambient conditions: Applicator shall record air temperature inside the manhole and prevailing weather conditions at the time of coating application.

- F. Specified and properly prepared surfaces shall be coated by roller or spray application of a moisture tolerant, solvent-free, 100 percent (100%) solid, epoxy primer as further described herein. Application shall cover all specified surfaces to a minimum dry film thickness of 150 mils.
- G. During application, Applicator shall regularly perform and record epoxy coating thickness readings with a wet film thickness gage, such as those available through Paul N. Gardner Company, Inc. meeting ASTM D 4414 – Standard Practice for Measurement of Wet Film Thickness of Organic Coatings by Notched Gages, to ensure uniform thickness during application.
- H. Top coating or additional coats of the epoxy coating should occur as soon as the prior coat becomes tack free, but no later than the recoat window for the specified products (24 hours). Additional surface preparation procedures will be required if this recoat window is exceeded.
- I. Installation of the epoxy coating shall not commence until the concrete substrate has properly cured in accordance with these specifications.
- J. Payment will be made on the basis of the contract unit price bid in the Itemized Proposal for each square foot of manhole epoxy application.

PART 5 – ANCILLARY LIFT STATION REPAIR ITEMS

5.01 BYPASS PUMPING

- A. If warranted to facilitate any aspect of the manhole or lift station restoration process, the CONTRACTOR shall provide a bypass pumping system that is capable of handling a minimum flow of 1,000 GPM at 50 psi. The CONTRACTOR shall also provide a secondary or standby pump system that is capable of handling similar flows in the event that the primary pump system experiences flows greater than 1,000 GPM, or if the first pump fails. Both pumping units shall be provided with the following items: sound reduction compartments, floatation sensors, automatic dialers, and internal and external check valve assemblies.
- B. Any requirement for bypass pumping shall be submitted by the CONTRACTOR to the ENGINEER for review and approval prior to commencement of actual sewer bypass. The ENGINEER shall have sole discretion in determining the necessity for any bypass pumping. No bypass pumping shall be executed without prior approval of the ENGINEER.
- C. Payment will be made on the basis of the contract unit price bid in the Itemized Proposal for any specific structure that requires bypass pumping. Payments for manhole bypass pumping will be limited to one installment per manhole. Any subsequent or additionally required bypass pumping will be at the sole responsibility and expense of the CONTRACTOR.

PART 6 – INSPECTION AND PERFORMANCE TESTING

6.01 PROTECTIVE LINER INSPECTION

- A. After the specified repair and rehabilitation work has been completed, the lift station shall be visually reviewed and tested by the CONTRACTOR in the presence of the OWNER. Visual review shall be for water tightness against leakage of water into the structure. All visible leaks and defects observed during the review shall be repaired to the OWNER's satisfaction. There shall be no visible infiltration.

6.02 PROTECTIVE LINER PERFORMANCE TESTING

- A. In addition to the visual inspection, will be subjected to the following in-field performance testing requirements as a prerequisite for CONTRACTOR payment.
- B. All equipment, materials, and work associated with the prescribed performance testing requirements shall be at the sole expense of the CONTRACTOR.

6.03 EPOXY COATING SPARK TESTING

- A. The epoxy coating shall be tested using a holiday or spark test method to identify any pinholes or holidays that were not detected during the visual inspection.
- B. The CONTRACTOR shall perform holiday detection on all surfaces coated with the epoxy coating in the presence of Inspector.
- C. After the epoxy coating has set hard to the touch, surfaces shall first be dried; an induced holiday shall then be made on to the coated concrete surface and shall serve to determine the minimum/maximum voltage to be used to test the coating for holidays at that particular area.
- D. The spark tester shall be initially set at 100 volts per one (1) mil (25 microns) of film thickness applied but may be adjusted as necessary to detect the induced holiday (ref. NACE RPO188-99).
- E. All detected holidays shall be marked and repaired by abrading the coating surface with grit disk paper or other hand tooling method. After abrading and cleaning, additional epoxy coating material can be hand applied to the repair area. All touch-up/repair procedures shall follow the epoxy coating manufacturer's recommendations.

END OF SECTION

SECTION 33 05 05.31
HYDROSTATIC TESTING

PART 1 - GENERAL

1.01 DESCRIPTION OF REQUIREMENTS

- A. The Contractor shall be responsible for the pressure testing of all systems prior to placing them in service.
- B. The pressure testing shall be as required to prove that the piping is left in proper condition for satisfactory operation under the conditions specified.

PART 2 - MATERIALS AND EQUIPMENT

(Not Applicable)

PART 3 - EXECUTION

3.01 PRESSURE AND LEAKAGE TESTS

- A. Tests shall be conducted in the presence of and to the satisfaction of the Engineer and of authorities having jurisdiction over the work. Notice shall be given prior to start of tests.
- B. Field pressure and leakage tests shall be conducted on the following:
- C. Force Mains.
 - 1. Mains shall be subjected to a leakage test. This test measures the amount of water required to be supplied to newly laid pipe to maintain a specific pressure after the pipe has been filled with water and the air expelled. The duration of this test shall be not less than two (2) hours and the test pressure shall be 100 psig as measured at the end point in the line. The maximum allowable leakage shall not exceed the limits specified in AWWA C-600.

3.02 ENGINEER'S RIGHT TO RETESTING

- A. Should the Contractor refuse or neglect to make any tests necessary to demonstrate the integrity of the completed system, the Engineer may retain the services of an outside consultant to make all such tests and their resulting adjustments and balance.
- B. The costs for such tests shall be deducted from amounts owing to the Contractor and shall not be borne by the Owner.

END OF SECTION

SECTION 33 09 00
INSTRUMENTATION AND CONTROLS FOR UTILITIES

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. This Section covers work related to the furnishing, installation, and testing of the various field elements and panels to be supplied with the PICS. This work supplements the requirements of Section 40 61 13 and it is to be included in the lump sum price for the PICS as provided through the PICS supplier in accordance with these specifications.
- B. Furnish and Install all instrumentation and controls hereinafter specified to perform the intended function. Work shall include all labor, materials, plant facilities and equipment, performance of all work necessary to complete the manufacturer, to make factory tests, to prepare and load for shipment, to deliver to the site, to provide programming, calibration, installation supervision, system start-up, services and incidentals required to completely furnish and install a control system as specified herein and shown on the Contract Drawings.
- C. All equipment, materials, programming and services hereinafter termed "the system", shall be integrated by the control system integrator who, with the contractor, shall coordinate and have responsibility for interconnecting with equipment now existing and/or being installed under this or other contracts as shown on the drawings and loop diagrams.
- D. Auxiliary and accessory devices necessary for system operation or performance such as transducers or relays to interface with existing equipment or equipment provided under other sections of this Specification shall be included whether specified or not.
- E. Attention is directed to the fact that the Instrumentation and Control System shall be furnished by a single pre-qualified system integrator who shall provide all of the services, equipment and appurtenances required to achieve a fully integrated and operational system. The PICS for this project is Sanders Company Inc, Stuart, Florida, phone 800-247-0880. They shall integrate all RTU's for this project. To facilitate the owner's future operation and maintenance, products shall be of the same major instrumentation manufacturer with panel mounted devices of the same type and model as far as possible.
- F. Substitutions on functions or equipment specified will not be acceptable. In order to ensure the interchangeability of parts, the maintenance of quality, the ease of interfacing between the various sub-systems and the establishment of minimums with regard to ranges and accuracy, strict compliance with the above requirements shall be maintained. In order to ensure compatibility between all equipment, it shall be the responsibility of the system supplier hereunder to coordinate all interface

requirements with existing equipment and with mechanical and electrical system suppliers and furnish any signal isolation devices that might be required.

1.02 RELATED WORKS

- A. Section 40 61 13 – Process Instrumentation and Controls System – General Provisions

1.03 SUBMITTALS

- A. Materials and Shop Drawings:

1. Furnish, as prescribed under the General Requirements, Shop Drawings covering the items included under this section or work.
2. Submit Shop Drawings at one time, as a package, for complete interface checking. Partial submittals will not be accepted. However, a separate submittal for the field instruments and the control panels will be allowed.
3. Specifically, include the following information:
 - a. Catalog information, descriptive literature, wiring diagrams, and shop drawings on all components of the field instruments.
 - b. Individual data sheets for all components of the field instruments and control panels to supplement the above information by citing all specific features for each specific component (e.g., scale range, materials of construction, special options included, etc.). Each component data sheet shall bear the component name and instrument tag number designation shown in the Drawings and Specifications.
 - c. Catalog information on all miscellaneous electrical and mechanical devices furnished under this section.
 - d. Shop drawings and catalog material for all control panels and enclosures. Include panel elevation (front, side, interior), construction shop drawings, schedules, and sizing, calculations.
 - e. Panel wiring diagrams of all control panels. Diagrams shall be complete electrical wiring diagrams showing all components and all auxiliary devices such as relays, alarms, fuses, lights, fans, heaters, etc. All wires and terminals shall be numbered on the diagrams, and line cross references shall be labeled. Include wiring interface to I/O of the PLCs. Include on the drawings, a tag number to identify each component, referenced to a component identification list.
 - f. Loop diagrams, consisting of individual wiring and/or plumbing diagram for each analog loop showing all terminal numbers, the location of the DC power supply, the location of any booster relays

or common dropping resistors, surge arrestors, etc. The loop diagrams shall meet the minimum requirements of ISA S5.4 plus divide each loop diagram into three areas for identification of element locations: panel face, face-of-panel, and field, respectively. On each diagram present a tabular summary of: (1) the output capability of the transmitting instruments; (2) the input impedance of each receiving instrument; (3) an estimate of the loop wiring impedance based on the wire sizes and lengths shown; (4) the total loop impedance; and (5) reserve output capacity.

- g. Power requirements and heat dissipation summary for all control panels. Power requirements shall state required voltages, currents, and phase(s). Heat dissipations shall be maximums and shall be given in BTU/HR. Summary shall be supplemented with calculations.
 - h. System interconnect diagram that shows all connections required between component parts of the items covered in this section and between the various other systems specified in this Contract. Number all electrical terminal blocks and field wiring. Identify each line at each termination point with the same number. Do not use this number again for any other purpose in the complete control scheme. Coordinate the electrical interconnect wiring diagram with Division 26, Electrical.
 - i. Installation details for all field mounted devices and panels to show conformance with those shown on the Drawings.
 - j. Configuration documentation for all programmable devices to indicate actual settings used to set the device scale, range, trip points, and other control parameters.
 - k. Submit the proposed layout, wiring diagram, mounting details, color section, dimensional data, and materials data for the graphic panel.
- 4. Submit a list of manufacturer's recommended spare parts and expendables to be supplied with the field instruments and control panels, with the manufacturer's current price for each item.
- B. Operating and Maintenance Manuals: See Section 40 61 13 for general requirements. For each field device and panel mounted control device provided, assemble the fully updated approved submittal information plus all available service manuals for the devices in binders with identifying tabs and data sheets.

1.04 WARRANTY AND GUARANTEES

- A. The PICS shall furnish to the Owner a written one year guarantee commencing with final acceptance, that all equipment and parts thereof, material and/or workmanship for the field elements, instruments, and control panels are of top quality and free from defects.

PART 2 - PRODUCTS

2.01 GENERAL

- A. See Section 40 61 13 for general requirements for name tags, corrosion protection, lightning/surge suppression, electronic transmission, and other electrical considerations.

2.02 CONTROL PANELS

- A. PICS Control Panels: Provide the control panels shown on the drawings in materials and rating noted below. Size free-standing control panel(s) as shown on the Drawings. Smaller surface mount panels shall be sized to adequately dissipate heat generated by equipment mounted inside or on the panel face.

1. Materials

- a. All outside control panels shall be stainless steel white powder coated.
- b. All panel accessories such as hinges, latches, screws, rivets, etc. shall be stainless steel.

2. Finish:

- a. Smoothly finish panel face openings for panel-mounted equipment. Cut with counter boring, and provide with trim strips as required to give a neat finished appearance.
- b. After fabrication, provide all steel panel surfaces (excluding stainless steel) with a phosphatized treatment inside and out, and then finish with two coats of baked enamel. Paint the panel interiors white, ANSI No. 51. The exterior color shall be selected by the Engineer.

2. Access and Identification:

- a. Provide a continuous piano hinge door for ease of access on all control panels. Expose a minimum of 80% of the panel interior for door openings. NEMA 12, 4, and 4X rated panel door openings shall be sealed and fully gasketed. Provide print pockets on each door. Two door enclosures shall have a removable center post. Sealed panel doors shall be equipped with quick release latches. NEMA 1 rated panel doors shall be equipped with a three point latching mechanism.
- b. All components and terminals shall be accessible without removing other components except for covers.

- c. Surface mounted panels shall have conduit entry from the bottom only. Freestanding, NEMA 1 panels shall have an open area in the bottom for conduit entry.
 - d. Provide fully gasketed glass window on the panel door when noted or shown to allow viewing of internally mounted devices without opening the door.
 - e. Provide laminated plastic nameplates for all front face panel mounted controls to completely define their use.
 - f. Provide identification tags and wire number tags as specified elsewhere for all internal components, wires, and terminals.
3. Corrosion Control: Protect all panels from internal corrosion by the use of corrosion inhibiting vapor capsules, Hoffman, model A-HCI, or equal. Provide sealed panels with combination drain/breathers, Crouse-Hinds model ECD18; or equal.
 4. Temperature Control: Provide panels mounted in outdoor or unheated areas with thermostatically controlled space heaters to maintain internal temperatures above dew point. Provide outdoor panels with integral sun shields.
 5. Construction: All panels shall be manufactured items, Hoffman Engineering, or equal. Minimum metal thickness shall be 14 gauge. Provide stiffeners as required to prevent deflection under instrument loading and permit lifting without racking or distortion. When required, provide removable lifting rings and fill plugs to replace rings after installation.
 6. Electrical:
 - a. Provide a main circuit breaker and branch circuit breaker for each branch circuit as required to distribute power within each panel from the main power feed. Make provisions for bottom feeder conduit entry and provide terminal board for termination of all wiring. Provide access to the breakers when the panel door is open. The following rules apply for actual circuit wiring:
 - 1) No more than 20 devices on any single circuit.
 - 2) Do not group multiple units of parallel operations on the same board circuit.
 - 3) Do not exceed an amp capacity of 12 amps for any branch circuit.
 - 4) Panel (or site) lighting, receptacles, heaters, controls, telemetry, and fans shall be on a separate branch circuit.

- b. The PICS supplier shall design, furnish and install all interior wiring within the control panels and furnish complete wiring diagrams showing the electrical circuits inside the panel and interconnections between the panel and the external instruments and components. Identify and number all terminals and wires. Attach plastic, snap on numbered tags to each panel wire for identification. Inside each panel, provide a copy of the panel wiring diagram. No power shall be applied until the PICS supplier has approved the installation.
- c. Wiring within panels shall meet the following requirements:
 - 1) Discrete wiring shall be 300 volt, type THWN stranded copper, sized for the current carried, but not smaller than No. 16 AWG.
 - 2) Power wiring shall be 300 volt type, stranded copper No. 14 AWG size, for 120V service.
 - 3) Analog signal wiring shall be 300 volt, stranded copper in twisted shielded pairs, no smaller than No. 16 AWG.
 - 4) Restrain wiring with plastic ties or ducts. Hinge wiring shall be secured at each end with bend area protected with a plastic sleeve.
 - 5) Separate analog or DC circuits at least six inches from any AC power or control wiring.
- d. All relays shall be the compact, general purpose, plug in type. Contacts shall be rated for not less than 10 amperes at 120V. Provide relays with neon status lights and test buttons. Time delay relays shall have integral adjustment knob and rangeability of at least 10:1. All relays shall have permanent, legible identification.
- e. Terminal blocks shall meet the following requirements:
 - 1) Provide the greater of 20 percent of all connected terminals or four unused spare terminals for each type supplied.
 - 2) Provide terminal blocks for DC and analog signals separate from AC circuit terminal blocks.
 - 3) Screw type terminal connections shall be locking, fork-tongue or ring-tongue lugs crimped with proper sized anvil. Terminate no more than two plugs per terminal with no more than one wire per lug.
 - 4) Compression clamp terminal connections shall be stripped and prepared per manufacturer's recommendations. Terminate no more than one wire per screw and yoke.

- 5) Use of aluminum connectors shall not be permitted without prior approval of the Engineer. Connectors shall be either copper or steel.
 - 6) Terminate data highway and other communications cable connections per manufacturer's recommendations, located near the bottom of the panel at the point of entrance to the panel.
- f. Provide power supplied as required to power instruments of circuits requiring DC power. Convert 120V AC to DC power of appropriate voltage, voltage regulation, and ripple control to operate within equipment tolerances. DC power supplies shall be of the linear type and design to eliminate switching RFI. Output over voltage and over current protection devices shall be provided. Provide NEMA 1 enclosures for all power supplies within panels.
 - g. Provide, when shown on the wiring diagrams, the indicated control panels with an internal, hand switch controlled, 10-watt L.E.D. light and a 120V, 15 amp, duplex receptacle.
 - h. Provide all panels with an isolated copper grounding buss to ground all signal and shield connections. Ground each analog signal shield on one end at the receiver end only. Properly ground all surge and transient protection devices. Coordinate grounding system with Division 26, Electrical.
 - i. For 480V panels, provide a 120V dry type control transformer for the panel control and other 120V circuits. Transformers shall be sized to meet higher service rating than actually applied and shall be provided with fused primary and secondary.
 - j. Install surge suppression devices so that they may be easily identified and replaced. A permanent I.D. # or nameplate shall be affixed to each device.

2.03 MATERIALS AND EQUIPMENT

- A. The following are the component specifications followed by specific device descriptions and unique settings or materials for specific devices identified on the drawings:
 1. Alarm, Audible Horn:
 - a. Provide audible horn that generates a loud audible alarm when activated by 115V AC power. The horn shall surface mount remotely as noted, suitable for outdoor use.
 - b. Outdoor units with sealed conduit entry, shall be Ronon Model 350W, or equal.

2. Alarm, Visual Beacon:
 - a. Warning lights shall be flashing type units that produce 360 degree beams of colored light. Flashing light shall be 60 to 80 flashes per minute. Unit shall be a solid state strobe source. Light color shall be red and unit shall have simple technique for re-lamping. Units shall be suitable for remote mounting, as noted, and shall operate on 120V AC power, unless otherwise noted or shown. Housing shall be weatherproof, suitable for use in outdoor environments without other protection. General purpose units shall be Benjamin Electric Manufacturing, Series KL-4000; or equal.
3. Counter, Totalizer:
 - a. Totalizers shall have counting rate, and other appropriate characteristics, to suit application. Unit shall be "silent" and non-mechanical, self-powered electronic type. Units shall accept speed counts up to 3000 cpm and be nominally 4" x 2" in size.
 - b. Units shall be non-resettable and sealed suitable for panel mounting as shown. Units shall mount flush with the panel mounting front face. Units shall operate on self-contained battery power with a minimum of 10 year life. Units shall be labeled showing units and multipliers. Unit shall have a 6 digit, 2 inch LCD digital display and shall register unit digit values noted. Counter-Totalizers shall be Veeder-Root Series 7997, or equal.
4. Indicator, Digital Panel, Oil or Watertight:
 - a. Units shall be oiltight NEMA 12, or watertight NEMA 4, as noted. Units shall surface mount as noted and indicate process variable value in engineering units on a 32 digit LCD, backlit display. Process indicators shall be horizontal digital indicators nominally 2.0 inches high by 4.0 inches wide with display digits nominally 0.5 inches in height. These indicators shall accept a 4 to 20 mA DC input signal and shall display the value of the represented analog variable in engineering units with scale range as noted. Decimal point shall be field selectable. Unit shall be provided with a permanent service legend to display the engineering units of the process variable. Unit shall operate loop power or on 120V line power.
 - b. Digital panel indicators shall be mounted to the panel mounting front face. Units shall be Crompton Modutec Series 2000 or equal.
5. Indicator, Digital Field, Watertight:
 - a. Units shall be watertight, mounted as shown and indicate process variable value in engineering units on 32 digit LCD display. Process indicators shall be horizontal digital indicators nominally 4.0 inches high by 6.0 inches wide with display digits not smaller than 0.8 inch

in height. These indicators shall accept a 4 to 20 mA DC input signal and shall display the value of the represented analog variable in engineering units with scale range as noted. Decimal point shall be field selectable. Unit shall be provided with a permanent service legend to display the engineering units of the process variable. Unit shall be loop powered in 24V powered loop.

- b. Digital field indicators shall be Action Instruments Model V560; or equal.

6. Indicating Light, Oiltight:

- a. Units shall be heavy duty, oiltight, push to test industrial type with integral transformer for 120V AC application. The lights shall be rated for NEMA 1 service. Units shall have screwed on flat faced lenses in colors shown and factory engraved legend plates as noted. Units shall be Square D type K, Allen Bradley Type 800H, or approved equal.

<u>Type</u>	<u>Color</u>
LT-1	Green
LT-2	Red
LT-3	Amber

- 7. Indicating Light, Watertight: Units shall be heavy duty, watertight, push to test, industrial type with integral transformer for 120 volt AC applications. The lights shall be rated for NEMA 4X service. Units shall have screwed on prismatic lenses in colors shown and factory engraved legend plates as and when shown. Units shall be Square D Type SK, Allen Bradley Type 800H or approved equal.

<u>Type</u>	<u>Color</u>
LT-1	Green
LT-2	Red
LT-3	Amber

8. Level Float Switch, Suspended:

- a. Units shall be direct acting float type level switches consisting of a mercury switch enclosed in a float connected to a two conductor, combination support and signal cable. The entire assembly shall be watertight and impact resistant. Floats shall be formed of a chemical resistant plastic material. Cable shall be rugged and flexible with heavy neoprene or PVC jacket. The actuation/deactuation differential shall not exceed 1 inch. The switch shall be rated at 5 amperes at 120 volts. Units shall be stainless steel bracket suspended type. Provide each float with 10 feet of cable.
- b. Units shall be supplied with integral weight assemblies for stabilization and positive operation of suspended units.

- c. Units shall be Consolidated Electric Co., Model LS; Anchor Scientific, Inc., Model Roto-Float Type S; or approved equal.
9. Potentiometer, Oiltight: Units shall be three terminal potentiometers with a total resistance of 1000 ohms and a power dissipation rating of 2 watts. Units shall have oiltight construction, rated NEMA 13, resolution of 1 percent, and linearity of plus or minus 5 percent. Units shall be single hole, panel mounting accommodating panel thicknesses between 1/16 to 1/4 inch. Units shall have legend plates with markings as noted. Units shall be Allen-Bradley, Type 800T; or equal.
 10. Potentiometer, Watertight: Units shall be three terminal potentiometers with a total resistance of 1000 ohms and a power dissipation rating of 2 watts. Units shall have watertight construction, rated NEMA 4X, resolution of 1 percent, and linearity of plus or minus 5 percent. Units shall be single hole, panel mounting accommodating panel thicknesses between 1/16 to 1/4 inch. Units shall have legend plates with marking as noted. Units shall be Allen-Bradley, Type 800H; or equal.
 11. Switch, Maintained Contact, Oiltight:
 - a. Units shall be heavy duty, oiltight, industrial type selector switches with contacts rated for 120 volt AC service at 10 amperes continuous. The switches shall be rated for NEMA 1 service. Units shall have factory engraved legend plates indicating position definition. Operators shall be black knob type. Units shall have the number of positions and contact arrangements as required. Units shall be single hole mounting in panel thicknesses of 1/16 or 1/4 inch.
 - b. Units shall be Square D Class 9001, Type K, Allen Bradley Type 800H; or equal.

<u>Type</u>	<u>Contacts</u>
SS-1	2
SS-2	3
SS-3	4
SS-4	5

12. Switch, Maintained Contact, Watertight:
 - a. Units shall be heavy duty, watertight, industrial type selector switches with contact rated for 120 volt AC service at 10 amperes continuous. The switches shall be rated for NEMA 4X service. Units shall have factory engraved legend plates indicating position definition. Operators shall be black knob type. Units shall have the number of positions and contact arrangements as required. Units shall be single hole mounting in panel thicknesses of 1/16 to 1/4 inch.

- b. Units shall be Square D Class 9001, Type K, Allen Bradley Type 800H; or equal.

<u>Type</u>	<u>Contacts</u>
SS-1	2
SS-2	3
SS-3	4
SS-4	5

13. Switch, Momentary Contact, Oiltight:

- a. Units shall be heavy duty, oiltight, industrial type push buttons with momentary contact rated for 120 volt AC service at 10 amperes continuous. The push buttons shall be rated for NEMA 1 service. Units shall have factory engraved legend plates indicating service definition. Units shall have contact arrangements as required and be black. Units shall be single hole mounted in panel thicknesses of 1/16 to 1/4 inch.
- b. Units shall be Square D Type K, Allen Bradley Type 800H, or equal.

<u>Type</u>	<u>Color</u>
PB-1	Green
PB-2	Red
PB-3	Black

- B. The following are the general components descriptions for the miscellaneous components of the PICS that are required to implement the various control functions of the field elements and control panels that are not specifically identified on the drawings:

1. Converter, Current-to-Current, Isolator:

- a. Units shall receive a 4 to 20 mA DC input signal and shall produce a repeated, isolated, proportional 4 to 20 mA DC output signal into loads in the range of 0 to 1200 ohms without load adjustments for a 24V DC supply. Input impedance shall be less than or equal to 50 ohms. Unit accuracy shall be plus or minus 0.25 percent of span. Unit shall be provided with multi-turn span and zero adjustment.
- b. Units shall be housed in a NEMA 4X rated enclosure with integral supports suitable for wall mounting. Unit shall operate on a isolated 120 volt, 60 Hz power supply.
- c. Units shall be Moore Industries SCT, AGM Electronics PTA 4000, Rochester Instrument Systems Model SC1326, or equal.

2. Converter, Current-to-Pulse Frequency:

- a. Unit shall accept an analog input and utilize time integration to produce a pulse rate output proportional to the input. The computing relay shall be housed in a metallic dust cover with integral bracket for rear of panel mounting. Unit shall accept a 4 to 20 mA DC input with input impedance of 250 ohms or less.
 - b. Pulse frequency scaling shall be provided so that each output pulse represents the unit digit value required. Unit shall operate on 24 volt DC and be provided with power supply operation. Output shall be provided with adjustable dropout of 0 to 5 percent of input span.
 - c. Accuracy shall be plus or minus 0.25 percent of span with temperature stability of 0.01 percent per degree F. Unit shall have multi-turn zero and span adjustment. Units shall be Moore Industries, LIT; AGM Electronics, PTA 4011; Rochester Instrument Systems, Model SC-1356; or equal.
3. Current Switch, Isolator:
- a. Units shall receive an isolated 4 to 20 mA DC input signal and shall provide an adjustable contact closure on the selected setpoint. The set point shall be continuously adjustable over the full input span and shall be repeatable within plus or minus 0.1 percent of span. Activation on rising or falling setpoint shall be internally adjustable. Dead band shall be continuously adjustable from 1 to 100 percent of full scale.
 - b. The contact output shall be an isolated DPDT contact rated for 5 amps at 120V AC. Units shall be housed in a NEMA 1 rated enclosure. Unit shall operate on an isolated 120 volt, 60 Hz power supply.
 - c. Units shall be Moore Industries DCA, AGM Electronics PTA 4034 or 4035, Rochester Instrument Systems Model 1218 or 1219, or equal.
4. Miscellaneous Mechanical Components:
- a. Manifold, Three valve Equalizing: Shall be of stainless steel construction for isolation and equalization of differential transducers. Units shall be Anderson, Greenwood and Co., Type M1, Evans Equalizing Valve Manifolds, or equal.
 - b. Test Tap: Shall consist of Crawford Fitting Co., Swagelock quick connects Series QC4 and caps QC4-DE, or equal.
 - c. Tubing, Stainless Steel: Shall be ASTM A312, TP 316, seamless soft annealed with 0.065 inch wall. Fittings shall be ASTM A276, TP 316 compression or socket weld type.

- d. Valve, Ball: Shall be stainless steel ball valves, Whitey Series 40, Hoke Flamite Series 7100, or equal.
- e. Valve, Check: Shall be stainless steel NUPRO 4CP Series, or equal.
- f. Valve, Needle: Shall be stainless steel, 0.020 inch orifice, Whitey Model 21RF2, or equal.

5. Remote Terminal Unit

- a. The RTU shall be front of panel mounted and equipped with an Operator Interface Unit (OIU).
- b. Electrical
 - 1. Input Voltage – 12 or 24 vdc Max. Current (360mA@12, 310mA@24)
 - 2. 7 Year battery backup for RTC and system data
- c. Environment
 - 1. Case – IP20/NEMA 1
 - 2. Panel Mount when gasket used – IP65/NEMA4X (Front panel only)
 - 3. Operating Temperature – (32 to 122°F)
 - 4. Storage Temperature – (-4 to 140°F)
 - 5. Relative Humidity – (5% to 95% non-condensing)
- d. Operator Interface Unit. The unit shall comprise a sealed membrane 16-key keypad and 128x64 resolution STN – LCD graphic display panel with yellow-green backlight.
- e. Communications. Two integral serial ports independently configurable for communications between 300 and 115.2K bps. Each port shall be independently DIP-switch selectable as RS-232 or RS-485. These shall have standard available protocols including:
 - 1. Modbus.
 - 2. DF-1
 - 3. SCI-COMM (SMS Encrypted)
- f. Input/Output (I/O) capability:

1. Built-in: 10 Digital Inputs, 8 Digital Outputs, and 2 Analog Inputs
 2. Expansion capabilities to 128 total I/O
- g. Memory. The unit shall contain a removable fast micro-SD card and 448k memory capacity.
- h. Special Function. Unit shall contain a built-in Triplex Pump Controller function with the following features:
1. FOFO Alternation
 2. Analog Control with setpoints
 3. Software HOA Switches
 4. Volumetric Flow Calculations
 5. Fixed or Auto Alternation Selection
 6. High Level and Low Level Alarm Setpoints
- i. Make/Model:
1. Sci-Text by Sanders Company, Stuart, Florida.
 2. No equal.
- j. Warranty. The system supplier shall warrant all hardware and SCADA software provided under this contract against all defects in material and workmanship for a period of one year. The system supplier shall warrant the SCADA software to be free of defects for as long as it is in operation by the owner. The system supplier shall also provide free SCADA Software updates for the life of the system. The function modules utilized in the remote terminal units shall carry an additional 2-year return-to-factory warranty. The 2-year return-to-factory warranty shall cover damage due to lightning and surge.
- k. Service. The system supplier shall offer full factory support of the installed system through the use of factory-trained employees. The Owner shall have 24 hour per day access to service personnel through a pager and/or cell phone.
- l. Spares. One spare circuit board of each type utilized in master radio communications equipment and remote terminal units shall be supplied.
6. Submersible Level Transmitter
- a. The submersible level transmitter shall provide reliable, continuous level monitoring of liquids in the pump station. Basis of design is

Blue Ribbon Model 313AI.

- b. The transmitter shall provide high-accuracy level measurements for hazardous locations. Housing shall be 316L stainless steel construction with integrated lightning suppression and hydrophobic breather vent.
- c. The transducer shall be compatible with the Sci-Text controllers, from a basic system for high/low alarm or simple pump control.

2.04 SPARE PARTS

- A. Obtain from the manufacturer(s) and provide the recommended critical spare parts as part of the work. The spare parts are the property of the Owner.
- B. All system spare parts and expendables, as required for a period of one year, shall be included and maintained at the job site by the PICS supplier.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install the PICS field instruments and control panels in strict accordance with the respective manufacturer's instructions and recommendations, in locations as shown on the Drawings, and as indicated on the installation details of the Drawings.
- B. Install all mechanical piping and fittings as well as in-line instruments supplied with and/or supplied for the PICS, in accordance with Division 40.

END OF SECTION

SECTION 33 31 00
SEWER BYPASS PUMPING

PART – GENERAL

1.01 DESCRIPTION OF WORK

- A. The work covered by this section consists of providing all labor, equipment, material, and supplies and performing all operations required to bypass pump sewage around a manhole or sewer section in which work is to be performed. The CONTRACTOR shall be prepared to bypass pump sewage as part of his operations. The CONTRACTOR shall provide all pumps, piping and other equipment necessary to accomplish bypass pumping; perform all construction; obtain all permits; pay all costs; and perform complete restoration of all existing facilities to conditions equal or better than existed prior to construction and to the satisfaction of the ENGINEER. All costs to accomplish bypass pumping, at the required volume, and all associated work including restoration, shall be considered incidental to the work and no additional compensation will be allowed.

1.02 GENERAL

- A. When the depth of flow in the sewer line being televised or repaired is above the maximum allowable for the proposed work, then the CONTRACTOR shall reduce the flow to the level shown below by manual operation of pump stations, plugging or blocking of the flow or by pumping and bypassing of the flow as acceptable to the ENGINEER. For manual operation of pump stations, the CONTRACTOR shall coordinate such operations with the appropriate City personnel. Plugging or blocking of the flow shall only be allowed when the CONTRACTOR can demonstrate that the upstream gravity collection system can accommodate the surcharging without any adverse impact.
- B. The depth of flow in the sewer line being televised or repaired shall not exceed that shown for the respective pipe sizes and for the operations indicated.
- C. Initial Television Inspection. For the initial television inspection, the sewer line shall be blocked completely. No flow, except infiltration, will be allowed through the sewer line.
- D. Television Inspection Before and After Lining Installation. For the television inspection before and after lining installation the sewer line shall be blocked completely. No flow, except infiltration before lining, will be allowed through the sewer line.
- E. Other Television Inspection, including Warranty.

Pipe Size	Maximum Depth of Flow
6" – 10" Pipe	20 Percent (20%) of Pipe Diameter
12" – 24" Pipe	25 Percent (25%) of Pipe Diameter

Above 24" Pipe 30 Percent (30%) of Pipe Diameter

- F. Television Inspection After Joint Testing/Sealing. For the television inspection after joint testing/sealing the sewer line shall be blocked completely. No flow will be allowed through the sewer line.

- G. Joint Testing/Sealing

Pipe Size	Maximum Depth of Flow
6" – 10" Pipe	20 Percent (20%) of Pipe Diameter
12" – 24" Pipe	30 Percent (30%) of Pipe Diameter
Above 24" Pipe	35 Percent (35%) of Pipe Diameter

- H. Pipe Lining Installation. For the pipe lining installation, the sewer line shall be blocked completely. No flow, except infiltration, will be allowed through the sewer line.

- I. Manhole Repairs. For manhole repairs, the flow through the manhole shall be controlled or blocked completely, as required, to properly complete the repairs as specified.

1.03 SUBMITTALS

The CONTRACTOR shall submit a written plan describing his means and methods for flow control and bypass pumping to the ENGINEER for review.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 PLUGGING AND BLOCKING

- A. A sewer line plug shall be inserted into the line upstream of the section being televised or repaired. The plug shall be so designed that all or any portion of the upstream flow can be released. During the television inspections and repair operations the flow through the line being worked shall be reduced to within the maximum limits stated above. After the work has been completed, the flow shall be restored to normal.

3.02 PUMPING AND BYPASSING

- A. When pumping and bypass pumping is required, as determined by the ENGINEER, the CONTRACTOR shall supply all necessary pumps, conduits, and other equipment to divert the flow around manhole section in which work is to be performed. The bypass system shall be of sufficient capacity to handle existing flow plus additional flow that may occur during rainstorm events. The CONTRACTOR will be responsible for furnishing the necessary labor and supervision to set up and operate the pumping and bypassing system. Pumps and equipment shall be

continuously monitored by the CONTRACTOR during the periods that pumping and bypassing are required. If pumping is required on a 24-hour basis, engine shall be equipped in a manner to keep noise to a minimum.

3.03 FLOW CONTROL PRECAUTIONS

- A. When flow in a sewer line is plugged, blocked or bypassed by the CONTRACTOR, he shall take sufficient precautions to protect the public health and to protect the sewer lines from damage that might result from sewer surcharging. Further, the CONTRACTOR shall take precautions to insure that sewer flow control operations do not cause flooding or damage to public or private property being served by the sewers involved and he shall be responsible for any damage resulting from his flow control operations.
- B. When flow in a sewer line is plugged or blocked by the CONTRACTOR, he shall monitor the conditions upstream of the plug and shall be prepared to immediately start bypass pumping, if needed. Any liquid or solid matter which is bypass pumped from the sewer collection system shall be discharged to another sewer manhole or appropriate vehicle or container only. No such liquid or solid matter shall be allowed to be discharged, stored, or deposited on the ground, swale, road, stormwater drainage system or open environment. The CONTRACTOR shall protect all pumps, conduit and other equipment used for bypass pumping from traffic.
- C. Should the liquid or solid matter from the sewer collection system be spilled, discharged, leaked, or otherwise deposited to the open environment as a result of the CONTRACTOR's flow control operations, he shall be responsible for all cleanup and disinfection of the affected area and all costs associated with same. The CONTRACTOR shall also be responsible for notifying the sewer system operating personnel and appropriate regulatory agencies and performing all required cleanup operations at no additional cost to the OWNER.

END OF SECTION

SECTION 33 32 20
COLLECTION SYSTEM SUBMERSIBLE PUMPS

PART 1 – GENERAL

1.01 WORK INCLUDED

- A. The work included under this Section consists of furnishing and installing submersible pump related equipment for the rehabilitated lift station; the existing pumps will be reused. New base elbows, rails, hatches, accessories, etc. shall be provided new. The lift station shall be fully tested, complete and in operating condition as indicated on the drawings and/or specified herein.

1.02 QUALITY ASSURANCE

- A. Unit Integrity: The lifting chains, and guide bars shall be supplied by the pump supplier to ensure unit integrity.

1.03 SUBMITTALS

- A. Shop Drawings: The CONTRACTOR shall submit detailed and dimensioned working shop drawings showing the construction of the proposed facility and installation of all equipment complete in every respect. Each drawing shall be indexed and/or referenced to the Contract Drawings and Specifications. No work upon the manufacture or fabrication of any equipment shall be performed until the ENGINEER's approval has been obtained. The CONTRACTOR shall submit, with the certified pump shop drawings, layout drawings showing exact installation, piping and foundation details for the pumping units being submitted.

1.04 WARRANTY

- A. The pump manufacturer shall provide a prorated warranty against defects in workmanship and materials for a period of five (5) years under normal use, operation, and service. The warranty shall be in published form and apply to all similar units.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. All metal components in the wetwell, with the exception of the pumps, motors and station piping, shall be Type 316 stainless steel.

- B. Piping: Pipe and fittings shall be 316 SST with flanges.
- C. All electrical systems and components, (regarding pump motors, cables, level control system), included as part of the pumping system shall comply with the National Electric Code Requirements.

2.02 PUMPS

- A. **The lift station rehabilitation will utilize the existing submersible pumps. Pump information in the table below is for the existing pumps.**

Lift Station Pump Details	
Pumps Existing	Three (3)
ABS Model	Flygt NP 3202.095
Design Point GPM	1,575
Head Feet	87' TDH
Impeller Dia.	340 mm
Motor HP	60
Speed	1,770
Voltage	460
Phase	Three (3)
Frequency Hertz	60

2.02 ACCESSORIES

- A. Pump Access Frame and Guides:
 1. The access frames, complete with hinged and hasp equipped covers where required, stainless steel upper guide holders and level sensor cable holder, shall be furnished and installed. The frames shall have a safety locking handle for locking in the open position. The covers shall be of checkered plate, and designed for 300 lbs./sq. ft. loading.
 2. Lower guide holders shall be integral with discharge connection; guide bars shall be of Schedule 40 welded Type 316 stainless steel pipe, of the size recommended by the pump manufacturer.

3. All material used to fabricate the cover, frame, upper guide holder and cable holder shall be aluminum or 316 stainless steel. All bolts, anchors, hinge pins and other fasteners shall be 316 stainless steel.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. All materials and equipment shall be installed as shown on the Drawings and as recommended by the manufacturer.
- B. Additional items of construction, such as wetwell, , flanged adapters, pipe restraints, and other items necessary for the complete installation of the system shall conform to specific details on the Drawings and shall be constructed of first-class materials conforming to the applicable portions of these Specifications.

3.02 INSPECTION AND TESTING

- A. Start-up and Demonstration Testing:
 1. Materials and equipment shall be tested or inspected as required by the Engineer, and the cost of such work shall be included in the cost of the equipment. Start-up and demonstration testing shall be in accordance with Section 01 75 16 and the following.
 2. Furnish the services of a factory representative for one (1) day who has complete knowledge of proper operation and maintenance to inspect the final installation and supervise a test run of the equipment.
 3. The duties of the factory service representative shall be as follows: After the equipment has been installed but before it is operated by others, the representative shall inspect the completed installation for soundness (no damaged or cracked components), completeness, correctness of setting and alignment, that the pumps are free from stresses imposed by attached piping, and for the adequacy of correctness of packing, sealing, and lubricants. The service representative shall start up the equipment and instruct the Owner's personnel in proper operation and maintenance procedures. The responsibility of the Contractor with regards to start-up shall be fulfilled when the start-up is complete, the equipment is functioning properly and has been accepted by the Owner.
 4. Field tests shall not be conducted until the entire installation is complete and ready for testing.
 5. The Contractor shall submit to the Engineer two (2) copies of a certified report from the factory service representative of the results of the representative's inspections, adjustments, testing and start-up. The report shall include descriptions of the inspection, adjustments made, and the start-up. The report shall also include a statement that the equipment is ready for permanent operation and that nothing in the installation will render the manufacturer's warranty null and void. Final payment shall not be made to

the Contractor until this report has been submitted to and approved by the Engineer.

6. Pre-final Inspection: Prior to final inspection, the Contractor shall conduct a preliminary pump performance test and pre-final site inspection in the presence of the Engineer or his authorized representative. Any deficiencies noted at this time shall be corrected prior to scheduling of the final inspection.
7. Final Inspection: After all pumps have been completely installed and are working under the direction of the manufacturer, the Contractor shall be responsible for conducting the following field acceptance tests and start-up procedures in the presence of the engineer or his authorized representative. The Contractor shall notify the Owner, the Engineer, and the pump manufacturer's representative 48 hours prior to start-up. The Contractor shall furnish all labor, piping, equipment, oil, grease, power, water and materials required to perform the acceptance testing. Field tests shall be performed for all pumps furnished under this Section.

B. Pump Field Testing:

1. Upon completion of all the mechanical work, the Contractor shall conduct testing as specified herein to demonstrate that the equipment performs in accordance with all specifications.
2. The Contractor shall perform initial testing of the equipment to ensure himself that the tests listed in the Demonstration Test paragraph below can be completed.
3. Pump Performance: Prior to acceptance as part of the final inspection, the Contractor shall conduct a field pump performance test. Pumps shall operate according to the operating conditions herein before specified without excessive vibration or overheating. Testing shall be performed using clean water. The Contractor shall utilize Owner supplied water to perform the required testing. Pumping rates shall be determined by pumping a calculated volume of water in a specified time interval. Discharge pressure and flow conditions shall be measured and recorded. Water levels during testing shall fall within the pump control levels shown on the Drawings. Amperage draws shall be monitored to determine effectiveness and efficiency of equipment. The test shall be repeated until satisfactory results are obtained. The test results shall be recorded on the Pump Test Report form included herein.
4. Demonstration Test: If the Contractor is unable to demonstrate to the Owner that the pumping units perform satisfactorily, the unit shall be rejected. The Contractor shall then remove and replace the defective unit(s) at his own expense. The Contractor shall conduct further tests until written certification is received from the Engineer.
 - a. Pumps: Pumps shall deliver the specified discharge pressures and flows at the rated efficiencies specified.

- b. Motors: Running amperage shall be noted and recorded on each leg of power cord while pump is operating under full load.
 - c. All self test trip relays shall demonstrate ability to simulate a fault condition. Level control system shall simulate various liquid levels and signal appropriate relays in pump logic controller to perform appropriate call functions as displayed by LED status indicators. All test results shall be recorded on Pump Test Report form.
 - d. Pumps, when tested, shall operate within 5 percent of the approved, certified head capacity curve.
 - e. Following performance testing, pumps shall be meggered for pump-moisture intrusion.
- C. Operation and Maintenance Procedures: After the equipment has been placed into operation, and all start-up and demonstration testing is complete, the qualified service representative of the pump system supplier shall instruct the Owner's personnel in the proper operation and maintenance procedures.
- D. The Contractor's attention is directed to the fact that the start-up and demonstration services specified represent an absolute minimum acceptable level of service and are not intended to limit the responsibilities of the Contractor to comply with all requirements of the Contract Documents. The Contractor shall procure, at no additional cost to the Owner, all services required, including additional or extended trips to the job site by manufacturer's representatives, to comply with said requirements.

SECTION 40 05 23
STAINLESS STEEL PROCESS PIPE AND TUBING

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Scope of Work: The Contractor shall furnish all materials, tools, equipment, transportation, labor, supervision and incidentals required to supply, store, install, clean, and test the shop fabricated stainless steel pipe and fittings as shown on the drawings and as specified herein. The shop fabricated stainless steel piping shall be used for low pressure process air.
- B. Qualifications: All shop fabricated stainless steel pipe and fittings shall be furnished by a single manufacturer who is experienced, reputable and qualified in the manufacture and fabrication of the items to be furnished. The pipe and fittings shall be shop fabricated and field installed in accordance with common industry wide practices and methods and shall comply with these specifications.
- C. Related Work Specified Elsewhere:
 - 1. Shop Drawings: Section 01 33 23
 - 2. Material and Equipment: Section 01 60 00
 - 3. Operating and Maintenance Data: Section 01 78 23
 - 4. Warranties: Section 01 78 36

1.02 SUBMITTALS

- A. The Contractor shall submit for review and approval piping layouts, schedules, shop fabrication drawings, specifications, catalog cuts and other data necessary to show conformance of the complete piping systems to these specifications. The Contractor's submittal shall include dimensions, fittings, locations of equipment, valves and appurtenances, joint locations and details, types and locations of supports, coordination with all other work and existing conditions, and all other pertinent technical specifications for the piping systems to be furnished.
- B. Shop fabrication drawings shall show alloys, diameters, pipe wall thicknesses, flanges and other joint preparation details, dimensions, fittings, and other appurtenances to be supplied.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Pipe:
 - 1. The pipe shall be manufactured from ASTM-A240 annealed and pickled sheets and plates in accordance with ASTM A778 in type 316 stainless

steel. Pipe shall be manufactured to nominal pipe sizes as listed in ANSI B36.19, Table 2, and shall have the following nominal wall thicknesses.

<u>Nominal Pipe Size</u> (Inches)	<u>Actual O.D</u> (Inches)	<u>Schedule/Gauge/Plate</u>	<u>Nominal Wall Thickness</u> (Inches)
10	10.750	Sch. 40	0.365
12	12.750	Sch. 40	0.406

2. Pipe and fittings shall be supplied with the following wall thicknesses:

<u>Diameter</u> (Inches)	<u>Wall Thickness</u> (Inches)
10 - 18	Sch. 40S

3. Fittings shall be butt weld type manufactured in accordance with ASTM-A-774 of the same raw material and in the same thicknesses as the pipe. Long radius elbows up to 24" diameter shall be smooth flow, i.e. center-line to end of elbow equals 1.5 times the nominal pipe size. All short radius, special radius, and reducing elbows and long radius elbows greater than 24" diameter shall be of mitered construction with at least (5) miter sections of 90° bends, (3) mitered sections for 45° and 60° bends, and (2) mitered sections for 30° and smaller bends. Reducers shall be straight tapered, cone type. Tees, crosses, laterals and wyes shall be shop fabricated from pipe.
4. The finish on the raw material, manufactured to ASTM A-240 will be No. 1, HRAP (hot rolled annealed and pickled) or better. The finish on the completed pipe and fittings shall be as specified in ASTM A778 and A774, respectively.

B: Flange:

1. Flange pipe ends shall be made up of type 316 stainless steel slip-on type rolled angle face rings and primed ductile iron back-up flanges drilled to ANSI 16.1 class 125 standard. The angle face ring thickness shall be equal to or greater than the wall of the pipe or fitting to which it is welded and it shall be continuously welded on both sides to the pipe or fitting. The angle leg shall not interfere with the flange bolt holes. The back-up flanges shall be supplied with the following nominal thicknesses.

<u>Nominal Pipe Size</u> (Inches)	<u>Flange Thickness</u> (Inches)
2-1/2 - 3	1/2
4	9/16
6 - 10	5/8
12 - 16	3/4
18 - 20	7/8
24 - 30	1

C. Couplings:

1. The piping will be shop prepared for pipe couplings where shown on the drawings or specified herein. The arched band type couplings shall be stainless steel of equal or superior alloy and wall thickness as the pipe and will be Depend-O-Lok type as manufactured by Brico or equal. Couplings will be Fixed - FxF, Expansion - ExE, or Fixed by Expansion - FxE as noted on the drawings or as required.
2. The couplings shall consist of 4 basic components: one piece housing, gasket assembly, bolts and nuts, and end rings as required for pipe restraint.
3. The coupling shall be of the arched, split-sleeve type which closes around pipe ends that are smooth for expansion or contraction requirements of pipe ends with steel end rings affixed for pipe and restraint requirements.
4. As the coupling closes, it compresses the elastomeric gasket beneath the arches of the sleeve to create the axial seal and the closure plate closes over the integral sealing plate and pad to create the radial seal.
5. The closure plates are secured together by bolts and nuts as specified.
6. The coupling shall permit a degree of angular pipe deflection, contraction and expansion as specified in the manufacturer's latest literature.
7. The gasket supplied shall be EPDM conforming to ASTM D-2000 for air service up to 240°F with intermittent exposure to 280°F.
8. The sealing members shall be comprised of 2 "O" ring gaskets and an elastomer sealing pad bonded to the integral sealing plate. Internal pressure is not required to affect the seal.
9. Bolts and nuts shall be S.S. conforming to ASTM A-276 T-304, minimum tensile strength 85,000 p.s.i.
10. The coupling shall be assembled with 3 bolts tightened to assure contact with the pipe. Follow manufacturer's recommendations regarding installation and tightening of bolts.
11. End rings shall be furnished with the couplings and shall be of the same material as the coupling housings.
12. At locations where pipe and restraint is called for on one (FxE) or both (FxFHD) sides of the coupled joint, steel end rings of the same material as the coupling housing shall be "skip" welded to the pipe ends in accordance with manufacturer's recommendations.
13. Prior to installation, couplings shall be coated on the I.D. and O.D. in accordance with coating specifications covering the pipe on which they are to be installed.

D. Joints:

1. Flanges shall be provided as a minimum at all flanged valves, meters, couplings, and other equipment. Couplings will be provided as shown on the drawings.
2. Pipe and fitting spools shall be shop fabricated to the fullest extent possible in 40'-0" maximum lengths with 7'-6" maximum widths for efficient commercial transport to the project site. Spools with fittings may exceed 40'-0" so long as length allows commercial transport. Smaller pipe spools shall be provided with joints as shown on the drawings for special handling, installation, and/or disassembly requirements.
3. All other joints required for shipping, handling and installation of the piping spools shall be band couplings.

E. Gaskets:

1. The Contractor shall supply and install rubber gaskets for flanged connection. They shall be suitable for use with 250° F air.

PART 3 - EXECUTION

3.01 FABRICATION AND INSTALLATION

- A. After the manufacturer of individual stainless steel fittings and pipe lengths, they shall be pickled by immersion in a tank containing an ambient nitric-hydrofluoric acid solution made up from Oakite Deoxidizer SS, or equal, and monitored to generally maintain a 25% or higher solution by volume of water. The duration of immersion shall be 15 to 20 minutes and may be supplemented by manually scrubbing or brushing with non metallic pads or stainless steel wire brushes. The acid treatment shall be followed by immersion in a rinse water tank, followed if necessary by a spray rinse. The stainless steel products shall then be allowed to air dry to achieve passivation.
- B. Welding of pipe spools shall be performed using welders and procedures qualified in accordance with ASME Section IX. Piping with wall thicknesses up to and including 11 gauge (0.125") shall be welded with the TIG (GTAW) process. Heavier walls shall be beveled according to procedure, root pass welded with the TIG (GTAW), and have subsequent weld passes performed using the TIG (GTAW), MIG (GMAW), or Metallic Arc (SMAW) process. Filler metal of equal or superior ELC grades only shall be added to all welds to provide a cross section at the weld equal to or greater than the parent metal. Weld deposit shall be smooth and evenly distributed; weld reinforcement shall be as follows:

Weld Reinforcement (Max.)

<u>Wall Thickness</u>	<u>I.D.</u>	<u>O.D.</u>
Up to 12 Ga. (0.109")	1/16"	3/32"
11 Ga (0.125") to 3/16" Pl.	3/32"	1/8"
1/4" Plate & Larger	1/8"	3/16"

- C. Concavity, undercut, cracks or crevices shall not be allowed. Butt welds shall have full penetration to the interior surface, and inert argon gas shielding shall be provided to the interior and exterior of the joint. Angle face rings shall be continuously welded on both sides to pipe or fitting. Exterior welds, such as the back side of face rings or flanges and structural attachments, may be welded by the MIG (GMAW) or Metallic Arc (SMAW) process; however, care must be taken to avoid melting through to the interior surface on very light walls. Excessive weld deposits, slag, spatter and projections shall be removed by grinding. Welds on gasket surfaces shall be ground smooth.
- D. Spools shall be fabricated to the "Pipe Fabrication Institute" fabricating tolerances ES-3(1981).
- E. After shop fabrication into pipe spools, exterior welds shall be manually scrubbed or brushed with non-metallic pads or stainless steel wire brushes to remove weld discoloration, rinsed with clean water and allowed to air dry.
- F. All fabricated piping shall have openings plugged and flanges secured for storage and/or transport after fabrication. All fabricated piping shall be piece marked with identifying numbers or codes which correspond to the Contractor's layout and installation drawings. The marks will be located on the spools at opposite ends and 180° apart.
- G. The piping supplier during manufacturing, fabrication and handling stages, and the Contractor during handling and installation stages, shall use extreme care to avoid the contact of any ferrous materials with the stainless steel piping. All saws, drills, files, wire brushes, etc. shall be used for stainless steel piping only. Pipe storage and fabrication racks shall be nonferrous or stainless steel or rubber lined. Nylon slings or straps or alloy chains or cable shall be used for handling stainless steel piping. After installation, the Contractor shall wash and rinse all foreign matter from the pipe surfaces. If rusting of embedded iron occurs, the Contractor shall pickle the affected surface with Oakite Deoxidizer SS or equal, scrub with stainless steel brushes and rinse clean.
- H. After installation, the Contractor shall paint all iron flanges, couplings and appurtenances. Painting of the stainless steel pipe is not required. However, the Contractor shall be responsible for supplying and installing the stainless steel piping with a consistently clean surface. Identifying spool piece marks shall be removed with paint thinner or solvents and the entire stainless steel surface shall be washed with detergent and hot water and rinsed clean. Final marking of the pipeline will be in accordance with these specifications.

3.02 TESTING

- A. After installation, all stainless steel piping shall be tested for at least two hours as the working pressure corresponding to the class of pipe or as required by the Engineer. If any joint of pipe proves defective, it shall be repaired to the satisfaction of the Engineer.

END OF SECTION

SECTION 40 61 13
PROCESS INSTRUMENTATION AND CONTROLS SYSTEM
GENERAL PROVISIONS

PART 1 - GENERAL

1.01 SUMMARY OF WORK INCLUDED

- A. Furnish and install all instrumentation and controls hereinafter specified to perform the intended function. This shall include all labor, materials, plant facilities and equipment, performance of all work necessary to complete, make factory tests, prepare and load for shipment, deliver to the site, provide programming, calibration, installation supervision, system start up, services and incidentals required to completely furnish and install the instrumentation and control system upgrades as specified herein and shown on the Drawings.
- B. Provide all investigation work required to establish the use and configuration of the as found hardware and software of each control signal affected under this contract.
- C. All equipment, materials, programming and services hereinafter termed "the system", shall be integrated by the Process Instrumentation and Control System (PICS) integrator who, with the contractor, shall coordinate and have responsibility for interconnecting with equipment now existing and/or being installed under this or other contracts as shown on the drawings and loop diagrams.
- D. Auxiliary and accessory devices necessary for system operation or performance such as transducers or relays to interface with existing equipment or equipment provided under other sections of this Specification shall be included whether specified or not.
- E. Attention is directed to the fact that the Instrumentation and Control System shall be furnished by a single pre-qualified system integrator (PICS) who shall provide all the services, equipment and appurtenances required to achieve a fully integrated and operational system. To facilitate the owner's future operation and maintenance, products shall be of the same major instrumentation manufacturer with panel mounted devices of the same type and model as far as possible.
- F. Substitutions on functions or equipment specified will not be acceptable. To ensure the interchangeability of parts, the maintenance of quality, the ease of interfacing between the various sub systems and the establishment of minimums with regard to ranges and accuracy, strict compliance with the above requirements shall be maintained. To ensure compatibility between all equipment, it shall be the responsibility of the system supplier hereunder to coordinate all interface requirements with existing equipment and with mechanical and electrical system suppliers and furnish any signal isolation devices that might be required.
- G. Equipment shall be fabricated, assembled, installed and placed in proper operating condition in full conformity with detail drawings, specifications, engineering data, instructions and recommendations of the equipment manufacturer as approved by the Engineer.
- H. Equipment removed during this work shall become the property of the owner.
- I. All equipment and installations shall satisfy applicable national, state and local mechanical and electrical codes.

- J. Document all changes to the plant's control system, including the updating of the plant's existing control system documentation to reflect changes made during construction and discrepancies found during the investigation work.
- K. Furnish, install, connect, configure and test PLC hardware, and software products and related items. Coordinate Process Control Network addressing schemes with Owner and incorporate agreed upon scheme for all equipment on the PCS including vendor supplied equipment.
- L. Furnish and install all equipment enclosures, power supplies, interconnecting cables, and support software and equipment required for a complete and functional system.
- M. Furnish and install all conduit, conductors, terminal boxes, and appurtenant equipment shown on the Drawings, hereinafter specified, and/or required for a complete and fully functional installation to the satisfaction of the Engineer.
- N. Configure all equipment to operate satisfactorily and demonstrate that the system is properly operating. Assist in the configuration and setup of all Variable Frequency Drive parameters. The setup shall include data access via the Process Control Network.
- O. Inspect equipment provided under this Section prior to shipment to project site.
- P. Provide training on the OIT hardware and software supplied and implemented under this contract.
- Q. Provide a full operational system as described in the Function Descriptions and Control Strategies section of this specification.

1.02 REFERENCES, CODES AND STANDARDS

In general, the installation for the Process Instrumentation and Control System shall comply with the following standards:

ANSI: American National Standards Institute
 IEEE: Institute of Electrical and Electronics Engineers
 ISA: Instrumentation, Systems and Automation Society
 UL 508 - Standards for Safety, Industrial Control Equipment.
 NEMA ICS 1 - General Standards for Industrial Control and Systems.
 NEMA ICS 2 - Standards for Industrial Control Devices, Controllers and Assemblies.
 NEMA ICS 3 - Industrial Systems.
 NEMA ICS 6 - Enclosures for Industrial Controls and Systems.
 NEMA ICS 250 - Enclosures for Electrical Equipment.
 NFPA 79 - Electrical Standard for Industrial Machinery
 UL 698A Intrinsic Safe Circuits.

1.03 ABBREVIATIONS AND DEFINITIONS

HMI	Human/Machine Interface
I&C	Instrumentation and Control
I/O	Input / Output
LOS	Line of Sight
NEC	National Electrical Code
PC	Personal Computer
PCN	Process Control Network
PCS	Process Control System
PLC	Programmable Logic Controller
OIT	Operator Interface Terminal
SCADA	Supervisory Control and Data Acquisition
UPS	Uninterruptible Power Supply

Process Control System - A complete, integrated system of PLCs, PCs, Windows-based servers, instruments, devices, wireless and wired process control networks, software, application Engineering, and ancillary equipment for monitoring and control of wastewater collection and treatment facilities.

Process Control Network - A complete, integrated and secured communication network consisting of equipment and cabling that provides communications between components of the Process Control System.

System Integrator - Organization, whose principle function is design, program, configure, manufacture, install and service of PCS. An organization, under the direction of the Contractor, who shall assume complete responsibility for: Detail Design, manufacture, installation, configuration, technically advising on and certifying correctness of installation, testing and adjusting, documenting and starting-up, and training of the complete PCS.

1.04 QUALITY ASSURANCE

- A. Contractor shall engage the services of a qualified System Integrator for the purposes of furnishing the Process Control System, providing technical assistance on the installation of System and certifying the correctness of said installation.
- B. The Contractor shall use only the approved system suppliers and must name his proposed system suppliers on the bid document.
- C. Equipment shall be latest and most modern design at time of Notice to Proceed.
- D. All software and firmware used in this Project shall be latest version that is compatible with each other, as of the Notice to Proceed.
- E. Like items of Equipment shall be end products of single manufacturer to achieve standardization for maintenance, spare parts, operation, and service.
- F. PCS components shall be grounded in accordance with NEC requirements.

1.05 SEQUENCE OF CONSTRUCTION

- A. The contractor shall begin the submittal process within two weeks after notice to proceed by submitting the name of the proposed System Integrator along with all information required to determine the adequacy of the proposed System Integrator.

- B. To ensure timely performance of the Contract and the System's conformance with Specifications, coordination meeting(s) shall be held during the project. Within 45 days of date of Contract Time commencement, submit Progress Meeting schedule for final coordination by Owner/Engineer, Contractor and Systems Integrator.
 - 1. Submit also the Submittal Schedule and Project Activity Schedule for final review.
 - 2. Progress Meetings shall be held at the project site and designated by Owner with Owner/Engineer's, Contractor's and System Integrator's representatives in attendance.
 - 3. Purpose of Progress Meetings is to obtain Owner/Engineer's clarification on intent of Contract Documents during Submittal preparation and prior to HMI and PLC software configuration at no additional cost to Owner.
 - 4. Progress Meeting(s) shall cover following:
 - a. Review of functional descriptions describing equipment operation.
 - b. Owner/Engineer selection of options.
 - c. Owner/Engineer review documentation
 - 5. Prepare and submit Startup Schedule, coordinated with overall Construction Schedule including the following:
 - a. Factory Acceptance Test(s).
 - b. Review of Wiring Sign-Off forms by Owner/Engineer.
 - c. I/O checkout by System Integrator.
 - d. Plant startup.
 - e. Training.
 - f. Post startup services
- C. Within one month after approval of the System Integrator, all hardware and software product submittals shall be delivered to the Authority.
- D. Within two months after approval of the System Integrator, detailed installation submittals shall be delivered to the Engineer.
- E. All power, control and instrumentation wiring associated with equipment, panels, devices, etc. to be removed and replaced shall be identified, marked and then disconnected to make the equipment safe. Refer to any applicable demolition drawings for more details. Notify the Owner prior to disconnection of any existing equipment.
- F. All work shall be coordinated with plant maintenance personnel and approved by plant operations personnel prior to beginning any work.
- G. Written consent from the Owner must be obtained not less than one week prior to carrying out any portion of the work which requires interruption of service.
- H. Plant operations shall be notified no less than 24 hours prior to beginning any work that requires disruption of plant operation.
- I. Complete any work that can be performed without interference to the existing operation of the plant control system, such as conduit and cable installations, prior to disconnecting any existing control equipment.
- J. Provide and implement a workaround to address any Plant control or monitoring process that is affected by temporary or permanent work being performed under this contract. Submit this plan to the Authority for review.

- K. Train operators in the functional operation of the new equipment.
- L. Demonstrate that the new and existing equipment is properly configured and operating by displaying process data at the local workstation and at other workstations on the existing SCADA system and verifying the accuracy of the displayed data.

1.06 INSUFFICIENT INSTRUCTION

- A. The Contractor shall furnish and install all materials and equipment which are reasonably inferable to be part of the complete installation.
- B. If, in the opinion of the Contractor, any work shown on details or called for under these Specifications is insufficiently specified or specified in such a manner as to make it impossible for him to produce first-class work which will meet the approval of the Owner, he shall notify the Owner before proceeding with the work and, if he fails to refer such instances to the Owner, no excuse for poor workmanship will be entertained.

1.07 FIELD ENGINEERING

- A. Where dimensions are shown or indicated, the information given is approximate only, and is not warranted by the Engineer to be either complete or correct. The Contractor shall verify actual existing conditions and dimensions in the field before ordering materials or starting construction.
- B. Drawing details indicate the general location and arrangement of conduit, wiring devices, equipment, and other products. The Contractor shall adjust the indicated locations (subject to approval in the field) as necessary to:
 - 1. Comply with all applicable code requirements.
 - 2. Permit access for construction, inspection, testing, operation, and maintenance.
 - 3. Avoid conflict with pipes, mechanical equipment, structural openings (e.g., doors), and other obstructions, as built, whether or not they are shown on the Drawings.
 - 4. Produce a neat, workmanlike arrangement.
- C. The Contractor shall determine the proper connection points for all power, control, and signal wiring, regardless of whether the connection points are in equipment furnished under this Contract, in equipment furnished by others, or in existing equipment.
- D. The Owner will make available to the Contractor any reference drawings. However, the Owner does not guarantee the correctness, completeness, or availability of reference drawings. Should the Contractor choose to rely upon the reference drawings, he does so at his own risk.
- E. The Contractor shall coordinate the making and sealing of all holes through structures to accommodate electrical conduits and supports for electrical equipment and shall submit working drawings thereof for the Owner's approval.
- F. The Contractor shall ensure that proper service is provided to all mechanical equipment requiring electricity for power or control.

1.08 SUBMITTALS

The following information shall be provided in tabbed, booklet format covering all Project work. This is a comprehensive list and all items may not apply to this particular project.

- A. Submit detailed information for each instrument or control device including manufacturer's descriptive literature and a specific data sheet for each device and its configuration which shall include as a minimum.
 - 1. Tag number per the loop diagrams.
 - 2. Product (item) name used herein and on the contract drawings.
 - 3. Manufacturer's complete model number.
 - 4. Location of the device.
 - 5. Input/Output characteristics.
 - 6. Range, size and graduations.
 - 7. Physical size with dimensions, enclosure NEMA classification and mounting details.
 - 8. Materials of construction of all components.
 - 9. Instrument or control device sizing calculations, where applicable.
 - 10. Certified calibration data on all flow metering devices.
 - 11. Accuracy, resolution, hysteresis and frequency response.
- B. Panel Layout Drawings
 - 1. Drawings shall show all panel mounted devices to scale and dimensioned and shall include legend.
 - 2. Include cross reference to a bill of material for components used.
 - 3. Component designations shall match those used on elementary schematic diagrams and physical component labeling required
- C. Elementary Schematic Diagrams - Ladder type circuit diagrams prepared to facilitate the understanding of the system function and maintenance and fault detection.
 - 1. Control devices shall be shown between vertical lines that represent control power wiring, with the left line representing control circuits common and right representing operating coils common except where permitted by Clause 9 of NFPA 79.
 - 2. Control devices shall be shown on numbered horizontal lines (rungs) between the vertical lines.
 - 3. Drawings shall include a cross referencing scheme used in conjunction with each relay, output device, limit switch, and other devices so that any contact related to a device can be readily located on the drawing.
 - 4. Component designations shall be included for all devices, with the same designations used on Panel Layout Drawings.
 - 5. Each panel terminal within a terminal strip shall be numbered; when multiple terminal strips exist, each shall be given a unique identification. Terminal strip identification shall be included on Panel Layout Drawings.
 - 6. All wires shall be numbered. Wiring and devices external to panel shall be clearly identified.
 - 7. Control devices shall utilize the symbology depicted in NFPA 79 and IEEE315.
 - 8. Switch symbols shall be shown with utilities turned off and devices in their normal starting condition. Include control settings on the diagrams when available.
- D. Panel Interconnection Diagrams - Wiring interconnection diagrams prepared to show all signal and power wiring for external connections to control panels provided for Project.
 - 1. Wire and cable tags information shall be provided to Contractor in an electronic format for in physical wire and cable tagging.

2. Drawings prepared on a per control panel basis.
 3. Show interconnecting wiring, field device, control panel, and provision for 2 field located termination cabinets.
 4. Interconnecting wiring shall include wire and cable tag numbers.
 5. Field device information shall include device tag and description, signal description, signal electrical characteristics, and range.
 6. Control panel information shall include terminal strip identification and terminal number.
 8. Drawings shall indicate source of control signal power.
 9. Prepare drawings in accordance with requirements of NFPA 79.
- E. PLC Equipment Layout Drawing including processing equipment, I/O components, power supplies, and peripheral devices.
 - F. PLC data base list with I/O module cross reference identification for each PLC processor.
 - G. PLC documentation describing memory type, size and structure; listing of I/O; data table memory and size of memory available for all programs.
 - H. PCS Equipment Layout Drawings including detailed enclosure layouts for servers, switches and communications systems with overall dimensions and equipment bill of materials.
 - I. Software user manuals for all applications, including operating system, describing programming methods and procedures, utilities, diagnostics, documentation, and system support functions. Documentation covering all custom software or programming proposed or required for this Project.
 - J. Network information including detailed block diagram showing system hardware and components; operating systems and software with revision numbers indicated; format, protocol and procedures for Process Control Network communications; on-line and offline capabilities for programming, system utilities and diagnostics; recommended test equipment.
 - K. Process Control Network Drawings - Drawings shall show connections between connected Process Control System devices including servers, HMIs, PLCs, radios, and network devices. Drawings shall indicate network domain and device addresses, subnet masks, gateways, and other pertinent network address information for both Ethernet and Devicenet systems.
 - L. Detailed fiber optic system layout drawings including patch panel connections, cable ID and color code, and equipment bill of materials.
 - M. Electrical power, UPS, Grounding, and DC Power Schematics for all equipment.
 - N. Heat calculations for all enclosures.
 - O. UPS sizing calculations.

- P. List of special tools (including software) required for instrument calibration, startup, checking, testing, parts replacement, troubleshooting, and maintenance of all components of the Process Control System. Identify any special tools specially designed or adapted for use on parts of this system.
- Q. Test Outline and Procedure Submittal - A detailed description of each specified test procedure and demonstration shall be submitted for approval
- R. Spare and Expendable Items Submittal - provide a list of recommended spares and expendable items as recommended by System Integrator in sufficient quantities to sustain the Process Control System for a period of 3 year after acceptance. A total purchase cost for the recommended list shall be provided in addition to the unit cost for each item. The cost of obtaining spare and expendable items selected by Owner will be addressed as a Change Order at the Owner's discretion.
- S. Operation and Maintenance (O&M) Data

1.09 FINAL DOCUMENTATION

- A. Prior to final acceptance of the system, eight (8) sets of Operating and Maintenance manuals covering instructions and maintenance on each type of equipment shall be furnished as noted herein.
- B. The instructions shall be bound in three ring binders with drawings reduced or folded for inclusion and shall provide at least the following as a minimum.
 - 1. A comprehensive index.
 - 2. A complete "As Constructed" set of approved shop drawings.
 - 3. A complete list of the equipment supplied including serial number, ranges and pertinent data.
 - 4. Full specifications on each item.
 - 5. System schematic drawings "As Constructed" illustrating all components, piping and electrical connections of the systems supplied under this section.
 - 6. Detailed service, maintenance and operation instructions for each item supplied.
 - 7. Special maintenance requirements particular to this system shall be clearly defined, along with special calibration and test procedures.
 - 8. The operating instructions shall also incorporate a functional description of the entire system with references to the system's schematic drawings and instructions.
 - 9. Complete parts lists with stock numbers and name, address and telephone number of the local supplier.

1.10 SOURCE QUALITY CONTROL

- A. The manufacturers of the equipment and fabricators of panels and/or cabinets supplied under this section shall allow the engineer and/or owner to inspect and witness the testing of the equipment at the site of fabrication. Equipment shall include the cabinets, special control systems and other pertinent systems and/or devices. A minimum of ten (10) working days notification shall be provide to the Engineer prior to testing. No shipments shall be made without the Engineer's approval.

1.11 PRODUCT HANDLING

- A. After completion of shop assembly, factory test and approval all equipment, cabinets, panels and consoles shall be packed in protective crates and enclosed in heavy duty polyethylene envelopes or secured sheeting to provide complete protection from

damage, dust and moisture. Dehumidifiers shall be placed inside the polyethylene coverings. The equipment shall then be skid mounted for final transport. Lifting rings shall be provided for moving without removing protective covering. Boxed weights shall be shown on shipping tags together with instructions for unloading, transporting, storing and handling at jobsite.

- B. Special instructions for proper field handling, storage and installation required by the manufacturer for proper protection shall be securely attached to each piece of equipment prior to packaging and shipment.
- C. Each component shall be tagged to identify its location, tag number and function in the system. Identification shall be prominently displayed on the outside of the package.
- D. A permanent stainless steel or other non-corrosive material tag firmly attached and permanently and indelibly marked with the instrument tag number as given in the tabulation, shall be provided on each piece of equipment supplied under this section.
- E. Equipment shall not be stored outdoors. Equipment shall be stored in dry permanent shelters and shall be adequately protected against mechanical and corrosive damage. If any apparatus has been damaged, such damage shall be repaired by the Contractor at his own cost and expense. If any apparatus has been subject to possible injury by water, it shall be thoroughly dried out and put through such tests as directed by the Engineer. This shall be at the cost and expense of the Contractor or the apparatus shall be replaced by the Contractor at his own expense.

1.12 WARRANTY

- A. Provide warranty in accordance with General Conditions.
- B. Furnish a copy of the warranty together with the operating instructions and maintenance data for the complete system.
- C. System defects and deficiencies shall be corrected by Contractor within 24 hours of notification if Owner does not have necessary replacement parts in stock and within 4 hours of notification if Owner has necessary replacement parts in stock. Failure to correct these items per these requirements may result in Contractor losing Maintenance Bond.

PART 2 - PRODUCTS

2.01 SYSTEM INTEGRATOR EXPERIENCE REQUIREMENT

- A. The Contractor shall utilize a System Integrator having the experience and knowledge, as defined herein, to undertake the work specified in this Section.
- B. Shall be regularly engaged in the design, installation, and servicing of wastewater treatment PCS.
- C. Shall demonstrate the ability to produce electrical and control logic diagrams in the level of detail required by this specification.
- D. Shall have previously executed a minimum of five (5) wastewater treatment PCS projects of similar size and complexity to this Project and incorporating PLCs and HMI platforms included in this Project.

- E. Shall have previously successfully executed Ethernet wireless and wired networked projects of comparable size and complexity to this Project.
- F. The person(s) performing the field I&C work as required by the Contract Documents shall have a minimum of five (5) years' experience on PLC-based systems.
- G. Provide, on-site, a field staff technician to commission the functional testing, start-up and training as required by the Contract Documents. The individual shall have authored and commissioned control logic for no fewer than three (3) projects of similar or greater complexity and shall have a demonstrated proficiency in authoring logic in PLC Function Block Language.
- H. Upon request of Owner and in addition to other specified requirements, Contractor shall provide a minimum of five (5) System Integrator references to confirm compliance with these requirements.

2.02 INSTRUMENTATION

- A. All instrumentation supplied shall be of the manufacturer's latest design and shall produce or be activated by signals which are established standards for the water and wastewater industries.
- B. All electronic instrumentation shall be of the solid-state type and shall utilize transmission signals which conform to all FCC and local requirements.
- C. Outputs of equipment that are not of the standard signals as outlined shall have the output immediately converted to compatible standard signal as for remote transmission.
- D. All instruments shall be provided with mounting hardware and floor stands, wall brackets or instrument racks as shown on the drawings, or as required.
- E. Equipment installed in a hazardous area shall meet Class, Group and Division as shown on the contract electrical drawings to comply with the National Electrical Code.
- F. All indicators and readouts shall be linear in process units.
- G. Electronic equipment shall be of the manufacturer's latest design utilizing printed circuitry and suitably coated to prevent contamination by dust, moisture and fungus. Solid state components shall be conservatively rated for their purpose to assure optimum long-term performance and dependability over ambient atmospheric fluctuations and 0 and 100 percent relative humidity. The field mounted equipment and system components shall be designed for installation in dusty, humid and slightly corrosive service conditions.
- H. All equipment, cabinets and devices furnished hereunder shall be heavy duty type designed for continuous industrial service. The system shall contain products of a single manufacturer, insofar as possible, and shall consist of equipment models which are currently in production. All equipment provided shall be of modular construction and shall be capable of field expansion.
- I. All electronic equipment shall be provided with radio frequency interference protection.

2.03 ELECTRICAL

- A. All equipment shall be designed to operate on a 60 Hz alternating current power source at a nominal 110 volts plus or minus 10 percent, except where specifically noted. All regulators and power supplies required for compliance with the above shall be provided between power supply and interconnected instrument loop. Where equipment requires voltage regulation, constant voltage transformers shall be supplied.
- B. All analog transmitter and controller outputs shall be 4-20 milliamps into a minimum load range of 0-750 ohms, unless specifically noted otherwise. All switches shall have double pole, double throw contacts rated at a minimum of 600 VA, unless specifically noted otherwise. Material and equipment used shall be UL approved wherever such approved equipment and materials are available. All equipment shall be designed and constructed so that in the event of a power interruption, the equipment specified hereunder shall resume normal operation without manual resetting when power is restored. UPS System shall be provided under this Division for control panel (CP). Refer to Division 26 Specifications for UPS requirements.

2.04 LIGHTNING/SURGE PROTECTION

- A. Lightning/surge protection shall be provided to protect the electronic instrumentation system from induced surges propagating along the analog and discrete signal and power supply lines. The protection systems shall be such that the protection level shall not interfere with normal operation but shall be lower than the instrument surge withstand level and be maintenance free and self-restoring. Instruments shall be housed in a suitable metallic case, properly grounded. Ground wires for all surge protectors shall be connected to a good earth ground and where practical, each ground wire run individually and insulated from each other. These protectors shall be mounted within the instrument enclosure or a separate NEMA 4X junction box coupled to the enclosure. The units shall be as manufactured by Innovation Technologies or approved equal.
- B. Power Supply - Protection of all alternating current (AC) instrument power supply lines shall be provided. Cabinet(s)/panel(s) and groups of field instruments, as approved by the Engineer, shall be protected by isolation transformers and surge suppressors. Individual field instruments shall be protected by individual gas tube surge suppressors.
- C. Signal Line - protection of all field analog, discrete, digital and telemetered signal lines shall be provided. Protection devices shall be installed at both ends and as close to the instrument being protected as possible. Where signal lines enter control rooms through an interface cabinet, the protection devices shall be mounted in the interface cabinet.
- D. Warranty - A five-year warranty shall be provided by the surge/lightning suppression equipment manufacturer. The warranty shall cover the replacement of all protected equipment for a period of five years after the date of acceptance.

PART 3 - EXECUTION

3.01 GENERAL INSTALLATION

- A. Instrumentation and accessory equipment shall be installed in accordance with the manufacturer's instructions. The locations of equipment, transmitters, alarms and similar devices shown on the drawing are approximate only. Exact locations shall be as approved by the Engineer during construction.

- B. Obtain in the field all information relevant to the relevant to the placing of process control work and in case of any interference with other work, proceed as directed by the Engineer and furnish all labor and materials necessary to complete the work in an approved manner.
- C. The instrumentation loop diagrams indicate the intent of the interconnections between the individual instruments. Any exceptions should be noted.
- D. The installation details on the drawings indicate the designed installation for the equipment specified. Where specific installation details are not specified or shown on the drawings, the American Petroleum Institute (API) Recommended Practice 550 shall be followed as applicable.
- E. All work shall be executed in full accordance with codes and local rulings. Should any work be performed contrary to said rulings, ordinances and regulations, the Contractor shall bear full responsibility for such violations and assume all costs arising therefrom.
- F. All equipment used in areas designated as hazardous shall be designed for the Class, Group and Division as required on the electrical drawings for the locations. All installation shall be in strict accordance with codes.
- G. Unless specifically shown in the contract documents, direct reading or electrical transmitting instrumentation shall not be mounted on process piping. Instrumentation shall be mounted on instrument racks or stands as detailed on the installation detail drawings. All instrumentation connections shall be provided with shut off and drain valves. For the differential pressure transmitters, three-way stainless-steel valve manifolds shall also be provided. For slurries, chemical or corrosive fluids diaphragm seals with flushing connections shall be provided.
- H. All piping to and from field instrumentation shall be provided with necessary unions, test tees, couplings, adapters and shut off valves.
- I. Field instruments requiring power supplies shall be provided with local electrical shut offs and fuses as required.
- J. Brackets and hangers required for equipment mounting shall be provided. They shall be installed in a workmanlike manner and not interfere with any other equipment.
- K. The system supplier shall investigate each space in the building through which equipment must pass to reach its final location. If necessary, the system supplier shall be required to ship his material in sections sized to permit passing through restricted areas in the building. The system supplier shall also investigate and make any field modifications to the allocated space for each cabinet, enclosure and panel to assure proper space and access (front, rear, side).
- L. The shield on each process instrumentation cable shall be continuous from source to destination and be grounded as directed by the manufacturer of the instrumentation equipment, but in no case shall more than one ground point be employed for each shield.
- M. Lifting rings from cabinets/assemblies shall be removed. Hole plugs shall be provided for the holes of the same color as the cabinet.

- N. The system supplier shall coordinate the installation, placing and location of system components, their connections to the process equipment panels, cabinets and devices subject to the Engineer's approval. He shall be responsible to ensure that all field wiring for power and signal circuits are correctly done in accordance with best industry practice and provide for all necessary system grounding to insure a satisfactory functioning installation. The Contractor hereunder shall schedule and coordinate his work under with that of the electrical work specified under applicable sections Division 26.

3.02 PLC INPUT/OUTPUT SIGNAL POWER SOURCE

- A. Except for 4-wire instruments, all analog loops shall be powered from respective process control panel.
- B. 120 volts alternating and direct current for Process Control System inputs shall be sourced from respective process control panel.
- C. 120 volts alternating and direct current for Process Control System outputs shall be sourced from respective location receiving control signal.

3.03 TESTS

- A. The Contractor shall furnish the services of the system suppliers' servicemen, all special tools, calibration equipment and labor to perform the tests. Certified copies of the tests shall be furnished in duplicate to the Engineer.
- B. Following connections, check-out and final adjustment of all panels, instruments, meters, monitoring and control devices, a performance check shall be made on each. Analog instruments and system inputs shall be tested at 0 percent, 25 percent, 50 percent, 75 percent, 100 percent, and 1001 percent of scale, as required. All status and alarm switches as well as all monitoring and control functions shall also be checked. Each device on the loop/logic diagrams must be signed off by the Engineer as being acceptable. Testing shall be done from the signal source (transmitter) to the Data Acquisition and Process Control System including all field wiring.
- C. If, during running of the tests one or more points appear to be out by more than the specified amount, the system supplier's servicemen shall make such adjustments or alterations as are necessary to bring equipment up to Specification performance. Following such adjustment, the tests shall be repeated for all specified points to insure compliance.

3.04 INSTRUCTION

- A. The Contractor shall furnish a system supplier's representative for a field training program to be run at the owner's plant site and consist of up to two (2) days instruction for two (2) of the owner's personnel. The program shall cover instrumentation debugging, troubleshooting, calibration and maintenance procedures and system operation. This training program will be held at a time chosen by the owner and will be exclusive of any instruction given at the time of system start-up.

3.05 SUBSTANTIAL COMPLETION

- A. Completion shall require the following process instrumentation and control work is successfully completed:
1. Owner's receipt of required site documentation including required O&M material.
 2. Owner's receipt of Fiber testing submittal.
 3. PLC and panel spare parts.
 4. "As Built" drawings
 5. Fully commented PLC program.
 6. Completion of specified training associated with equipment provided.
 7. Successful completion of the specified demonstration period.
 8. Owner's receipt of required tools.

END OF SECTION

SECTION 44 31 31
ODOR CONTROL BIOTRICKLING FILTER EQUIPMENT

PART 1 - GENERAL

- A. The work specified shall include furnishing and testing of all equipment and materials necessary to provide the Owner with a completely operational Biotrickling Filter Odor Control System for removal of hydrogen sulfide (H₂S) and other volatile organic compounds (VOC's) from the treated air.
- B. The Odor Control System shall consist of a fiberglass biotrickling filter vessel, internal structural members, media with support grating, mist eliminator, internal piping, liquid distributors, nutrient feed and storage system (if needed), irrigation valves, recirculation pump (if needed), air exhaust fan/blower, process control system control panel, ducting, and any other equipment or accessories required to provide a complete and functioning biotrickling filter odor control system. All major system components, vessel, blower and ductwork from the blower to the BTF shall be from the same manufacturer for single source responsibility. If specified by Owner, the odor control system shall also include an integral or detached polisher with carbon polishing media. See **Carbon Polisher** section for additional information.

1.01 PROCESS DESCRIPTION

- A. The system shall perform in accordance with the design basis. It shall be designed for continuous operation in a highly corrosive environment.
- B. The biotrickling filter odor control system shall utilize a high surface area synthetic/inert media to provide an optimal site for growth of microorganisms (aka: biomass). This media has a high surface/high void area for optimal treatment in a small footprint. Microorganisms that attach to the media are capable of removing H₂S and other odorous VOC's when they are contacted by these compounds in the odorous air stream. A blower conveys the odorous air from the odor source to the media at the bottom of the vessel where the air passes upward through the vessel and media. As the odorous air travels upward it comes in contact with the biomass where non-pathogenic sulfur oxidizing bacteria immobilized on the synthetic media remove H₂S and other odorous VOCs. The biotrickling filter odor control systems counter-current flow of air and water/nutrients enhances the mass transfer to the media where the biological sulfur reduction takes place degrading the odorous compounds to sulfuric acid and other soluble sulfates which are removed in the drain water. If needed, solution containing water and nutrients is conveyed from the sump onto the media via a recycle pump to maintain a healthy biological population. Neutralizing or oxidizing chemicals shall not be utilized to accomplish odor control within the biotrickling filter. If a supplemental nutrient formula is needed

for the odor control system to meet the design criteria, the manufacturer shall provide a reservoir and associated dosing system.

1.02 MANUFACTURERS

- A. The biotrickling filter supplier shall be experienced in the design, construction and successful operation of biotrickling filter odor control systems for the removal of hydrogen sulfide gas and other odor producing compounds from air ventilated from wastewater treatment systems.
- B. The biological odor control system shall be designed and manufactured by
 - 1. Heyward Florida Incorporated.
 - 2. Evoqua Water Technologies.
 - 3. Or Engineer Approved Equal.
- C. Systems utilizing organic, lava rock, stone or PUF media shall not be accepted.
- D. Vessels shall be fiberglass construction only. Systems using HDPE, PVC, Polypropylene, or PVC overlays shall not be accepted.

1.03 WARRANTY

- A. The complete biological odor control system and all components shall carry a 3-year "Full Replacement Warranty" that shall begin once the unit has been started and is meeting all performance requirements. The synthetic/inert biological media and support grating shall carry a 10-year non pro-rated full replacement warranty. Cost of removal and replacement of media shall be by Owner.

1.04 SERVICES OF MANUFACTURER'S REPRESENTATIVE

- A. The manufacturer shall provide the services of a qualified service technician who shall adequately supervise the installation and testing of all equipment furnished under this contract and instruct operating personnel in its proper maintenance and operation. The manufacturer shall provide service technician for at least four (4) trips no less than eight (8) days total for installation assistance, start up, and post start-up inspection of the equipment. Within the first year of operation a direct employee of the manufacturer (not local representative) shall make quarterly visits for one year after installation to insure proper operation and performance of the system. A report shall be generated and sent to the Owner which shall include inlet/outlet H₂S, airflow, pH readings, or any other required information needed for documentation of proper operation and performance. Emergency response for first year is 24-hour call back and five (5) business days on site at no cost to Owner.

- B. The biotrickling filter system with other associated equipment such as the blower, piping and controls shall be field-tested.
- C. Manufacturer shall supply all nutrients required for startup and testing and provide a 3-month supply after acceptance by owner. Owner shall be responsible for providing 20 – 25 gallons of seed sludge during startup.
- D. The startup and testing shall meet the performance guarantees described under performance requirements listed herein. All equipment shall show evidence of mechanical soundness, no evidence of liquid or gas leaks, no undue vibration and generally be structurally rigid when being tested.
- E. The manufacturer representative witnessing the biotrickling filter system startup and field test shall furnish the Owner a written report certifying that the unit is operating according to specifications.

PART 2 - PRODUCTS

2.01 GENERAL

- A. The biotrickling filter shall be cylindrically shaped fiberglass construction with upflow air passage and countercurrent liquid flow. The biotrickling filter shall include an engineered baffle to ensure 0% bypass of the air stream around any of the media bed.
- B. The water control system shall be capable of "Dual Mode" operation with the flexibility to operate in a constant liquid recirculation mode (uniform media pH) or intermittent freshwater mode (varying media pH) to allow for wider operational control for site specific odors.
- C. All parts for the odor control system shall be installed in strict accordance with the manufacturer's instructions and under the guidance of the manufacturer's field representative. All components shall be designed for operation in a highly corrosive environment. All exposed parts shall be suitable for direct sunlight.
- D. All materials of construction including miscellaneous hardware shall be resistant to attack by the corrosive compounds present in the air stream, as well as those present in the recirculating liquid, including biodegradation by-products. Nuts, bolts, and washers shall be 316 stainless steel.
- E. Manufacturer is responsible for the duct piping from the blower to the biotrickling filter vessel, and, if applicable, from the biotrickling filter vessel to the carbon polishing system. Contractor shall be responsible for piping from the wetwell to the suction side of the blower, as well as Sch. 80 PVC piping for the water, nutrients and drain.
- F. The system supplied is a biotrickling filter that requires nutrients. These nutrients can be provided from effluent water that meets specified quality or from on-site chemical nutrient addition.

2.02 PERFORMANCE REQUIREMENTS

- A. The Biotrickling filter system shall be designed for the following operating conditions and criteria:

Specified Air Flowrate (CFM)	600
Minimum EBRT (Empty Bed Residence Time) at specified air flow flow rate *	20 seconds
H ₂ S In, ppmv (maximum)	500
H ₂ S In, ppmv (average)	250
Minimum H ₂ S Removal Efficiency / 24 hr Avg.	99 %
Max. Pressure Loss Across Biological Reactor	2.0" wc

* Despite any manufacturer's claims, the owner shall strictly enforce the minimum EBRT requirements in order to achieve and maintain the most complete removal of odors as possible, and to allow for a "treatment buffer" for any increase in odor levels due to growth or any unforeseen circumstances.

2.03 NUTRIENT SYSTEM

- A. Supplier shall furnish any tank(s), pump(s), piping, and appurtenances for a complete and operational nutrient delivery system.
- B. The system may receive plant effluent water if available for nutrient supply. The manufacturer shall still be responsible for providing all necessary equipment for a supplemental nutrient delivery system.

2.04 BLOWERS

- A. Blowers shall be corrosion resistant cast aluminum or FRP direct/indirect drive.
- B. All internal and external blower hardware shall be 316 stainless steel.
- C. Motors shall be high-efficiency, 1.15 service factor, 3phase/60hz 208-230/460V. Motors shall be stainless steel washdown/inverter duty induction type motors with sealed lubricated bearings mounted on a corrosion resistant aluminum or stainless steel motor pedestal. No painted carbon steel bases shall be allowed. Bearings shall be heavy duty, self-aligning grease lubricated ball or roller type with a minimum 100,000 hour B-10 life. OSHA approved belt or shaft guard shall be provided.
- D. Blower impeller shall be dynamically balanced prior to assembly.

- E. Blower motor shall be operated by a VFD motor controller for precise air flow control to the biotrickling filter.
- F. Fan inlet/outlet shall be provided with a flexible rubber boot or expansion joint with stainless steel band or attachment hardware. The fan shall be anchored to the concrete pad without the need for vibration isolators.

Exhaust Fan Design Requirements	Value
Air Flow Rate / cfm	600
Total Pressure Drop (Biotrickling filter, Carbon Polisher, Duct Work)	
Motor HP (stainless steel washdown/inverter duty induction type)	2

2.05 BIOTRICKLING FILTER PROCESS CONTROL SYSTEM PANEL AND ACCESSORIES

- A. A HIBOCS process control system skid shall be provided to operate the exhaust fan, nutrient pump(s) (if required), actuator valve, recirculation pump (if required), instrumentation and all other system components. A 3ph/60hz/208-230/460V AC feed shall be supplied to the panel for use to power the system.
- B. The process control system panel shall be manufactured of FRP or stainless steel with all stainless steel mounting hardware where necessary. The HIBOCS control system skid shall include a NEMA 4X blower motor controller, 110V transformer, timers, flow meters, schedule 80 PVC piping, valves, nutrient feed pump, and nutrient tank in a complete packaged system for operational process control of the biotrickling filter.
- C. System supplier shall provide any and all necessary start-up or acclimation kits required to place the system into successful operation and be given to owner after startup.
- D. Spare Parts (to include but not limited to):
 - 1. Blower bearings.
 - 2. Blower belts.
 - 3. Nutrient pump rebuild kit.

2.06 CARBON POLISHER - Optional (Integral or detached)

- A. If specified, the manufacturer shall include an integral or detached fiberglass carbon polisher and carbon polishing media for final treatment/polishing of the air stream from the biotrickling filter.
- B. Detached carbon polishers shall include all interconnecting ductwork from biological system outlet to carbon polisher inlet.

- C. In order to assure proper media contact/detention time for odor removal, the carbon polisher shall be designed so that air flows do not exceed 20 cfm per cubic foot of media.
- D. The biologically treated air (99% hydrogen sulfide removed) shall pass upward through the carbon media bed and then be discharged to atmosphere.
- E. Manufacturer shall be responsible for providing initial supply of carbon polishing media.

NOTE: Carbon odor control polishing media life is dependent on the different types and concentration of odors and contaminants present in the airstream which will vary from site to site and season to season. Due to these changing conditions, carbon media life can be very challenging to determine without expensive air testing and continuous air monitoring. For these reasons, all carbon polishing media supplied with HICARB odor control systems DO NOT carry a warranty unless otherwise specified.

PART 3 - EXECUTION

3.01 GENERAL

- A. All parts for the odor control system shall be installed in strict accordance with the manufacturer's instructions and under the guidance of the manufacturer's field representative.

3.02 WORKMANSHIP (Fiberglass)

- A. Fiberglass Vessels: The finished laminate shall be free from visual defects such as foreign inclusion, dry spots, air bubbles, pin holes, pimples, delamination, exposed reinforcement (glass fibers), and runoff. The exterior surface shall be smooth, with no sharp projections. Care shall be taken to fill voids and crevices at joints and fittings. Upon request, representative laminate samples shall be sent to the Engineer prior to fabrication for approval of surface finish and visual defects. The installed, fabricated work shall be identical in surface finish and visual defects.

3.03 FIELD ACCEPTANCE TESTS

- A. General:
 - 1. The biotrickling filter system with other associated equipment such as the blower, carbon vessel (if required), piping and controls shall be field-tested.
 - 2. The owner shall furnish all labor and equipment to the manufacturer's technical representative for conducting the tests.

3. The test shall meet the performance guarantees described under performance requirements listed herein. All equipment shall show evidence of mechanical soundness, no evidence of liquid or gas leaks, no undue vibration and generally be structurally rigid when being tested.
4. The Manufacturer representative witnessing the Biotrickling filter system field test shall furnish the Owner a written report certifying that the unit is operating according to specifications.

B. Test Procedures

1. The performance tests shall be conducted at time of installation with odorous air streams present in wet well and without the need of supplemental H₂S.
2. Manufacturer shall be allowed a minimum of four (4) weeks of continuous and uninterrupted operation of the biological system for bacterial acclimation and any needed adjustments prior to conducting performance testing.
3. The odor control system shall be tested under actual operating conditions in order to demonstrate that it will perform as required. At which time air flow rates, recirculation rates and other controllable parameters must remain constant and recorded.
4. The test shall last at least twenty-four (24) consecutive hours with intermittent data logging from the inlet and outlet of the scrubber system using an OdaLog portable gas detection instrument. **Performance testing will also be required on quarterly visits as described previously.**
5. Hydrogen sulfide concentration shall be measured in the biotrickling filter inlet and outlet using freshly calibrated OdaLog meters.
6. A description of the performance and written report shall be submitted to Owner documenting proper operation and performance. The hydrogen sulfide removal efficiency shall be as specified in the performance requirements listed herein.
7. Any additional time required to achieve successful installation and operation shall be at the expense of the manufacturer and not the Owner.

END OF SCOPE OF WORK

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 for a 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 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 (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.
11. **Competitive Range** means the responsive submissions that meet the evaluation criteria and are considered to be reasonably susceptible of award.
12. **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.
13. **Contract** is a written agreement or purchase order issued for the purchase of goods or services.
14. **Contractor** means the person, firm or entity selling goods or services to the City under a Contract.
15. **Deliverables** means the goods, products, materials, and/or services to be provided to the City by a Bidder.
16. **Due Date** means the date and time specified for receipt of Responses to a Solicitation.
17. **End User** is a person, program, agency, or other eligible user who uses a contract to purchase a commodity or contractual service.
18. **Goods** are supplies, materials, or equipment.
19. **Intent to Award** is a document, published on Onvia/DemandStar, that informs the public and respondents of the City's decision to award a contract pursuant to a previously issued competitive solicitation.
20. **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.
21. **Issues** means points, matters, or concerns to be addressed during negotiations.
22. **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.
23. **Lowest Responsible Bidder** means the Bidder submitting Lowest Responsible Bid.

24. **Offer** means a complete signed Response submitted to the City in response to a Solicitation, such as a Bid submitted in response to an Invitation to Bid.
25. **DemandStar** is the official online repository for all City competitive solicitations.
26. **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.
27. **Pre-Bid 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.
28. **Price Analysis** is an evaluation of the total cost of a contract in order to determine if the price is reasonable.
29. **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.
30. **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 employment or practice.
31. **Protest** is a formalized process by which respondents have an opportunity to challenge a procurement practice or contract award.
32. **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.
33. **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.
34. **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.
35. **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.
36. **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.
37. **Scope** means the extent of the area or subject matter that something deals with or to which it is relevant.
38. **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.
39. **Services** include all work or labor performed for the City on an independent contractor basis other than construction.
40. **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.
41. **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.
42. **Stakeholder** means an individual, who is not likely to become a supplier, who has an interest in the commodities/contractual services needed.
43. **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.
44. **Subject Matter Expert** means a person who has working or expert knowledge about a particular topic or field.
45. **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.

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 www.demandstar.com.

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 this 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 this 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 they are authorized to sign this Response for the Bidder. 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 the Bidder 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 the Bidder 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 the joint venture, 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

Results from the evaluation committee 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 Policy.

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, 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 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 office of the Owner, 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 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 protestor.

12. BID TABULATION

Bidders who wish to receive a copy of the bid tabulation may obtain it via www.demandstar.com or on the City of Port Orange website, Bid opportunities page at www.port-orange.org/bids.aspx or by email purchdiv@port-orange.org.

13. BONDS

If this Solicitation requires submission of bid guarantee and performance bonds, there will be a separate page explaining those requirements. Responses submitted without the required bid bond or certified check shall be deemed non-responsive. When the Purchasing Manager deems it necessary, bid bonds/deposits shall be prescribed and are advertised in the public notices inviting bids. 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. Upon award, the successful Bidder may also be required to furnish and pay for a satisfactory contract one hundred percent (100%) Payment and Performance Bond which will be recorded by the City, at the Bidder's sole cost and expense, with the Clerk of the Circuit Court, Volusia County, Florida, and to enter into a written contract with the City of Port Orange. After recording, the City will furnish to the Bidder the recording information for the bond to evidence that the Bidder has met the requirements of Florida law. The City will bill the cost of recording to the Bidder. Payment and Performance Bonds shall also be recorded at the Bidder's expense in the Office of the Clerk of the Circuit Court, Volusia County, Florida. All bonds no matter which kind, are advertised in the Solicitation which appears in the newspaper. Unsuccessful Bidders are entitled to the return of their surety where the Purchasing Manager has required such. A successful Bidder shall forfeit any surety required by the Purchasing Manager upon failure on the part of the Bidder to enter into a contract within the time specified after the award of bid.

14. 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.

15. 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 Bidder 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.

16. CHANGE ORDER REQUEST NOTIFICATION

The Successful Bidder is responsible for giving the City of Port Orange, prior to the Contract expiration date, at least forty-five (45) calendar day's advance notice for any anticipated changes in price greater than \$25,000.00, 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.

17. CLEAN UP

Upon completion of the delivery of materials, the Bidder shall restore any/all public and private property which was 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 expense.

18. 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 City Manager and staff recommendation 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 Manager. Failure to comply with this procedure shall result in rejection/disqualification of said submittal without exception. Contact with staff, City Council members and the Evaluation Committee during a public meeting shall not be considered a violation of this requirement.

19. 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 notice 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.

20. 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.

21. 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.

22. CONTRACT

Any acquisition above the \$25,000 level shall be done through one of the formal competitive methods except upon City Council waiver and/or shall have City Council approval. Only the Purchasing Manager and/or City Manager, have the authority to obligate the City by entering into a written contract to purchase goods and/or services up to \$25,000.00. The City of Port Orange, Florida reserves the right to reject any and all Responses or to waive any and all non-substantial irregularity in Responses received, whenever such waiver or rejection is in the best interest of the City.

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 County 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 in the Proposal Submittal and Requirements Section 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 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, 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 "Bidder's Acknowledgement 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 "Statement of No Bid", 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. 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.

42. 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 \$10,000.00 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.

43. 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.

44. 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.

45. IDENTICAL TIE BIDS

When identical prices are received from two or more Bidders and all other factors are equal, priority for award shall be given to bidders in the following sequence:

1. Drug-free workplace pursuant to Section 287.087, Florida Statutes.
2. Certified service-disabled veteran.
3. Local businesses as defined in Section 2-275 of the Code of Ordinances.
4. Firm with the lowest volume of work on City projects within the last five years. The information will be based on information provided by the Bidder, subject to verification at the City's option.

46. 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.

47. 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.

48. 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.

49. INSURANCE CANCELLATION

No change or cancellation in insurance shall be made without thirty (30) days' 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.

50. **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 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 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 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.

<i>Standard Insurance Requirements</i>			
	Insurance	Standards	Additional Requirements
REQUIRED	<u>Workers' Compensation</u> The Bidder 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 bidder using an employee leasing company shall complete the Leased Employee Affidavit Form Exhibit.	<u>Contract Amount Limits</u> 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.
REQUIRED	Comprehensive General Liability (including Completed Operations and Contractual Liability)	<u>Limits:</u> 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 Bidder 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.
REQUIRED	Comprehensive Business, Automobile Liability to include all owned, hired and non-owned automobiles.	<u>Limits:</u> Auto Liability Body Injury and Property Damage: \$1,000,000 each occurrence \$1,000,000 aggregate	
<i>Additional Insurance Requirements</i>			
REQUIRED	Property Insurance Builders Risk. <u>Additional Coverage:</u>	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 - \$ <u>To be determined.</u>	
☐	Contractor Pollution Liability	Limits: Coverage - \$1,000,000	
☐	Errors and Omissions	Limits: Coverage - \$1,000,000	
☐	Umbrella Policy	Limits: Coverage – \$ <u>To be determined.</u>	
REQUIRED	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.		

51. INVOICES AND PAYMENTS

All invoices shall be sent to: City of Port Orange, Accounts Payable, P.O. Box 291759, Port Orange, Florida, 32129. 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 Bidder offers a payment discount. The City cannot make advance payments, make deposits in advance of receipt of goods, or pay C.O.D. Bidders should state any payment discount in the space provided on the bid form for construction services.

52. IRREVOCABILITY OF RESPONSES

Each Bidder agrees that Responses shall remain open until the effective date not to exceed 90 days after 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.

53. 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.

54. 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.

55. 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 operations and shall secure, at his expense, all licenses and permits necessary for construction and operation.

56. 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 he proposes to furnish.

57. LOCAL PREFERENCE

In accordance with City of Port Orange City Code 2-275, except where federal or state law, or any other funding source, mandates to the contrary, the City shall give preference to local businesses in the following manner:

(a) Competitive Bids

- (1) Port Orange Business: In any competitive bidding process where a bid submitted by a Port Orange business is within eight percent (8%) of the lowest and best responsible bid submitted by a non-Port-Orange business, then the Port Orange business shall have the opportunity to submit, within five (5) working days of the bid opening, a best and final bid equal to or lower than the amount of the original low bid. The bid shall then be awarded to the lowest and best responsible bidder.
- (2) Volusia County business: In any competitive bidding process where a Volusia County business is within five percent (5%) of the lowest and best responsible bid submitted by a business other than a Port Orange business or Volusia County business, then the Volusia County business shall have the opportunity to submit, within five (5) working days of the bid opening, a best and final bid equal to or lower than the amount of the original low bid. The bid shall then be awarded to the lowest and best responsible bidder.
- (3) Florida Business: In any competitive bidding process where a State of Florida business is within three percent (3%) of the lowest and best responsible bid submitted by a non-local business, then the Florida business shall have the opportunity to submit, within five (5) working days of the bid opening, a best and final bid equal to or lower than the amount

of the original low bid. The bid shall then be awarded to the lowest and best responsible bidder.

- (4) Tied Bid Preference: In case of a tie bid between a local business and a non-local business, the local business shall prevail. In case of a tie between two or more local businesses, the following order of preference shall control: first priority to Port Orange business, second priority to Volusia County business, and third priority to Florida business.

- (b) Definitions. The following words, terms and phrases, when used in this section, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Port Orange Business means a business having its headquarters and principal place of business within the City of Port Orange at least twelve (12) months prior to the bid or proposal opening date, as evidenced by a valid business tax receipt or such other documentation, to the City's satisfaction, demonstrating the physical business presence of the firm within the limits of the City of Port Orange.

Volusia County Business means a business having its headquarters and principal place of business within the County of Volusia, and not within the City of Port Orange, at least twelve (12) months prior to the bid or proposal opening date, as evidenced by a valid business tax receipt or such other documentation, to the City's satisfaction, demonstrating the physical business presence of the firm within the limits of Volusia County.

Florida Business means a business having its headquarters and principal place of business within the State of Florida, and not within Volusia County, at least twelve (12) months prior to the bid or proposal opening date, as evidenced by a valid business tax receipt or such other documentation, to the city's satisfaction, demonstrating the physical business presence of the firm within the limits of the State of Florida.

58. **MAINTENANCE**

Maintenance required for equipment Solicitation is preferred to be available in the City of Port Orange by a manufacturer-authorized maintenance facility.

59. **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.

60. **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 bidder under this section are the solicitation for or purchase of goods or services, or the subcontracting of work in performance of this contract.

61. **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.

62. 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 Consultant responsible for any excess costs occasioned thereby and may immediately cancel the contract.

63. NOTICE TO BIDDER

The employment of unauthorized aliens by any bidder is considered a violation of Section 274A (e) of the Immigration and Nationality Act. If the bidder knowingly employs unauthorized aliens, such violation shall be cause for unilateral cancellation of the contract.

64. 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. Bidder(s) may sell such commodities or services certified by the Division to State of Florida agencies at the bidder's option.

65. OTHER AGENCIES

- (a) All Bidders awarded contracts from this Bid may, upon mutual agreement, permit any municipality or other governmental agency to participate in the contract under the same prices, terms, and conditions, if agreed to by both parties.
- (b) It is understood that at no time will any city, municipality, or other agency be obligated for placing an order for any other city, municipality, or agency; nor will any city, municipality, or agency be obligated for any bills incurred by any other city, municipality, or agency. Further, it is understood that each agency will issue its own purchase order to the awarded Bidder(s).

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 would immediately follow the Pre-Bid Conference. Attendance to the Pre-Bid Conference is normally non-mandatory. 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 Proposal Form, the Bid Form (when a Bid Bond is permitted as proposal security), Certificate as to Corporate Principal, Public Entity Crimes Statement, Anti-Collusion Statement, and Drug Free Preference Statement must be properly executed in ink. Upon the prescribed Schedule of Unit Prices, all bid 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 Proposal. The Bidder shall sign his/her name and give his/her business address in the spaces provided therefore. If the Bid 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 ninety (90) days from the date of Response opening unless otherwise stated by the City. Responses may not be withdrawn before the expiration of ninety (90) days. Prices shall be firm, with no escalator clauses unless specified by the City. Responses may be withdrawn after ninety (90) 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 Pricing/Delivery Information 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 bidder 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 Schedule of Unit Pricing for each line item listed on the Bid Proposal 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 cannot be guaranteed. Items shall be ordered on an as needed, when needed basis. Exact quantities or estimated quantities cannot be predetermined.

72. PROPRIETY 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 Bidder during the term of contract, and the Bidder shall be held responsible for any damage to the property occurring by reason of his 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 bidder, 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

Bidder 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 Bidder does not transfer the records to the City.
- (d) Upon completion of the Contract, Bidder shall transfer to the City, at no cost, all public records in possession of the Bidder 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 Bidder does not comply with a public records request, the City shall deem the non-compliance a breach of this Contract, and the Bidder may be subject to penalties under Section 119.0701, Florida Statutes.

BIDDER QUESTIONS RELATING TO BIDDER'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.

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 competitor's 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 Bidder 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 Bidder involving transactions related to this Contract.

(b) The Bidder 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 Bidder 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, REBIDDING

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 Buyer 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 NEGOTIATION

The City reserves the right to negotiate with the selected Bidder the exact terms and conditions of the Contract.

86. RIGHT OF WITHDRAWAL

A bid may not be withdrawn before the expiration of ninety (90) days from the Response due date.

87. 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.

88. 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.

89. SAMPLES

Samples, when requested, must be furnished at, or before, Response 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.

90. SEPARATION AND DISTRIBUTION

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. 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: Michael Hall, Purchasing Buyer, Purchasing Office, a division of the Finance Department, Port Orange City Hall, 1000 City Center, 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 Responses deemed non-responsive 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 and name of the Bidder.

96. 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 <http://ccfcorp.dos.state.fl.us/index.html>. Contract documents shall be executed by the entity's duly authorized officer as evidence by entity records.

97. SUBCONTRACTING

The Bidder will not sub-contract or enter into any subcontracting agreements pertaining to this contract, without obtaining written approval from the City of Port Orange.

98. 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.

99. 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.

100. 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.

101. TERMINATION CONVENIENCE – NOTICE

The City of Port Orange reserves the right to terminate the contract for default if the Bidder breaches any of the terms therein, including warranties of the Bidder or if the Bidder 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 Bidder 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 Bidder.

102. TERMINATION - NOTICE

Either party may cancel the contract at any time after award, unless otherwise specified. The City shall be required to give the bidder notice thirty days prior to the date of cancellation of the contract. The bidder shall be required to give the City written notice (60) sixty days prior to the date of cancellation of the contract. The City of Port Orange may terminate the contract without cause upon thirty (30) days written notice.

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 Bidder 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. 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, Contract, proposal or quote.

108. 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)

109. 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 product 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 CONDITIONS

PERIOD OF OFFER VALIDITY

Bids offered in this ITB must remain firm for a period of Ninety (90) days from the ITB opening date.

REPAIR OF DAMAGES

It is the Contractor's responsibility to repair any damages incurred in the area that is directly related to the project. When damages occur, the City of Port Orange representative is to be notified immediately and shall inspect the repairs upon completion.

SAFETY

Contractor shall comply with all applicable Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), State of Florida Safety Regulations and comply with all 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.

SITE CLEANLINESS

The Contractor shall give special attention to keeping the work site clean and free from trash and debris. Trash, debris and waste materials shall not be left on City premises but shall be disposed of at the Contractor's facilities. Site must be maintained free of trash, construction debris and cleaned every day.

CONTRACT TERM

The term of the contract shall be Three Hundred & Sixty-Five (365) days from the Notice to Proceed (Final Completion Time).

No subcontractor is allowed without written approval from the City of Port Orange.

TIMELINE

- A. Notice of Award: After bid opening and complete review of submitted bid information.
- B. Notice to Proceed: TBD by Public Works and Utilities.
- C. Final Completion Time: Not to exceed Three Hundred & Sixty-Five (365) days from the date of the Notice to Proceed.

ELIGIBILITY OF BIDDER

To be eligible to respond to this ITB, the Bidders must have prior experience working with the services described in this ITB. Please provide eligibility experience with your submittal.

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.

BID BONDS

A certified check or bank draft, payable to the City of Port Orange, Florida or a satisfactory bid bond executed by the Bidder and an acceptable surety, in an amount equal to five percent (5%) of the bid shall be submitted with each bid.

PAYMENT & PERFORMANCE BONDS

Upon award, the successful bidder will also be required to furnish and pay for a satisfactory contract one hundred percent (100%) Payment and Performance Bond to be recorded by the City, with the Clerk of the Circuit Court, Volusia County, Florida and to enter into a contract for services with the City of Port Orange. 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.

LICENSES AND PERMITS

Contractor is responsible for all applicable local and state licenses, permits and fees.

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/Tie Preference Statement
- _____ Form 7.5 – Public Entity Crimes Statement
- _____ Form 7.6 – Affidavit of Anti-Collusion
- _____ Form 7.7 – Statement of Bidder’s Qualifications
- _____ Form 7.8 – Professional References for Previous Experience
- _____ Form 7.9 – Listing of Subcontractors
- _____ Form 7.10 – Certificate as to Corporate Principal
- _____ Form 7.11 – Local Business Affidavit of Eligibility
- _____ Attachment H – CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION
- _____ Attachment 1 – Bid Proposal
- _____ Copy of License (Contractor, Sunbiz, etc.)
- _____ Bid Bond
- _____ Submission of one (1) original marked “ORIGINAL” and one (1) digital (CD or 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 Invitation to Bid at the prices or rates as finally negotiated. I agree that my bid will remain firm for a period of up to ninety (90) 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 Invitation to Bid.

I certify that all information contained in this Bid is truthful to the best of my knowledge and belief. I further certify that I am a 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 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

NAME, TITLE, TYPED

TELEPHONE NUMBER / FAX NUMBER

FEDERAL IDENTIFICATION #

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 _____, 20____, by _____, as _____ of _____, a _____. He or she is _____ personally known or _____ 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, Specifications, and any other documents accompanying or made a part of this invitation to Bid.

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 orders 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 following statement regarding Change Orders to the awarded Contract:

Name of Business

By: _____

Printed Name: _____

Title: _____

STATE OF _____

COUNTY OF _____

*The foregoing instrument was acknowledged before me by means of _____ physical presence or
_____ online notarization, this _____ day of _____, 20____, by _____ who
is personally known to me or who produced _____ as identification.*

My Commission Expires: _____

Notary Public, State of _____
Printed, typed or stamped name, commission and
expiration:

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 that are equal with respect to price, quality, and service are received by the city for the 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 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 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 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 any 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

By: _____

Printed Name: _____

Title: _____

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me by means of _____ physical presence or _____ online notarization, this _____ day of _____, 20____, by _____ who is personally known to me or who produced _____ as identification.

My Commission Expires: _____

Notary Public, State of _____

Printed, typed or stamped name, commission and expiration:

FORM 7.5 – SWORN STATEMENT UNDER SECTION 287.133(3)(A), FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES

(To be signed in the presence of notary public or other officer 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 an 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 of Administrative Hearings is attached to this statement. **(Draw a line through paragraph 7 if paragraph 6 above applies.)**

Name of Business

By: _____

Printed Name: _____

Title: _____

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me by means of _____ physical presence or _____ online notarization, this _____ day of _____, 20____, by _____ who is personally known to me or who produced _____ as identification.

My Commission Expires: _____

Notary Public, State of _____
Printed, typed or stamped name, commission and
expiration:

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 BIDDERS ACCEPTANCE OF THE TERMS AND CONDITIONS OF THE FOREGOING SPECIFICATIONS, CONTRACT AND PROVISIONS, 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: _____ ZIP CODE: _____

TELEPHONE: _____ FAX: _____

COMPLETION TIME: _____

F.E.I.N. NUMBER: _____

NO Bid may be withdrawn for a period of ninety (90) days subsequent to the submittal of the Bids, without the consent of the City of Port Orange.

NO BID (REASON): _____

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 7.8 is complete, true, and correct to the best of their knowledge and belief. If necessary, questions 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 contracting business under your present firm or trade name?
- F. Contracts on hand: (Schedule these, showing amount of each contract and the appropriate anticipated dates of completion.)
- 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.
- K. List your major equipment currently owned or leased.
- L. Experience in work similar to this type of project.
- M. Background and experience of the principal members of your organization, including the officers.
- N. Credit currently available: \$_____
- O. Give bank reference: _____
- P. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the Owner?
- Q. The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the Owner in verification of the recitals comprising this Statement of Bidder's Qualifications.

Name of Business

By: _____

Printed Name: _____

Title: _____

STATE OF _____
COUNTY OF _____

*The foregoing instrument was acknowledged before me by means of _____ physical presence or
_____ online notarization, this _____ day of _____, 20____, by _____ who
is personally known to me or who produced _____ as identification.*

My Commission Expires: _____

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 or
Services provided: _____
Contract Amount: _____
Start/End Date of Contract: _____
2. Company Name: _____
Contact Person: _____
City, State: _____
Telephone Number: _____
Email Address: _____
Description of goods or
Services provided: _____
Contract Amount: _____
Start/End Date of Contract: _____
3. Company Name: _____
Contact Person: _____
City, State: _____
Telephone Number: _____
Email Address: _____
Description of goods or
Services provided: _____
Contract Amount: _____
Start/End Date of Contract: _____

This document must be completed and returned with your Submittal.

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 to those required under the City's contract and 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.

	Contact Name	Phone	Current Client? Y or N	Number of years service provided	Description of service
1					
2					
3					

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 Engineer.** 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 _____

FORM 7.10 – CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the _____ secretary of the corporation named as Principal in the within Bid Bond; that _____, who signed the said Bid Bond on behalf of the Principal, was then of said corporation; that I know his signature, and his signature thereto is genuine; and that said Bid Bond was duly signed, sealed and attested for in behalf of said corporation by authority of its governing body.

Signature

AFFIX CORPORATE SEAL

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 State of Florida***THIS AFFIDAVIT IS SUBMITTED IN REFERENCE TO THE FOLLOWING SOLICITATION:**

RFSQ/RFP/ITN/BID/CONTRACT/PROJECT #(as applicable): _____

BUSINESS NAME: _____ CONTACT PERSON/TITLE: _____ MAILING ADDRESS: _____

CITY-STATE-ZIP: _____ Length of Time at Address Provided: _____

Physical Presence of Business: ☐ Headquarters, ☐ Manufacturing Facility, or ☐ Locally Owned FranchiseAnd within Legal Boundaries: ☐ The City of Port Orange ☐ Volusia County ☐ The State of

Florida FEIN (Federal Employer Identification Number): _____

BUSINESS STRUCTURE: ☐ Corporation ☐ LLC ☐ Partnership ☐ Sole Proprietorship☐ Other (Specify): _____

PHONE NUMBER: _____ FAX: _____

EMAIL: _____

****Please attach a valid business tax receipt, or other such documentation****

ATTESTATION – I understand that:

- In accordance with City Of Port Orange City Code 2-275, local businesses shall have five (5) business days from bid/proposal opening to submit a best and final bid for evaluation. To qualify: A Port Orange business initial bid must be within (8%) of the lowest and best responsible bid from a non-Port Orange business; A Volusia County business initial bid must be within (5%) of the lowest and best responsible bid from a non-Volusia County business; A State of Florida business initial bid must be within (3%) of the lowest and best responsible bid from a non-State of Florida business.
- A local business must have its headquarters, manufacturing facility, or locally owned franchise located within the legal boundaries of the City of Port Orange, Volusia County, or the State of Florida, as indicated herein, for at least twelve (12) months prior to the bid or proposal opening date and a valid business license, issued by the corresponding government agency. Post office boxes are not verifiable and shall not be used for the purpose of establishing said physical address. Bidders shall attach to this affidavit of eligibility with a bid or proposal, a copy of a valid business tax receipt or such other documentation, to the city's satisfaction, demonstrating the physical business presence of the firm within corresponding local limits.
- The preference does not apply to goods or services exempted by statute or prohibited by Federal law, State law, or other funding source restrictions.
- The preference established in this policy does not prohibit the right of the City, or other authorized purchasing authority, to compare quality or fitness for use of supplies, materials, equipment and services proposed for purchase and compare qualifications, character, responsibility and fitness of all persons, firms or corporations submitting bids or proposals.
- The information contained herein may be subject to verification.
- A bidder who misrepresents the local preference status of its firm in a proposal or bid submitted to the City of Port Orange will lose the privilege to claim local preference status, and shall lose eligibility to claim local preference for a period of one (1) year. The City Manager may also recommend that the firm be referred for debarment.

As an authorized representative of the firm, I certify that this firm complies fully with the above requirements.

Name of Business

By: _____

Printed Name: _____

Title: _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me by means of _____ physical presence or _____ online notarization, this _____ day of _____, 20____, by _____, as _____ of _____, a _____. He or she is _____ personally known or _____ 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

Attachment H

Certification Regarding Debarment, Suspension, Ineligibility And Voluntary Exclusion

Subcontractor Covered Transactions

- (1) The prospective subcontractor, _____, of the Sub-Recipient certifies, by submission of this document, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the Sub-Recipient's subcontractor is unable to certify to the above statement, the prospective subcontractor shall attach an explanation to this form.

SUBCONTRACTOR

By: _____
Signature

Name and Title

Street Address

City, State, Zip

Date

Note: Before contract is executed: Debarment Form – Attachment H Must be complete by each proposed Bidder/Contractor

This document must be completed and returned with your Submittal

BID COST/FEE PROPOSAL

"ATTACHMENT 1" SCHEDULE OF UNIT PRICING					
BID FORM					
CITY OF PORT ORANGE					
ITB # 21-09					
HERBERT & NOVA MASTER LIFT STATION IMPROVEMENTS AND UPGRADE					
Completed Attachment 1 Bid Proposal form MUST be included with Bid Submission					
Instruction to save Attachment from DemandStar website: Perform "File Save As" and save spreadsheet to your computer. Fill in pricing in highlighted cells, preferably electronically.					
Bidders are required to complete all fields shaded in green. All other fields will be automatically calculated.					
NAME OF BUSINESS:					
CONTACT PERSON:					
EMAIL ADDRESS:					
AUTHORIZED SIGNATURE:					
PROPOSAL PRICING					
ITEM #	DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL COST
A	BASE BID				
1	Pre-Construction Video	LS	1	\$ -	\$ -
2	Demolition of Existing Lift Station	LS	1	\$ -	\$ -
3	Bypass Pumping	LS	1	\$ -	\$ -
4	Complete Lift Station	LS	1	\$ -	\$ -
5	Electrical (Includes Generator)	LS	1	\$ -	\$ -
6	Tie Into Existing Force Main	LS	1	\$ -	\$ -
7	DIP Fittings	TN	0.5	\$ -	\$ -
8	Installation of Decorative Wall	LS	1	\$ -	\$ -
9	Odor Control	LS	1	\$ -	\$ -
10	Permit Allowance	LS	1	\$ -	\$ -
11	As-Built Plans	LS	1	\$ -	\$ -
12	Restoration	LS	1	\$ -	\$ -
				TOTAL BASE BID:	\$ -
1	Confirm the number of calendar days to complete upon receipt of PO:				DAYS
2	Warranty for Labor:				YEARS
3	Warranty for Materials:				YEARS
AWARD: THIS BID WILL BE AWARDED TO THE LOWEST, RESPONSIVE, RESPONSIBLE BIDDER					

This document must be completed and returned with your Submittal

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:

Description of Work:

NOW, THEREFORE,

A. If the principal shall not withdraw said bid within 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 within 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 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 _____, A.D. 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 original bid bond and financial statement of Surety Company).

PRINCIPAL:

Signature

Corporate Officer & Title

ATTEST:

Signature

Corporate Secretary (Affix Corporate Seal)

WITNESSES:

SURETY:

Attorney-in-Fact (signature)

Name & Title

Name of Local Resident Agent

City, State, Zip

Telephone:
A.M. Best No.: _____ NAIC No. : _____

ATTEST:

Signature

Corporate Secretary (Affix Corporate Seal)

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 forgoing bond on behalf of the Contractor named therein in favor of the City of Port Orange, Florida.

Signature of Affiant

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)

.....
END OF BID BOND

This document must be completed and returned with your Submittal

PAYMENT & PERFORMANCE BOND

RETURN RECORDED DOCUMENT TO:

City Clerk
1000 City Center Circle
Port Orange, Florida 32129-4144

Name of Project

City Project No. _____

Bond No. _____

Space Reserved for Recording Data

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 _____ **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 255.02(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.

(Capital Projects)
[MTR/sal 2016-02-26]

Page 1 of 2
Public Construction Bond

IN WITNESS WHEREOF, this performance and payment bond is executed in duplicate originals, each of which shall be deemed an original, this _____, day of _____, 20__.

Attest:

(Name of Principal)

(As to Corporate Principal) Secretary

By: _____

Name/Title: _____

(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.

AFFIDAVIT REGARDING WORKERS' COMPENSATION

IMPORTANT

This certificate must be completed and returned by the Awarded Bidder, upon issuance of a Notice of Intent to Award by the Purchasing Department of the City of Port Orange. Please note, the City of Port Orange does not accept exemptions for Workers' Compensation coverage.

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 said 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 and subscribed before me this _____ day of _____, 20__.

My Commission Expires: _____

Notary Public

Notary Public Printed Name

LEASED EMPLOYEE AFFIDAVIT

EXHIBIT CONTRACT # _____

☐ I hereby certify that I do not utilize an employee leasing company or employee 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 arrangement. 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: _____

LEGAL NOTICE OF COPYRIGHT

**YOU MAY NOT USE, COPY, MODIFY, OR
TRANSFER EJCDC DESIGN AND
CONSTRUCTION RELATED DOCUMENTS, OR
ANY COPY, MODIFICATION OR MERGED
PORTION, IN WHOLE OR IN PART, EXCEPT AS
DULY LICENSED BY THE NATIONAL SOCIETY
OF PROFESSIONAL ENGINEERS.**

**REPRODUCTION OF THE EJCDC DESIGN AND
CONSTRUCTION RELATED DOCUMENTS IN
PRINT OR MACHINE-READABLE FORMAT
FOR RESALE OR EDUCATIONAL PURPOSES IS
EXPRESSLY PROHIBITED. THESE
DOCUMENTS ARE TRANSMITTED ONLY FOR
A BONA FIDE CONTRACT DOCUMENT FOR
CITY OF PORT ORANGE CONSTRUCTION
PROJECTS UNTIL FURTHER LEGAL NOTICE.**

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

**City of Port Orange
1000 City Center Circle
Port Orange, Florida 32129**

THIS AGREEMENT is by and between _____ (“Owner”) and _____ (“Contractor”).

The Effective Date of this Agreement shall be _____ (If no date is specified then the Effective Date shall be the date on which the Agreement is signed by the last of the two parties.)

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:

Demolition of the existing building and generator, installation of a new generator and automatic transfer switch, wetwell coating system, top slab, piping, vales, valve vault and decorative wall.

ARTICLE 2 – THE PROJECT

- 2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

ITB 21-09 Herbert Street and Nova Road Master Lift Station Improvements and Upgrades

ARTICLE 3 – ENGINEER

- 3.01 The part of the Project that pertains to the Work has been designed by the Project Engineer, Kevin A. Lee, P.E. (“Civil Engineer”), and Keff Kurella, P.E. (“Electrical Engineer”). Kevin A. Lee, P.E. 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 of the Essence*

- A. All time limits for Substantial Completion and Final Completion as stated in the Contract Documents, particularly Paragraph 4.02 below, are of the essence of the Contract.
- B. All time limits for Milestone dates set forth in the Contract Documents are of the essence of the Contract.

4.02 *Days to Achieve Substantial Completion and Final Completion*

- A. Unless as otherwise modified in a Notice to Proceed issued after the Effective Date of the Agreement or an allowable extension of time in accordance with Paragraph 12.02 of the General Conditions, the Work shall be substantially completed within 330 days after the Effective Date of the Agreement.
- B. Unless as otherwise modified in a Notice to Proceed issued after the Effective Date of the Agreement or an allowable extension of time in accordance with Paragraph 12.02 of the General Conditions, the Work shall be finally completed in accordance with Paragraph 14.06 of the General Conditions within 365 days after the Effective Date of the Agreement.
- C. If a Notice to Proceed is issued more than 60 days from the Effective Date of this Agreement, then the dates for Substantial Completion and the Final Completion shall be extended by the same number of days. (For example, if the Notice to Proceed is issued 63 days after the Effective Date of the Agreement, then the Substantial Completion and Final Completion dates shall be extended by 63 days.)

4.03 *Liquidated Damages*

- A. Contractor and Owner agree and recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial loss that is not readily ascertainable as of the Effective Date of this Agreement if the Work is delayed and not Substantially Completed within the time period specified in Paragraph 4.02 above, plus any allowable extension of time in accordance with Paragraph 12.02 of the General Conditions. Contractor agrees and recognizes that any delay to Substantial Completion shall constitute a material breach. Accordingly, Owner and Contractor agree that as liquidated damages for delay, Contractor shall pay Owner \$0.00 for each day that expires after the date the Work is required to be Substantially Completed until the Contractor achieves Substantial Completion with the Work. Contractor and Owner agree and recognize that the liquidated damages set forth herein shall not be treated as a penalty and are just damages that are proportionate to any damages that might reasonably be expected to follow from a delay to Substantial Completion.
- B. Owner may withhold Contractor's final payment in order offset the liquidated damages that Contractor owes Owner. Owner may also withhold progress payments if Owner reasonably believes that Contractor's final payment will not sufficiency cover the liquidated damages that Contractor owes Owner.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraphs 5.01.A, 5.01.B, and 5.01.C below:

- A. For all Work other than Unit Price Work, a lump sum of: \$ _____

Any allowances specifically identified and called for in the Contract Documents are included in the above price in accordance with Paragraph 11.02 of the General Conditions.

- B. For all Unit Price Work in accordance with Paragraph 11.03 of the General Conditions, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the actual quantity of that item:

<u>UNIT PRICE WORK</u>					
<u>Item No.</u>	<u>Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Bid Unit Price</u>	<u>Bid Price</u>

See Attachments

Total of all Bid Prices (Unit Price Work) \$

The Bid Unit Prices set forth above are guaranteed prices. Although the Estimated Quantities are estimates and may increase or decrease based on determinations of Engineer, Contractor agrees and understands that the Bid Unit Prices shall remain the same irrespective of the quantities. Contractor understands that in agreeing to any Bid Unit Price it is agreeing to bear the risk associated with any material price increase or escalation. Owner agrees and understands that in agreeing to any Bid Unit Price it is agreeing to bear the risk associated with any material price decrease or reduction.

- C. 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 Progress Payments

- A. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions.

6.02 Progress Payments; Retainage

- A. Progress payments shall be made on account of the Contract Price on the basis of Contractor's Applications for Payment during performance of the Work in accordance with Paragraph 14.02 of the General Conditions. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed). Progress payments will be made in an amount equal to the percentage of the Work completed in accordance with the Schedule of Values, less the aggregate of payments previously made, less the retainage, and less such amounts as Engineer may determine Owner may withhold, including, but not limited to, liquidated damages.

- B. Owner shall withhold 5 percent of each progress payment as retainage.

6.03 Final Payment

- A. Final Payment inclusive of retainage shall be made to Contractor in accordance with Paragraph 14.07 of the General Conditions.

ARTICLE 7 – INTEREST

7.01 All monies not paid in strict accordance with Florida Statute §218.735 shall bear interest as provided for therein.

ARTICLE 8 – CONTRACTOR’S REPRESENTATIONS

8.01 In order to induce Owner to enter into this Agreement and in determining the Contract Price, Contractor makes the following representations:

- A. Contractor has carefully examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
- B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), if any, that have been identified in Paragraph SC-4.02 of the Supplementary Conditions as containing reliable "technical data," and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in Paragraph SC-4.06 of the Supplementary Conditions as containing reliable "technical data." Contractor’s receipt and study of such reports shall not relieve it of visiting the Site and becoming familiar with and satisfied with the Site conditions that may affect cost, progress, and performance of the Work.
- E. Contractor has considered the information known to Contractor; 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 Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (3) Contractor’s safety precautions and programs.
- F. Based on the information and observations referred to in Paragraph 8.01.E above, Contractor does not consider that 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 Documents.
- G. 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.

- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 Contents

- A. The Contract Documents consist of the following:
 - 1. This Agreement (pages 1 to 10, inclusive).
 - 2. Combination Payment and Performance Bond (pages 1 to 3, inclusive).
 - 3. General Conditions (pages 1 to 69, inclusive).
 - 4. Supplementary Conditions (pages 1 to 7, inclusive).
 - 5. Technical Specifications as listed in ITB 21-09 Herbert Street and Nova Road Lift Station Improvements and Upgrades, as identified in “Section 3 - Scope of Work” (pages 1 to 391, not attached, on file with Junos Reed, P.E., City Engineering and Construction Manager).
 - 6. Bid Set Drawings as listed in ITB 21-09 Herbert Street and Nova Road Lift Station Improvements and Upgrades (pages 1 to 19, inclusive).
 - 7. Addendum No. __ (pages __ to __, inclusive).
 - 8. Exhibits to this Agreement (enumerated as follows):
 - a. Exhibit No. 1 Contractor’s Bid Schedule of Unit Prices (pages 1 to __, inclusive).
 - b. Documentation submitted by Contractor prior to Notice of Award (N/A).
 - 1. Affidavit Regarding Workers’ Compensation (page 1, inclusive).
 - 2. Leased Employee Affidavit Exhibit (page 1, inclusive).
 - c. Exhibit No. 2 Contractor’s Proposal (pages 1 to __, inclusive).
 - d. Composite Exhibit No. 3 City’s Invitation to Bid Request No. 21-09 (pages 1 to __, not attached, on file with City Clerk).
 - 9. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
 - a. Notice to Proceed (pages ____ to ____, inclusive).

- b. Work Change Directives.
- c. Change Orders.
- B. The documents listed in Paragraph 9.01.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 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 Terms

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

10.02 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.

10.03 Successors and Assigns

- A. 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.

10.04 Severability

- A. Any provision 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.

10.05 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 10.05:
1. “corrupt practice” means the offering, giving, receiving, or soliciting of any thing 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.
- B. Contractor certifies that in the event a Lien is recorded on the Project by any person or entity providing labor, services, or materials with respect to any portion of the Work, it will immediately transfer such lien to its payment bond or take other appropriate action to immediately remove the encumbrance.

10.06 *No-Damage-for-Delay*

- A. 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 considered this no-damage-for-delay provision and understands that it is not entitled to any damages whatsoever for a delay to its Work.

10.07 *No Intended Third-Party Beneficiaries*

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

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement. Counterparts have been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or have been identified by Owner and Contractor or on their behalf.

CITY OF PORT ORANGE

Owner

By: Donald O. Burnette

Title: Mayor

Date: _____

Attest: Robin L. Fenwick, MMC

Title: City Clerk

Address for giving notices:

1000 City Center Circle

Port Orange, Florida 32129

(386) 506-5500

Contractor

By: _____

Title: _____

Date: _____

Attest: _____

Title: _____

Address for giving notices:

Telephone: (____) ____-____

E-Mail: _____

License No.:

**Engineers Joint Documents Committee
Design and Construction Related Documents
Instructions and License Agreement**

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You may not sublicense, assign, or transfer this license except as expressly provided in this Agreement. Any attempt otherwise to sublicense, assign, or transfer any of the rights, duties, or obligations hereunder is void.

This Agreement shall be governed by the laws of the State of Virginia. Should you have any questions concerning this Agreement, you may contact EJCDC by writing to:

Arthur Schwartz, Esq.
General Counsel
National Society of Professional Engineers
1420 King Street
Alexandria, VA 22314

Phone: (703) 684-2845

Fax: (703) 836-4875
e-mail: aschwartz@nspe.org

You acknowledge that you have read this agreement, understand it and agree to be bound by its terms and conditions. You further agree that it is the complete and exclusive statement of the agreement between us which supersedes any proposal or prior agreement, oral or written, and any other communications between us relating to the subject matter of this agreement.

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.

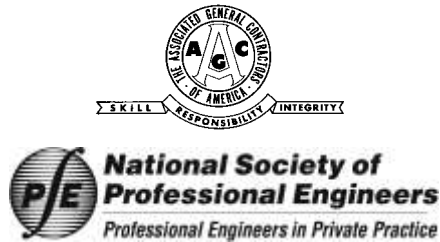
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These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor (EJCDC C-520 or C-525, 2007 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the Narrative Guide to the EJCDC Construction Documents (EJCDC C-001, 2007 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (EJCDC C-800, 2007 Edition).

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. 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 which is evidence of the agreement between Owner and Contractor covering the Work.
 3. *Application for Payment*—The form acceptable to Engineer and Owner which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 6. *Bidder*—The individual or entity who submits a Bid directly to Owner.
 7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
 9. *Change Order*—A document recommended by Engineer and/or Owner 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, issued on or after the Effective Date of the Agreement.
 10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
 11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; (iii) achieve Final Completion; and (iv) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.
15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work*—See Paragraph 11.01 for definition.
17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed by the last of the two parties.
19. *Engineer*—The individual or entity named as such in the Agreement.
20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *Final Completion* – This shall occur when Contractor, in the opinion of Engineer or Owner, performs and completes all corrective action associated with the Punchlist in addition to any other work required of Contractor under the Contract Documents.
22. *General Requirements*—Sections of Division 1 of the Specifications.
23. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
24. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

27. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
29. *Notice to Proceed*—A written notice given 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 under the Contract Documents.
30. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
31. *PCBs*—Polychlorinated biphenyls.
32. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
33. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
34. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
35. *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.
36. *Punchlist* – The detailed list of incomplete, unsatisfactory or unacceptable, or defective items that Contractor is required to complete to achieve Final Completion that is generated in accordance with Paragraph 14.06 of the General Conditions.
37. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
38. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
39. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
40. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

41. *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.
42. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, samples, product data, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
43. *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 for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
44. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
45. *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 at the Site.
46. *Substantial Completion*—The time and date at which the Work has progressed to the point where, in the opinion of Engineer, the Work is sufficiently complete, in accordance with the Contract Documents, so that the Work 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 thereof. 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 is intended.
47. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
48. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
49. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, 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 Subcontractor.
50. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
51. *Unit Price Work*—Work to be paid for on the basis of unit prices.
52. *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, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

53. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

- A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. 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 Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day:*

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

c. is failing or has been damaged.

E. *Furnish, Install, Perform, Provide:*

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean 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, shall mean 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, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.
- F. 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 Bonds and Evidence of Insurance*

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request such as the specific additional insured endorsement included in the liability policy) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5 and/or the Supplementary Conditions.

2.02 *Copies of Documents*

- A. At the request of Contractor, Owner or Engineer shall furnish to Contractor up to 5 hard copies of the Drawings and Specifications. Additional copies of the Drawings and Specifications will be furnished upon request at the cost of reproduction.

2.03 *Notice to Proceed; Starting the Work*

- A. 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 Agreement.

2.04 N/A

2.05 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer and Owner 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 Documents, and identifying the Substantial Completion and Final Completion dates;
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 / line-items 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.

2.06 *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 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, 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 instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial 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 for acceptability to Engineer or Owner as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted 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 the 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 component parts / line-items of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 Intent

- A. The Contract Documents are complementary; what is required by one 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. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents (*e.g.*, answering Requests for Information) shall be issued by Engineer as provided in Article 9.

3.02 Reference Standards

- A. Standards, Specifications, Codes, Laws, and Regulations
 1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement 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, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements and dimensions. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, 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) any standard, specification, manual, or code, or (c) 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 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04 below.
3. Contractor shall not be liable to Owner 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 the Contract Documents and checking and verifying pertinent figures therein and all applicable field measurements and dimensions.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); 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).
2. 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 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 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
 - 1. A Field Order;
 - 2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or
 - 3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

- A. Contractor and any Subcontractor or Supplier 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 editions; or
 - 2. 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.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting

from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor 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. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- B. *N/A*
- 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.

4.02 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions may identify:
 - 1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents and shall under no circumstance 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. Such "technical data" is identified in the Supplementary Conditions. Except for such limited reliance on such "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; or
 - 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.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to establish that any “technical data” on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
2. is of such a nature as to require a change in the Contract Documents; or
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 6.16.A), 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 as aforesaid) until receipt of written order to do so.

B. *Engineer’s Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner’s obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer’s findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition 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 meet any one or more of the categories described in Paragraph 4.03.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 Paragraphs 9.07 and 11.03; and
 - c. Contractor notifies Owner and Engineer of such condition within 5 days after first becoming aware of such condition.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew of the existence of such conditions at the time Contractor made a final 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
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 4.03.A within 5 days after first becoming aware of such condition.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or 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) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

- A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
 1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and
 2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all such information and data;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents;
 - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
 - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, 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 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer within 5 days. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that (i) they are attributable to the existence or location of any Underground Facility 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 existence or location, and (iii) Contractor notifies Owner and Engineer of such condition within 5 days after first becoming aware of such condition. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *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.

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and

drawings are not Contract Documents. Such “technical data” is identified in the Supplementary Conditions. Except for such reliance on such “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; or
 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 any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work or identified in a report listed in the Supplemental Conditions. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible or if such condition is caused by the negligence, recklessness, or intentional misconduct of Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) 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 4.06.E.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. An equitable adjustment shall be made in the Contract Price or Contract Times, 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. 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, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

- F. 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. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. N/A
- H. N/A
- I. N/A

ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish performance and payment bonds in accordance with Florida Statute §255.05, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. The obligations, duties, responsibilities, and requirements of Contractor set forth in this Contract shall be incorporated into Contractor's performance bond.
- B. All bonds shall be in the form prescribed by the Contract Documents. All bonds 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 shall show that it is effective on the date the agent or attorney-in-fact signed each bond. The performance and payments bonds shall be recorded in the public records in and for Volusia County, Florida. As a courtesy to the Contractor and to expedite recording, the City shall record the bond on behalf of the Contractor and shall cause a copy of the recording information to be provided to the Contractor by the Project Engineer.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in Florida or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed

or authorized in Florida to issue bonds or insurance policies for the limits and coverages so required.

5.03 *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. *N/A*
- F. In the event of any conflict between this Paragraph 5.03 and the specific insurance requirements of Contractor set forth in the Supplemental Conditions, the specific insurance requirements in the Supplemental Conditions govern.

5.04 *Contractor's Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed 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:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 - 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 - 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

- a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;
 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom;
 6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle;
- B. The policies of insurance required by this Paragraph 5.04 shall:
1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds for ongoing and completed operations, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
 2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
 3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraph 6.20 below and as otherwise set forth in the Contract;
 4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
 5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
 6. include completed operations coverage:
 - a. Such insurance shall remain in effect for 10 years after Substantial Completion.
 - b. Contractor shall furnish Owner and each other 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.

- C. Contractor shall be solely responsible for any insurance deductible or self-insured retention.
- D. In the event of any conflict between this Paragraph 5.04 and the specific insurance requirements of Contractor set forth in the Supplemental Conditions, the specific insurance requirements in the Supplemental Conditions govern.

5.05 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). Such policy shall identify both Contractor and Owner as named insureds. Contractor shall solely be responsible for any deductible. This insurance shall:
 - 1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
 - 2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, flood, windstorm, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
 - 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 - 4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 - 5. allow for partial utilization of the Work by Owner;
 - 6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.

B. *N/A*

- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. *N/A*

E. *N/A*

- F. Contractor's all-risk property insurance shall not terminate or expire if Owner elects to utilize or occupy any portion or portions of the Project prior to Substantial Completion. Contractor shall obtain an occupancy / use endorsement that allows Owner to utilize or occupy a portion or portions of the Project prior to Substantial Completion (such that if a temporary Certificate of Occupancy or Completion is issued for a portion(s) of the Project, the all-risk property insurance shall remain in full force).

- G. In the event of any conflict between this Paragraph 5.06 and the specific insurance requirements of Contractor set forth in the Supplemental Conditions, the specific insurance requirements in the Supplemental Conditions govern.

5.07 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their 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 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 Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (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. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Contractor as trustee or otherwise payable under any policy so issued.

- B. *N/A*
- C. *N/A*
- D. In the event of any conflict between this Paragraph 5.07 and the specific insurance requirements of Contractor set forth in the Supplemental Conditions, the specific insurance requirements in the Supplemental Conditions govern.

5.08 *Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Contractor and made payable to Contractor as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Contractor shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and, only if applicable, the cost thereof covered by an appropriate Change Order.
- B. Contractor as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Contractor's exercise of this power. If such objection be made, Contractor as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Contractor as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.
- C. 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.
- D. In the event of any conflict between this Paragraph 5.08 and the specific insurance requirements of Contractor set forth in the Supplemental Conditions, the specific insurance requirements in the Supplemental Conditions govern.

5.09 *Acceptance Insurance; Option to Replace*

- A. If Owner has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by the Contractor in accordance with Article 5 and/or the Supplementary Conditions on the basis of non-conformance with the Contract Documents, Owner shall so notify Contractor in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Contractor shall provide Owner such additional information in respect of insurance provided as the Owner may reasonably request. If Contractor does not purchase or maintain all of the insurance required of it by the Contract

Documents, Owner shall notify Contractor 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, which shall constitute a material breach of the Contract by Contractor. Without Owner's prejudice to any other right or remedy, Owner may elect to obtain equivalent insurance to protect its interests at the expense of Contractor, and a Change Order shall be issued to adjust the Contract Price accordingly.

- B. In the event of any conflict between this Paragraph 5.09 and the specific insurance requirements of Contractor set forth in the Supplemental Conditions, the specific insurance requirements in the Supplemental Conditions govern.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

- A. N/A

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

6.01 *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. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents. Contractor shall submit a Request for Information to Engineer seeking clarification as to any aspect of the Contract Documents as soon as practical to, among other things, maintain the orderly progress of the Work and avoid any delay to the Work.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent or superintendents, as appropriate, who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

6.02 *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 at all times maintain good discipline and order at the Site.
- B. 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 shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *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.
- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall 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 shall 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.

6.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer and Owner for acceptance (to the extent indicated in Paragraph 2.07) proposed monthly adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will be submitted with Contractor's Applications for Payment, as conditions precedent to payment, and will comply with any provisions of the General Requirements applicable thereto.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.
 - 3. All proposed Progress Schedules submitted to Engineer and Owner shall identify Contractor's critical path sequence of scheduled activities of the Work as well as earliest start dates for scheduled activities, the earliest finish date for scheduled activities, the latest start date for scheduled activities, and the latest finish date for scheduled activities. All float in the Progress Schedules shall belong to Owner to offset a delay to Contractor's critical path attributable to Owner or its agents.

6.05 *Substitutes and "Or-Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description 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 or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *“Or-Equal” Items:* If in Engineer’s sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an “or-equal” item, in which case review and approval of the proposed item may, in Engineer’s sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it 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; and
 - 3) it has a proven record of performance and availability of responsive service.
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
2. *Substitute Items:*
 - a. If in Engineer’s sole discretion an item of material or equipment proposed by Contractor does not qualify as an “or-equal” item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
 - b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
 - c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.
 - d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - 1) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,

- b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
- 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
 - b) 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
 - c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
- 3) will identify:
 - a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services; and
- 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.

- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. 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.

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

6.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection. Additionally, subject to Paragraph 6.06.B below, Contractor shall provide to Owner within 10 days from the Effective Date of this Agreement a written list of all Subcontractors (or other individuals or entities it plans on engaging to perform a scope of the Work), together with their Certificates of Insurance that must identify Owner as an additional insured. Subcontractors must identify Owner as an additional insured for purposes of ongoing and completed operations.
- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor
 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor and ensure that they perform the Work in a good and workmanlike manner and pursuant to the Contract Documents.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (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 any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *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 a particular 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 shall be disclosed by Owner in the Contract Documents.
- B. *N/A*
- C. *N/A*

6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. 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 opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *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. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear 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. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *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.

6.11 *Use of Site and Other Areas*

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

- 1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
- 2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
- 3. *N/A*

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall 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. At the completion of the Work Contractor shall remove from the Site 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 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 property to stresses or pressures that will endanger it.

6.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show as-built conditions and changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *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. 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, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. 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. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.

- D. 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.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.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 (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).
- F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of 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.

6.16 *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 threatened 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 thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

- A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*
 - a. Submit number of copies specified in the General Requirements.
 - b. Data shown on the Shop Drawings will 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 6.17.D.
 2. *Samples:*
 - a. Submit number of Samples specified in the Specifications.
 - b. 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 6.17.D.
- B. 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. *Submittal Procedures:*
1. Before submitting each Shop Drawing or Sample, Contractor shall have:
 - a. thoroughly reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
 2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
 3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop

Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. *Engineer's Review:*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. 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, conform to the information given in 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 (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.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's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures:*

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.

6.18 *Continuing the Work*

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements regarding payment or otherwise, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *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 and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper 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.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
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 or the issuance of a notice of acceptability by Engineer;
 6. any inspection, test, or approval by others;
 7. any correction of defective Work by Owner; or
 8. the achievement of Final Completion (including Contractor's completion of Punchlist items that were deemed satisfactory to Engineer).

6.20 *Indemnification*

- A. To the fullest extent permitted by Florida law including Florida Statute §725.06, Contractor shall indemnify and hold harmless Owner (including Owner's officers and employees) from liabilities, damages, losses, and costs, including, but not limited to, reasonable attorney's fees, 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. Contractor agrees and understands that the monetary limitation on the extent of its indemnification shall be \$1 million per occurrence or the per occurrence limits of its commercial general liability (CGL) insurance, whichever is greater, which bears a reasonable commercial relationship to the Contract and is hereby part of the project specifications and bid documents.
- B. To the fullest extent permitted by Florida law, Contractor shall defend Owner (including Owner's officers and employees) from claims, demands, and litigation asserted against Owner to the extent such claims, demands, or litigation are 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.
- C. Contractor agrees and understands that its obligation to indemnify, hold harmless, and defend as set forth in Paragraphs 6.20.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 incident 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.

6.21 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed 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 Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
 - 1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. 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. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, 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.

7.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 3. the extent of such authority and responsibilities will be provided.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.

- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C or as otherwise provided in Florida Statute §218.735.

8.05 *Lands and Easements; Reports and Tests*

- A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

- A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *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.

8.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

- A. N/A

8.12 *Compliance with Safety Program*

- 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 pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *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 Documents.

9.02 *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 9.09. 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.

9.03 *Project Representative*

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which 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. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

- A. 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, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the clarification or interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing as soon as practical (so as to maintain the orderly progress of the Work and to avoid any delay to the Work) but in no event later than 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred or render a written answer with respect to any Request for Information Contractor submits to Engineer seeking clarification as to an aspect of the Contract Documents. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. *N/A*
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents 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 shall 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 Paragraph 14.07.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 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *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 by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *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 as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
2. changes in the 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 a Work Change Directive; and
3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05 that are then resolved by the parties to the Agreement.

10.04 *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.

10.05 *Claims*

- A. *Engineer's Decision Required:* All Claims, except those otherwise waived pursuant to the Contract, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims. Owner, however, may, but is not required to, refer to Engineer its assessment of liquidated damages against Contractor in accordance with Paragraph 4.03 of the Agreement or any claim it has with respect to construction defects discovered after Final Completion.
- B. *Notice:* Unless as otherwise set forth herein, written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with detailed, supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event. A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event.
- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant take one of the following actions in writing:
 1. deny the Claim in whole or in part;
 2. approve the Claim; or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. *N/A*
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.
- G. All Claims Contractor submits for an adjustment in Contract Time or Contract Price shall be subject to the No-Damage-For-Delay provision in Paragraph 10.06 of the Agreement.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall 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. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall 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 shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall 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, who 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 shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors) employed for services specifically related to the Work. Attorneys and accountants shall not constitute a Cost of the Work.
5. Supplemental costs including 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, and hand tools not owned by the workers, 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.
 - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the 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 property insurance established in accordance with Paragraph 5.06.D), 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 shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall 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 telegrams, long distance telephone calls, telephone 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 Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, 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 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. 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.
- 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.

C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data. Owner shall have the right to inspect and audit Contractor's books and cost records at any time during the course of the Project and for three years after Final Completion. Owner must give Contractor 7 days written notice that it plans on inspecting and auditing Contractor's books and cost records.

11.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances specifically identified and called for 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:*
 - 1. Contractor agrees that:
 - a. 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
 - b. 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 on account of any of the foregoing will be valid.
- C. *Contingency Allowance:*
 - 1. Contractor agrees that a 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 on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 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 are estimates and solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- 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. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect to any other item of Work; and
3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense for supplying additional units or Owner believes that Owner is entitled to a decrease in Contract Price for Contractor supplying fewer units and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for 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, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01 excluding 11.01.A.1) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C). Contractor shall keep detailed backup supporting its actual costs incurred associated with the adjustment in Contract Price.
- C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall 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 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five 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 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1

and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

- d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
- e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
- f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires not caused by Contractor or anyone whom Contractor is responsible, floods not caused by Contractor or anyone whom Contractor is responsible, epidemics, abnormal weather conditions not anticipated or customary in Volusia County, or acts of God.
- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, 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. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Contractor must provide Engineer and Engineer an updated Progress Schedule reflecting how the critical path has been impacted as a condition precedent to being entitled to an adjustment in Contract Time.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions not anticipated or customary in Volusia County, acts of God, acts

or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall only be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Contractor must provide Engineer and Engineer an updated Progress Schedule reflecting how the critical path has been impacted as a condition precedent to being entitled to an adjustment in Contract Time.

- D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or 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) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 Notice of Defects

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 Access to Work

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will 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 therewith as applicable.

13.03 Tests and Inspections

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.
- 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 and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. 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.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, 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, furnishing all necessary labor, material, and equipment.
- C. If it is found that the uncovered Work is defective, Contractor shall pay 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 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 Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. 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, or both, 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, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *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, 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 shall 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.

13.06 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay 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 correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *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 terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. repair such defective land or areas; or
 - 2. correct such defective Work; or
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If 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. 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 correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

- C. 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.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, 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.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay 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) 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 pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor 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 the defective work (whether as-is, by receiving a credit, or receiving other compensation, losses, or damage from Contractor as discussed above in Paragraph 13.08). 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.

13.09 *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 rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the

Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, 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 13.09, 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, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, 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 (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) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. 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 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A 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 on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. *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 or which will be completed by the end of the month, accompanied by such supporting documentation as is required by the Contract Documents. 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 shall also be accompanied by a bill of sale, invoice, or other documentation

warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor (in a form approved by Owner) certifying that all previous progress payments received on account of the Work have been applied to pay Contractor's Subcontractors and Suppliers and to otherwise discharge Contractor's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments is set forth in Paragraph 6.02.B of the Agreement.

B. Review of Applications:

1. Engineer will, within 10 days after receipt of each Application for Payment, indicate in writing a recommendation of payment or nonpayment and present the Application to Owner. If Contractor's Application for Payment is deficient, Owner shall reject the payment request and return it to Contractor within 20 business days after the date on which the payment request is stamped as received indicating in writing the reasons for refusing to recommend payment; 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 under Paragraph 9.07, 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 Documents; 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, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, 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 for any responsibility or liability with 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 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due:

1. Subject to the provisions of Paragraph 14.02.D and Florida Statute §218.735, Owner shall pay Contractor 25 business days after the date on which the payment request is stamped as received by Engineer.

D. *Reduction in Payment:*

1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. 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;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or
 - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any undisputed 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, when Contractor remedies the reasons for such action.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 *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; provided, however, that Substantial Completion shall not occur until the governing building department issues a Certificate of Occupancy (or Certificate of Completion, if applicable) that allows Owner to utilize the entire Project for the purposes for which it is 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 tentative certificate of Substantial Completion which shall fix the date of Substantial Completion subject to the Certificate of Occupancy (or Completion).
- D. 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 Punchlist.

14.05 *Partial Utilization*

- 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. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and 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 14.04.A through D for that part of the Work.
 - 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and 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 14.04 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 5.10 regarding property insurance.

14.06 *Final Completion- Punchlist*

- A. Within 30 days from Contractor achieving Substantial Completion the following must occur: Contractor shall notify Engineer and Owner in writing that the Project is complete in which case Engineer and Owner will promptly make a final inspection (or inspections, if necessary) with Contractor for the purpose of reviewing and developing a detailed Punchlist of items that are incomplete, unsatisfactory or unacceptable, or defective that Contractor is required to complete. However, if the Contract Price is \$10 million or more, the foregoing must occur within 60 days from Contractor achieving Substantial Completion.

- B. The Punchlist shall be provided to Contractor by Engineer and/or Owner no later than 5 days after the punchlist of items has been reviewed and developed in accordance with paragraph 14.06.A above. Contractor shall then have 30 days from its receipt of the Punchlist to perform and complete the corrective work identified therein.
- C. Final Completion shall be the date that Engineer or Owner determines that Contractor satisfactorily performed and completed the corrective work identified in the Punchlist in addition to any other work required of Contractor under the Contract Documents.

14.07 *Final Payment*

A. Application for Payment:

1. After Contractor achieves Final Completion and furnishes all required maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up or as-built record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment inclusive of retainage following the procedure for progress payments.
2. The final Application for Payment shall 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. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective final releases or waivers (satisfactory to Owner) of all Lien rights or Liens filed in connection with the Work.
3. In lieu of the final releases or waivers of Liens specified in Paragraph 14.07.A.2.d and as approved by Owner, Contractor may furnish an affidavit of Contractor whereby Contractor swears that: (i) all payrolls, 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 (ii) 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.
4. The documents and materials that Contractor is required to submit to accompany its Final Application for Payment (as set forth in this Paragraph 14.07) are conditions precedent to final payment.

B. Engineer's Review of Application and Acceptance:

1. 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 Documents have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09 below. 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. Payment Becomes Due:

1. Twenty-five (25) business days after the date on which the Application for Payment is stamped as received by Engineer, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

- A. The making and acceptance of final payment will constitute:
 1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
 2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *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 notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will 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 established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 3. Contractor's repeated disregard of the authority of Engineer;
 4. Contractor's violation in any substantial way of any provisions of the Contract Documents;
 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 15.02.A occur, Owner may, after giving Contractor (and surety) 5 days written notice of its intent to terminate the services of Contractor:
1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
 2. 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
 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.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 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) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed 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.

- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within 5 days of the notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. 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. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *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;
 - 3. N/A; and
 - 4. reasonable expenses directly attributable to termination such as demobilization expenses. Attorneys' fees, accountant fees, and home office overhead expenses shall not be deemed reasonable expenses.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority or (ii) Contractor complies with all conditions precedent to payment and Owner fails for 60 days to pay Contractor the sum Owner undisputedly determined to be due to Contractor, 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 15.03. 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 Contractor complies with all conditions precedent to payment and Owner has failed for 60 days to pay Contractor any sum Owner undisputedly determined to be due to Contractor, 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 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 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 16 – DISPUTE RESOLUTION

16.01 *Methods and Procedures*

- A. Mediation shall be a condition precedent to any dispute between Owner and Contractor relating to the Contract; provided, however, that Owner, in its sole discretion, can waive mediation as a condition precedent to pursue a claim / litigation against Contractor or defend a claim / litigation from Contractor. The party initiating mediation must submit written request to the other party of its desire to mediate and provide the names of suggested mediators. The parties shall work together to mutually agree on a mediator within 30 days from the written request. The parties shall mediate the dispute within 60 days from the written request unless a different date is agreed upon due to the availability of the mediator, the availability of the parties and their counsel, or upon the mutual agreement of the parties. If the parties are unable to agree on a mediator (and the Owner has not elected to waive mediation), the parties, subject to Paragraph 16.01.C below, agree to allow the court to unilaterally select the mediator and any litigation will be stayed pending the outcome of such mediation.
- B. *N/A.*
1. *N/A.*
- C. Any litigation arising out of or relating to the Contract shall be brought in the exclusive venue of Volusia County, Florida. The prevailing party shall be entitled to all attorneys' fees and court costs at the trial and appellate level. **CONTRACTOR VOLUNTARILY AND KNOWINGLY WAIVES IT RIGHT TO A TRIAL BY JURY.**

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
2. delivered at or sent by registered or certified mail, postage prepaid, or an overnight carrier (such as UPS or FedEx) to the last business address known to the giver of the notice.

17.02 *Computation of Times*

- A. When any period of time is referred to in the Contract Documents 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.

17.03 *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 Documents. 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.

17.04 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

- A. This Contract is to be governed by the law of the state of Florida.

17.06 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SUPPLEMENTARY CONDITIONS

TABLE OF CONTENTS

SC-4.02	Subsurface and Physical Conditions
SC-4.06	Hazardous Environmental Conditions
SC-5.04	Contractor's Liability Insurance
SC-5.06	Property Insurance
SC-6.06	Concerning Subcontractors, Suppliers, and Others
SC-12.01	Change of Contract Price
SC-17-07	Public Records Compliance
SC-17-08	Examination of Records
SC-17-09	Sovereign Immunity

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC C-700 (2007 Edition). All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

SC-4.02 *Subsurface and Physical Conditions*

SC-4.02 Delete Paragraphs 4.02.A and 4.02.B in their entirety and insert the following:

A. No reports of explorations or tests of subsurface conditions at or contiguous to the Site, or drawings of physical conditions relating to existing surface or subsurface structures at the Site, are known to Owner.

SC-4.06 *Hazardous Environmental Conditions*

SC-4.06 Delete Paragraphs 4.06.A and 4.06.B in their entirety and insert the following:

A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.

B. Not Used.

SC-5.04 *Contractor's Liability Insurance*

SC-5.04 Add the following new paragraph immediately after Paragraph 5.04.B:

C. The limits of liability for the insurance required by Paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under Paragraphs 5.04.A.1 and A.2 of the General Conditions:

- | | |
|--|-----------------------|
| a. State: | Statutory |
| b. Applicable Federal (e.g., Longshoreman's): | Statutory |
| c. Employer's Liability: | \$1,000,000.00 |

2. Contractor's General Liability under Paragraphs 5.04.A.3 through A.6 of the General Conditions which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of Contractor:

- | | |
|---|----------------|
| a. General Aggregate | \$1,000,000.00 |
| b. Products - Completed Operations Aggregate | N/A |
| c. Personal and Advertising Injury | \$1,000,000.00 |
| d. Each Occurrence (Bodily Injury and Property Damage) | \$1,000,000.00 |
| e. Property Damage liability insurance will provide Explosion, Collapse, and Under-ground coverages where applicable. | |
| f. Excess or Umbrella Liability | |
| ☒ General Aggregate | \$1,000,000.00 |
| ☒ Each Occurrence | \$500,000.00 |

3. Automobile Liability under Paragraph 5.04.A.6 of the General Conditions:

SC-5.06 *Property Insurance*

SC-5.06.A. Delete Paragraph 5.06.A in its entirety and insert the following in its place:

A. Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof. Contractor shall be responsible for any deductible or self-insured retention. This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, Engineer, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or loss payee;

2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss and damage to the Work, temporary buildings, falsework, and materials and equipment in transit and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by these Supplementary Conditions.
3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
5. allow for partial utilization of the Work by Owner;
6. include testing and startup;
7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued; and
8. comply with the requirements of Paragraph 5.06.C of the General Conditions.

-SC-6.06 *Concerning Subcontractors, Suppliers, and Others*

SC-6.06 Add a new paragraph immediately after Paragraph 6.06.G:

H. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by a particular Subcontractor or Supplier.

SC-12.01 *Change of Contract Price*

SC-12.01.C *Contractor's Fee.* Delete the semicolon at the end of GC 12.01.C.2.c, and add the following language:

, provided, however, that on any subcontracted work the total maximum fee to be paid by Owner under this subparagraph shall be

no greater than 27 percent of the costs incurred by the Subcontractor who actually performs the work;

SC-17-07 *Public Records Compliance*

SC-17-07 Add the following new paragraph immediately after Paragraph 17.06:

A. *Public Records Compliance.* Contractor 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 Contractor does not transfer the records to the City.

(d) Upon completion of the Contract, Contractor shall transfer to the City, at no cost, all public records in possession of the Contractor 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 Contractor does not comply with a public records request, the City shall deem the non-compliance a breach of this Contract, and the Contractor may be subject to penalties under Section 119.10, Florida Statutes.

**CONTRACTOR QUESTIONS RELATING TO
CONTRACTOR'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**

SC-17-08 *Examination of Records*

SC-17-08 Add the following new paragraph immediately after Paragraph 17.07:

A. *Examination of Records.*

(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.

SC-17-09 *Sovereign Immunity*

SC-17-09 Add the following new paragraph immediately after Paragraph 17.08:

A. *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.



End of Solicitation Documents

CITY OF PORT ORANGE, FLORIDA

INVITATION TO BID

"Attachment A" BID SET – Drawings

Herbert and Nova Master Lift Station Rehabilitation

Drawings & Specifications can be found on the City of Port Orange website. See link for attachment of documents: <https://www.port-orange.org/bids.aspx>

"Attachment A" ITB 21-09 Bid Set - Drawings for Herbert and Nova Master Lift Station Rehabilitation



ITB #21-09

Prepared by: Michael Hall, Purchasing Agent

Release Date: March 8, 2021

Bid Due Date & Time: March 8, 2021 @ 2:30 PM

City of Port Orange, Florida

1000 City Center Circle

Port Orange, FL 32129

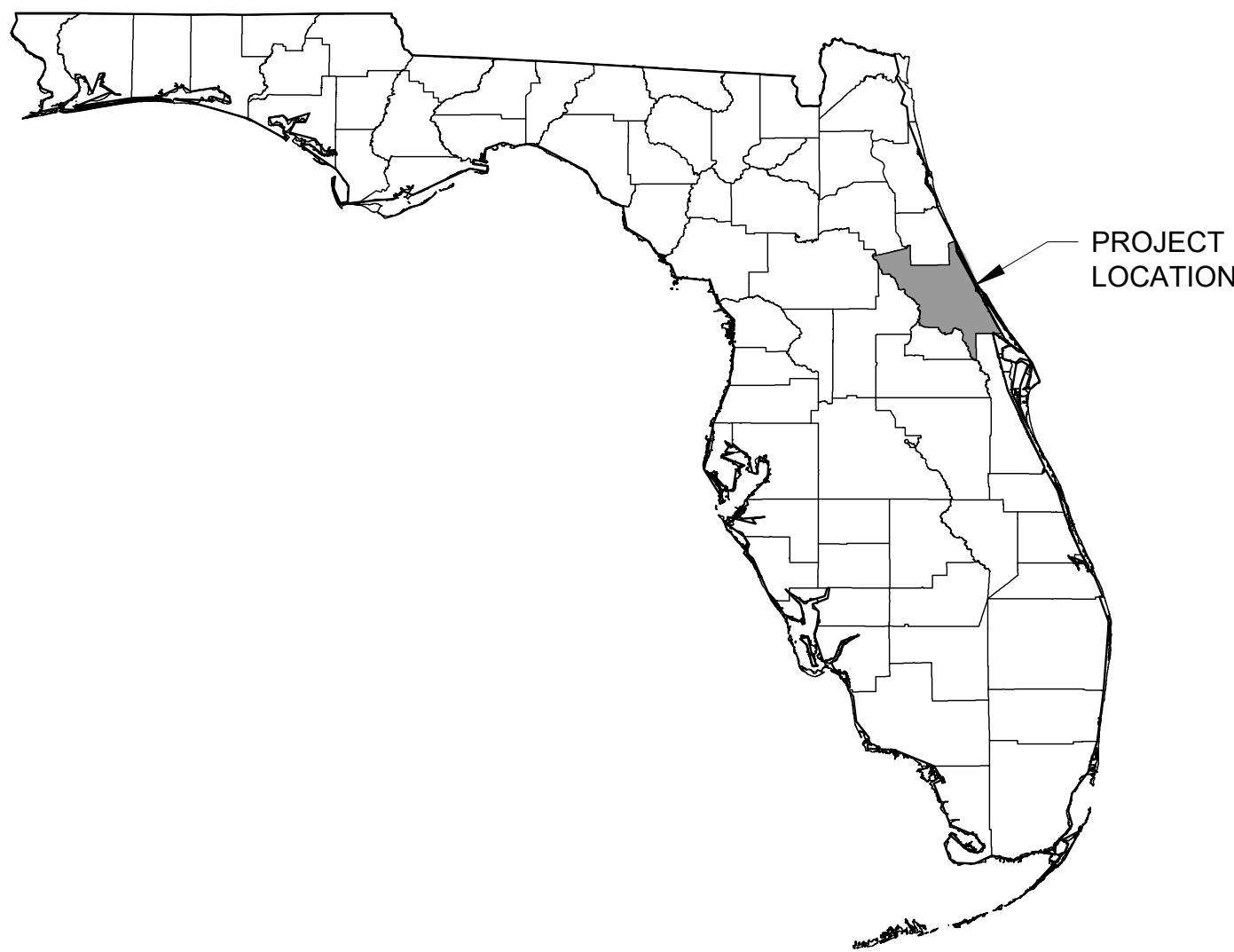
(386) 506-5740

purchdiv@port-orange.org

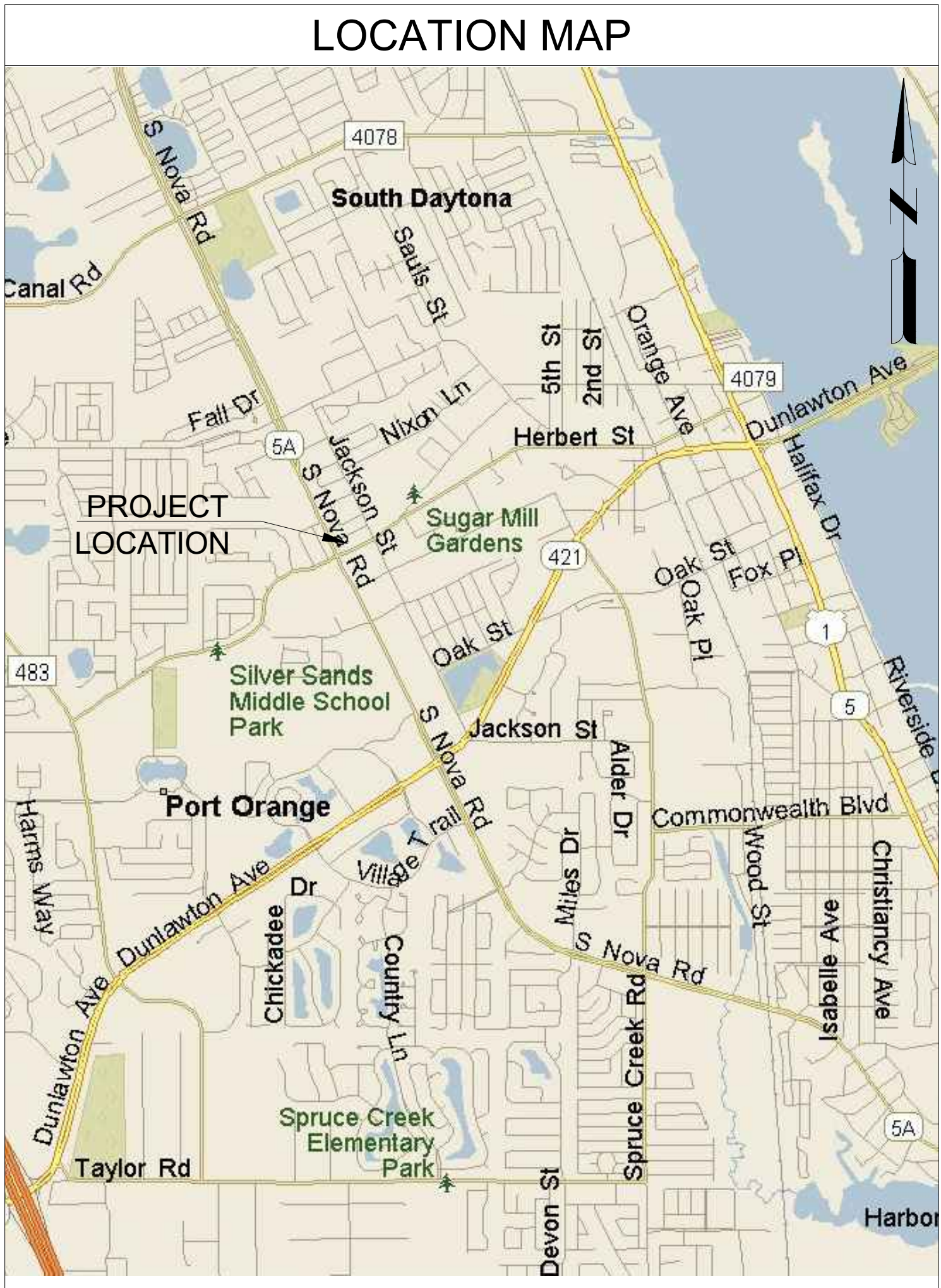
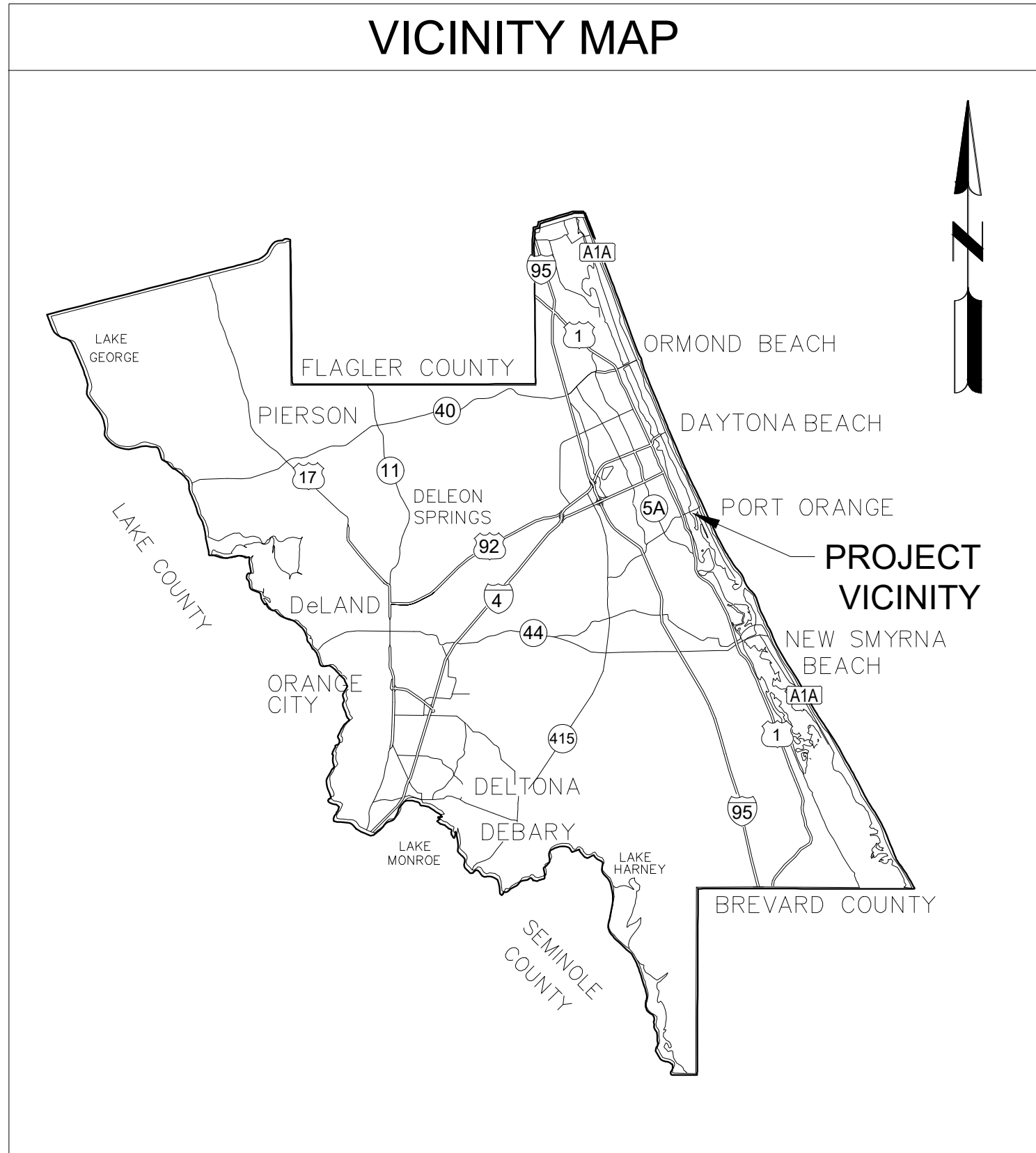
www.port-orange.org

CITY OF PORT ORANGE
HERBERT & NOVA LIFT STATION
IMPROVEMENTS & UPGRADE

BID # 21-09
BID SET
DECEMBER 2020



VOLUSIA COUNTY



SHEET INDEX

SHEET NUMBER	SHEET TITLE
G-001	COVER SHEET
G-002	SYMBOLS AND ABBREVIATIONS
C-001	EXIST SITE PLAN
C-021	POLLUTION PREVENTION PLAN
C-022	TEMPORARY BY-PASS PLAN
C-051	DEMOLITION PLAN
C-061	DEMOLITION DETAIL
C-101	PROPOSED LIFT STATION SITE PLAN
C-102	PROPOSED LIFT STATION DETAIL
C-103	PROPOSED ELEVATIONS
C-501	GENERAL CONSTRUCTION DETAILS
C-502	STANDARD CONSTRUCTION DETAILS
E-001	LEGEND, ABBREVIATIONS AND NOTES
E-101	ELECTRICAL PLAN
E-501	ELECTRICAL DETAILS
E-502	ELECTRICAL DETAILS
E-503	ELECTRICAL DETAILS
E-504	ELECTRICAL DETAILS
E-701	RISER DIAGRAMS

CIVIL ENGINEER: KEVIN A. LEE, P.E.

P.E. NUMBER: 71501

ELECTRICAL ENGINEER: KEFF S. KURELLA, P.E.

P.E. NUMBER: 62496

CITY OF PORT ORANGE
PROJECT MANAGER: STEVE PARNELL



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CITY OF PORT ORANGE
HERBERT & NOVA LIFT STATION
IMPROVEMENTS & UPGRADE
HERBERT AVE. & NOVA ROAD
PORT ORANGE, FL 32127

ISSUED
04/28/2020 60% DESIGN SET
08/01/2020 90% DESIGN SET
10/15/2020 100% DESIGN SET
12/02/2020 BID SET

NOT FOR CONSTRUCTION

M&H NO.: 1000715-181687.01
DATE: OCTOBER 2020
DESIGNED BY: KAL
DRAWN BY: SEM
CHECKED BY: MCM
DO NOT SCALE DRAWINGS

SHEET CONTENTS
COVER SHEET

SHEET NO.
G-001

A	
ABD.	ABANDON OR ABANDONED
AC.	ACRE
A/C	AIR CONDITIONING
ACOMP	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
ARCH.	ARCHITECTURE
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
B	BASE LINE
BLDG.	BUILDING
BLK	BLOCK
BM	BENCHMARK
BOC	BACK OF CURB
BOT.	BOTTOM
BRG.	BEARING
BS	BLACK STEEL PIPE
BV	BALL VALVE
BWW	BACKWASH WATER

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
C	CENTER LINE
CL	CLASS
C.L.F.	CHAIN LINK FENCE
CLR.	CLEAR/CLEARANCE
OMP	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
CS	CHLORINE SOLUTION
CTR.	CENTER
CULV.	CULVERT
CY	CUBIC YARD
CYL.	CYLINDER
CU.F.T.	CUBIC FEET
CU.IN.	CUBIC INCHES
D	CHECK VALVE

D	
DBL.	DEGREE OF CURVATURE
DBL.	DOUBLE
DET.	DETAIL
D.F.	DRINKING FOUNTAIN
D.F.	DIESEL FUEL
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
DW	DRIVEWAY

E	
EA.	EAST
E	EACH
ECC.	ECCENTRIC
EAC	EACH FACE
EFF.	EFFLUENT
E	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
F.L.F.	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	
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
HOUR.	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.	INFLEUNT
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
M.H.	MANHOLE
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.J.	MECHANICAL JOINT
MOD.	MODIFY/MODIFIED
MON.	MONUMENT
M.W.	MANWAY
M.W.L.	MEAN WATER LEVEL
M.G.	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

O	
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	
PAVT	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
PL	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

Q	
Q	FLOW RATE

R	
R	RADIUS
RAS	RETURN ACTIVATED SLUDGE
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

R	
RED.	REDUCER
REBAR	REINFORCING STEEL
REF.	REFERENCE
REINF.	REINFORCE/REINFORCED
REMP	REINFORCED PLASTIC MORTAR PIPE
REM.	REMOVE/REMOVABLE
REQD.	REQUIRED
R.DRN	ROOF DRAIN
RW.	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)
S-	SANITARY
SAN.	SCHEDULE
SE	SOUTHEAST
SE	SECONDARY EFFLUENT
SER	SECONDARY EFFLUENT RETURN
SECT	SECTION
SF	SQUARE FOOT
SGI	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

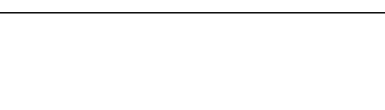
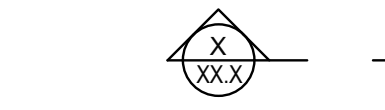
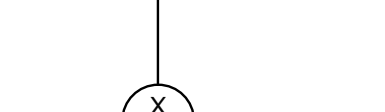
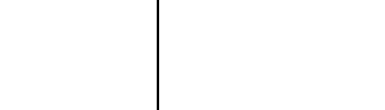
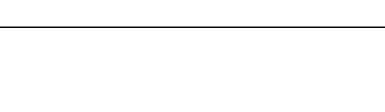
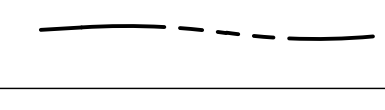
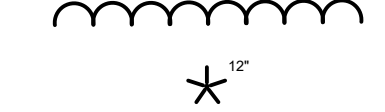
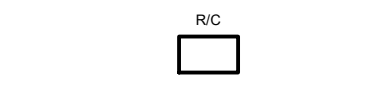
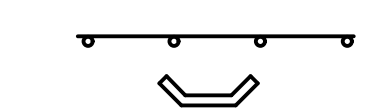
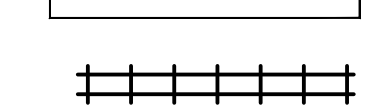
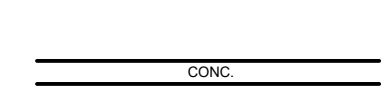
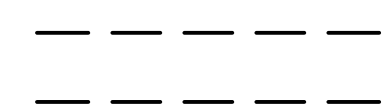
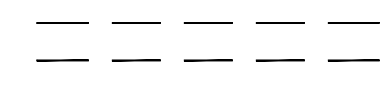
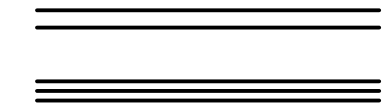
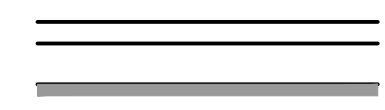
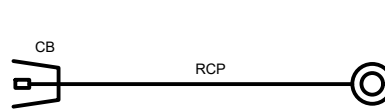
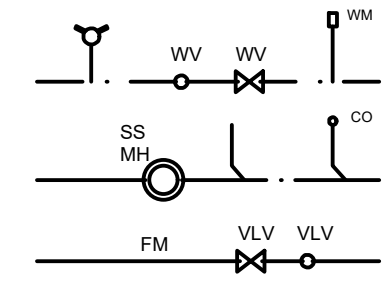
T	
TAN	TANGENT
T & B	TOP & BOTTOM
T/B	TOP OF BEAM
T.B.M.	TEMPORARY BENCH MARK
T.E.	TOTALLY ENCLOSED
T.E.F.C.	TOTALLY ENCLOSED, FAN COOLED
TEL.	TELEPHONE
TEMP.	TEMPORARY/TEMPERATURE
T.E.N.V.	TOTALLY ENCLOSED, NON-VENTILATED
THD.	THREAD/THREADED
THK.	THICK
TN.O.	TURNOUT
T.O.	TOP OF
T.O.B.	TOP OF BANK
T.O.C.	TOP OF CURB
T.O.S.	TOP OF SLAB
TOT.	TOTAL
TOP OF PIPE	
T.P.	TELEPHONE POLE
TREAD OF STAIR	
T.R.A.	TIE ROD ASSEMBLY
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

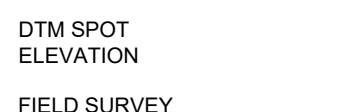
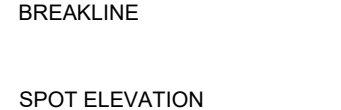
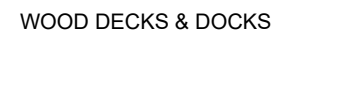
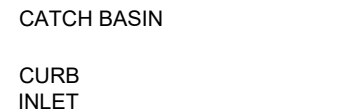
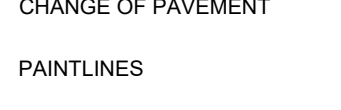
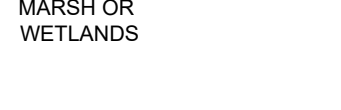
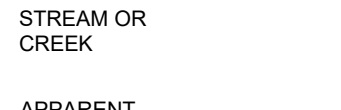
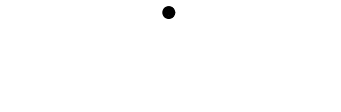
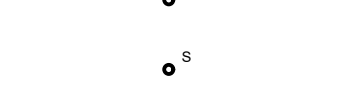
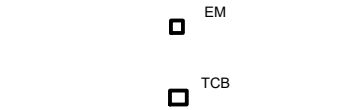
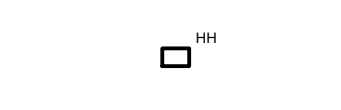
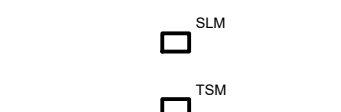
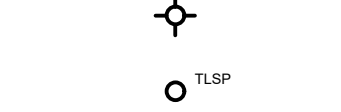
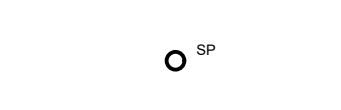
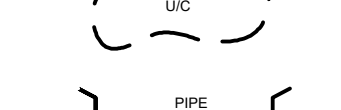
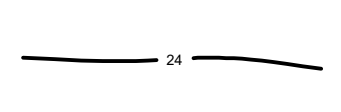
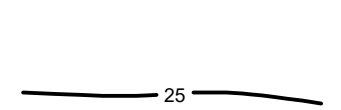
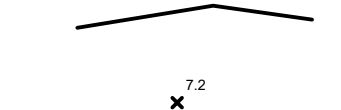
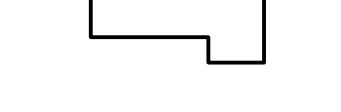
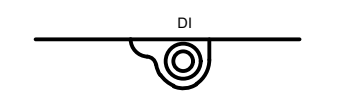
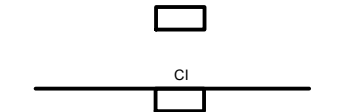
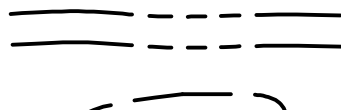
V	
VAC.	VACUUM
VAR.	VARIABLES
VB	VALVE BOX
V.C.	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VEL.	VELOCITY
VERT.	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VFC	VERTICAL POINT OF CURVATURE
VOL.	VOLUME
VTR	VENT THROUGH ROOF

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	

Y	
YD(S)	YARD(S)
YH	YARD HYDRANT
YR.	YEAR



SITE PLANS LEGEND





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CITY OF PORT ORANGE
HERBERT & NOVA LIFT STATION
IMPROVEMENTS & UPGRADE
HERBERT AVE. & NOVA ROAD
PORT ORANGE, FL 32127

ISSUED
04/28/2020 60% DESIGN SET
08/01/2020 90% DESIGN SET
10/15/2020 100% DESIGN SET
12/02/2020 BID SET

NOT FOR CONSTRUCTION

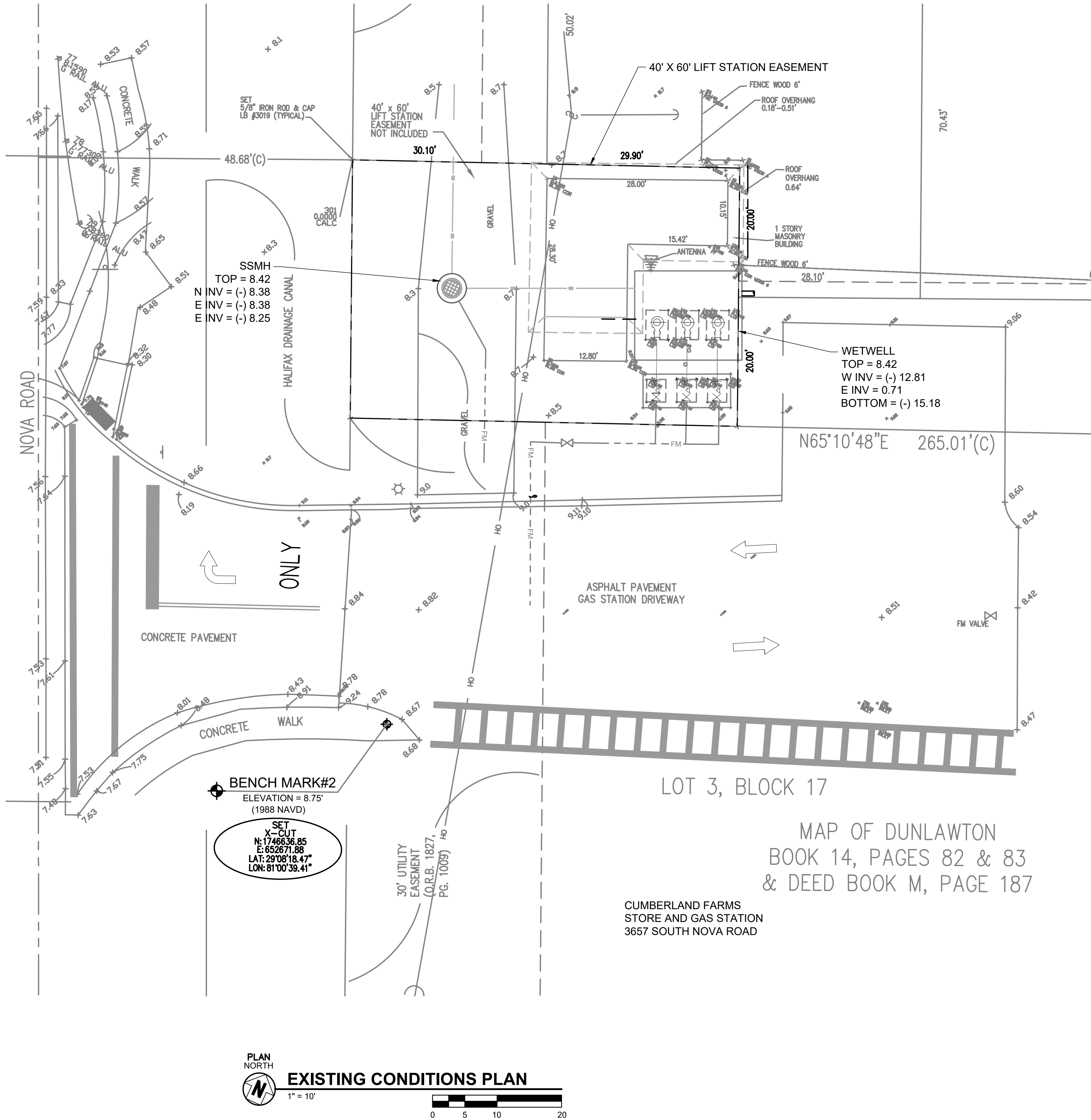
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DATE: OCTOBER 2020
DESIGNED BY: KAL
DRAWN BY: SEM
CHECKED BY: MCM
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SHEET CONTENTS
EXISTING SITE PLAN

SHEET NO.

C-001

DESCRIPTION OF SURVEYED PROPERTY:
40' x 60' LIFT STATION EASEMENT AS SHOWN ON THE PLAT OF
SPRINGWOOD SQUARE AS RECORDED IN MAP BOOK 36, PAGE
178 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

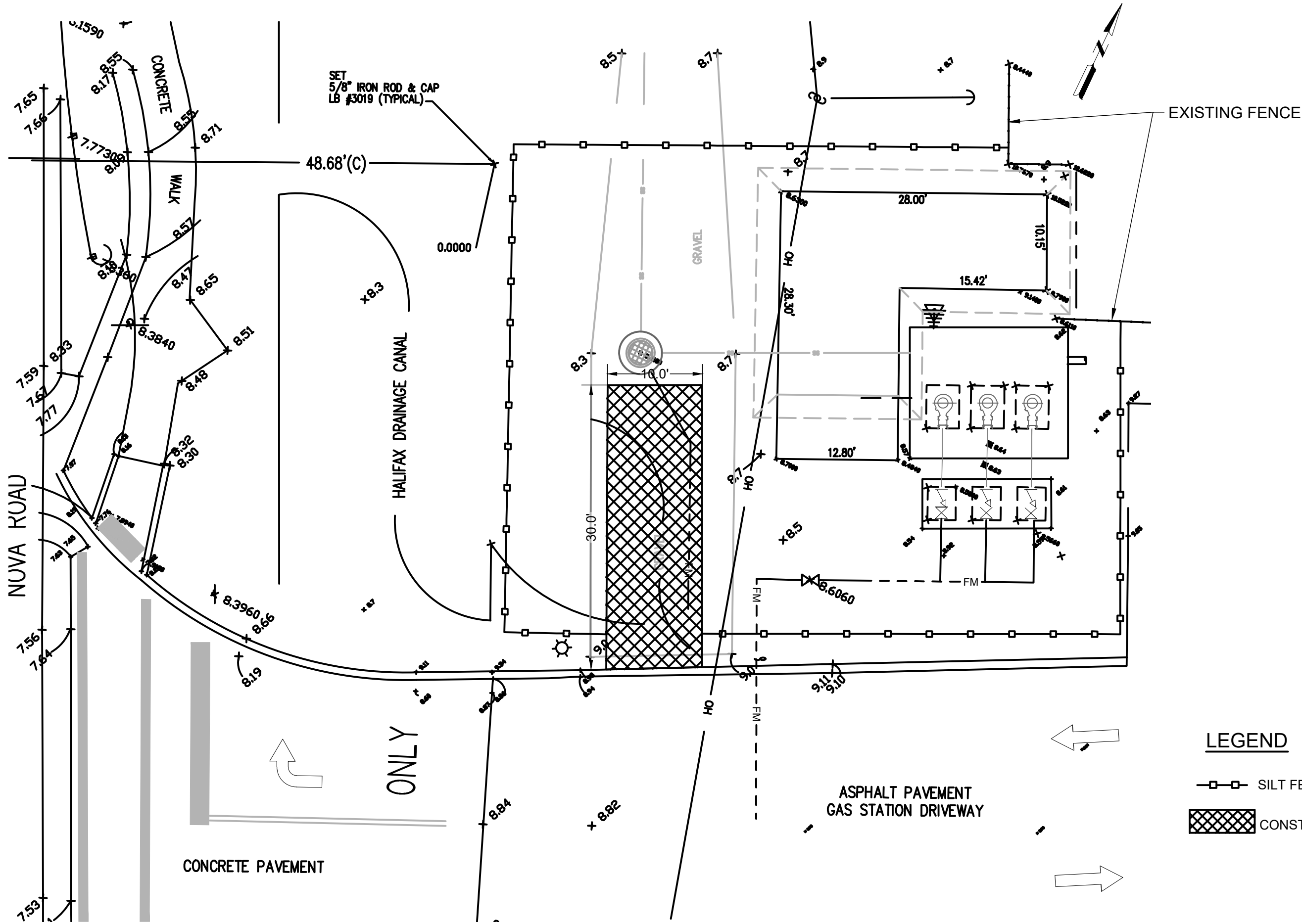


POLLUTION CONTROL NOTES:

ALL EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL COMPLETION OF CONSTRUCTION.

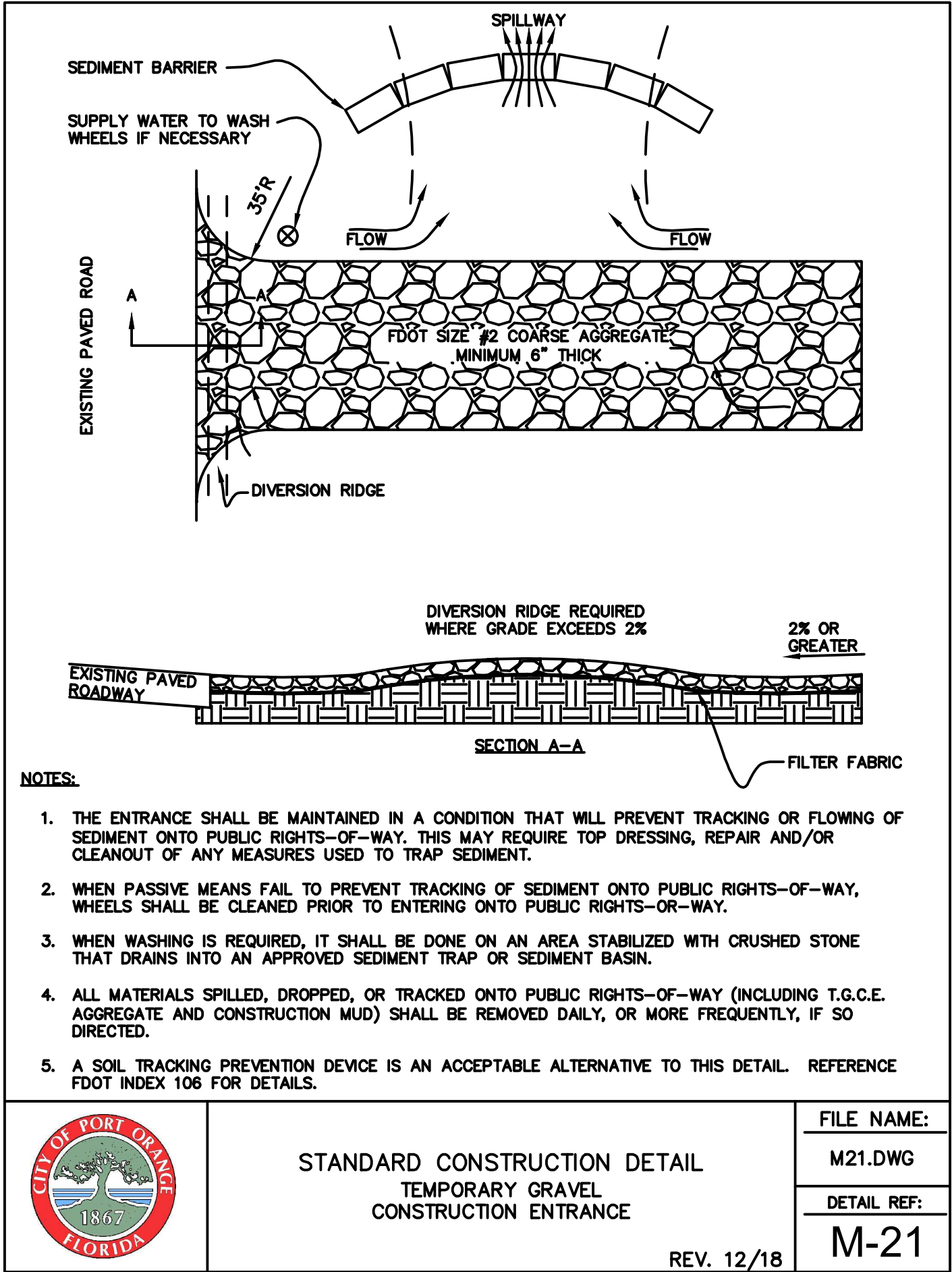
- ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM WITH LOCAL CITY/COUNTY AND WATER MANAGEMENT DISTRICT SPECIFICATIONS, SUBJECT TO AUTHORIZED AND APPROVED VARIANCES, WAIVERS AND/OR CONDITIONS OF SITE PERMITS.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PLACED PRIOR TO OR AS THE FIRST STEP IN, CONSTRUCTION. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTATION OF SILT OFF THE SITE.
- 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.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THESE PLANS AND FIELD CONDITIONS PRIOR TO CONSTRUCTION.
- PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL PROVIDE TREE PROTECTION BARRIERS TO MEET THE REQUIREMENTS OF LOCAL SPECIFICATIONS.
- THE CONTRACTOR SHALL SELECTIVELY CLEAR ONLY THE AREAS REQUIRED FOR CONSTRUCTION AND STABILIZE ANY DISTURBED AREAS IMMEDIATELY FOLLOWING COMPLETION OF CONSTRUCTION.
- 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.
- CONTRACTOR SHALL BLOCK INTRUSION OF SAND, SILT OR OTHER DEBRIS INTO ANY DRAINAGE OR SANITARY SEWER STRUCTURE OR PIPING ON OR ADJACENT TO SITE.
- ALL CLEARED AREAS FOR IMPROVEMENT AND/OR CONSTRUCTION SHALL BE WATERED TO PREVENT WIND EROSION.
- FOR ADDITIONAL INFORMATION AND DETAILS, SEE F.D.O.T. STANDARD PLANS - FY 2020-21.
- UNLESS OTHERWISE SPECIFIED, SILT FENCES MUST BE USED IN LIEU OF HAY BARRIERS.
- ADDITIONAL POSTS AND RAILS MAY BE NECESSARY TO SECURE AND SUPPORT BARRIERS.

- ADDITIONAL BARRIER LENGTHS MAY BE REQUIRED BY THE COUNTY ENGINEER OR BY REGULATORY AGENCIES.
- 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.
- NON STORMWATER DISCHARGES SUCH AS FIRE HYDRANT FLUSHING, ETC. SHALL BE DISCHARGED IN ACCORDANCE WITH THE CONTRACTOR'S NPDES PERMIT.
- ANY POTENTIALLY HAZARDOUS CHEMICALS BROUGHT ONTO JOB SITE WILL BE LIMITED AND KEPT IN ORIGINAL CONTAINER WITH MSDS LABEL.
- NO SILT SHALL BE TRACKED ONTO PUBLIC ROADWAYS. ANY SILT DEPOSITED ON PUBLIC ROADWAYS SHALL BE REMOVED BY END OF THE WORK DAY.



LEGEND

- SILT FENCE
- CONSTRUCTION ENTRANCE



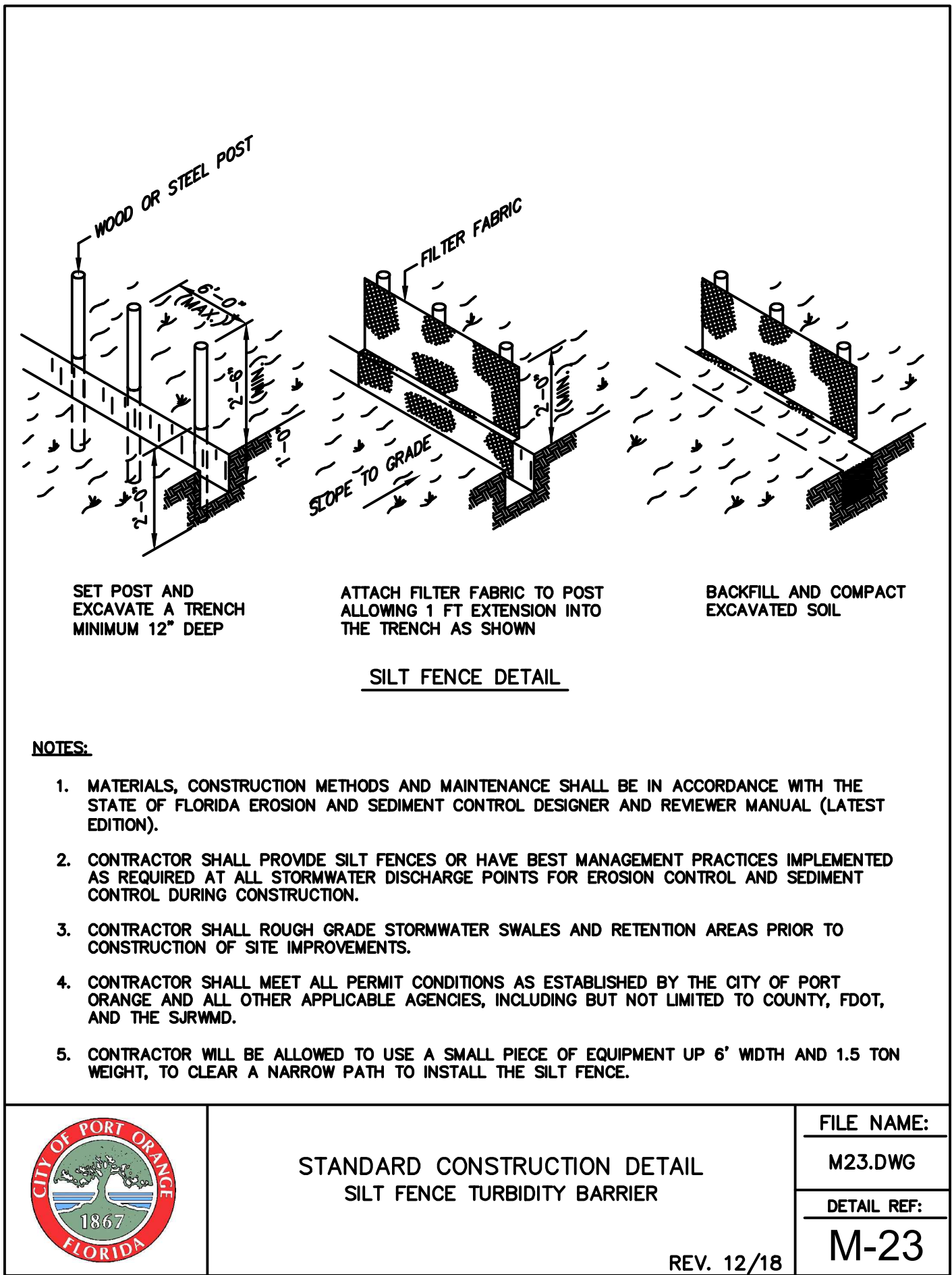
- NOTES:
- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 - WHEN PASSIVE MEANS FAIL TO PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, WHEELS SHALL BE CLEANED PRIOR TO ENTERING ONTO PUBLIC RIGHTS-OF-WAY.
 - WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
 - ALL MATERIALS SPILLED, DROPPED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY (INCLUDING T.G.C.E. AGGREGATE AND CONSTRUCTION MUD) SHALL BE REMOVED DAILY, OR MORE FREQUENTLY, IF SO DIRECTED.
 - A SOIL TRACKING PREVENTION DEVICE IS AN ACCEPTABLE ALTERNATIVE TO THIS DETAIL. REFERENCE FDOT INDEX 106 FOR DETAILS.



STANDARD CONSTRUCTION DETAIL
TEMPORARY GRAVEL
CONSTRUCTION ENTRANCE

REV. 12/18

FILE NAME:
M21.DWG
DETAIL REF:
M-21



- NOTES:
- MATERIALS, CONSTRUCTION METHODS AND MAINTENANCE SHALL BE IN ACCORDANCE WITH THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL (LATEST EDITION).
 - CONTRACTOR SHALL PROVIDE SILT FENCES OR HAVE BEST MANAGEMENT PRACTICES IMPLEMENTED AS REQUIRED AT ALL STORMWATER DISCHARGE POINTS FOR EROSION CONTROL AND SEDIMENT CONTROL DURING CONSTRUCTION.
 - CONTRACTOR SHALL ROUGH GRADE STORMWATER SWALES AND RETENTION AREAS PRIOR TO CONSTRUCTION OF SITE IMPROVEMENTS.
 - CONTRACTOR SHALL MEET ALL PERMIT CONDITIONS AS ESTABLISHED BY THE CITY OF PORT ORANGE AND ALL OTHER APPLICABLE AGENCIES, INCLUDING BUT NOT LIMITED TO COUNTY, FDOT, AND THE SJRWMD.
 - CONTRACTOR WILL BE ALLOWED TO USE A SMALL PIECE OF EQUIPMENT UP 6' WIDTH AND 1.5 TON WEIGHT, TO CLEAR A NARROW PATH TO INSTALL THE SILT FENCE.



STANDARD CONSTRUCTION DETAIL
SILT FENCE TURBIDITY BARRIER

REV. 12/18

FILE NAME:
M23.DWG
DETAIL REF:
M-23

Mead & Hunt

Mead and Hunt, Inc.
4401 Eastport Parkway
Port Orange, FL 32127
phone: 386-761-6810
meadhunt.com
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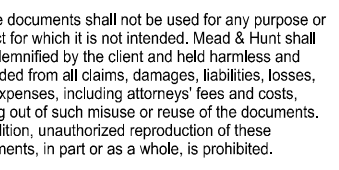
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SHEET CONTENTS
POLLUTION PREVENTION
PLAN

SHEET NO.

C-021



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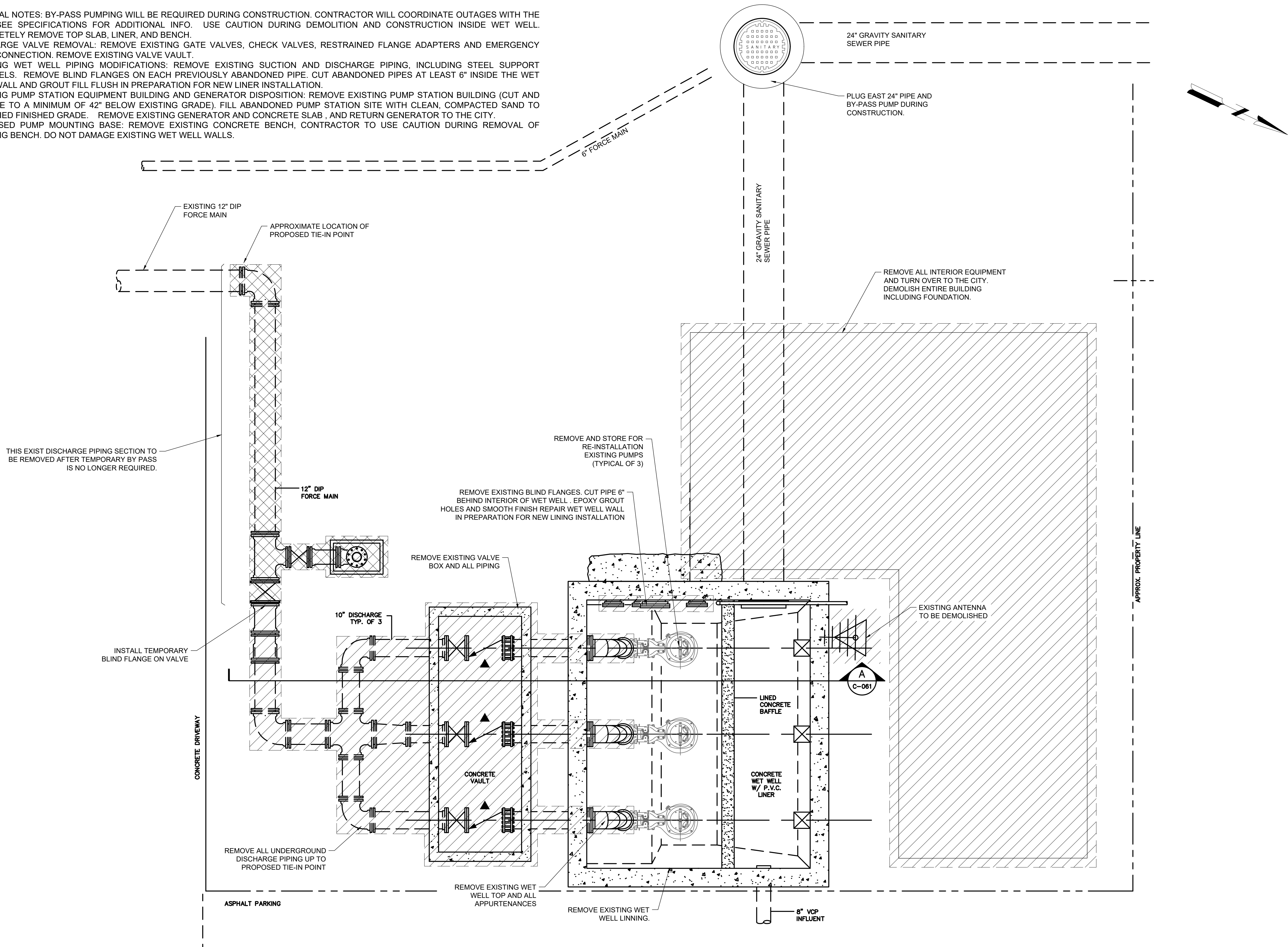
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C-022



NOTES:

1. GENERAL NOTES: BY-PASS PUMPING WILL BE REQUIRED DURING CONSTRUCTION. CONTRACTOR WILL COORDINATE OUTAGES WITH THE CITY. SEE SPECIFICATIONS FOR ADDITIONAL INFO. USE CAUTION DURING DEMOLITION AND CONSTRUCTION INSIDE WET WELL. COMPLETELY REMOVE TOP SLAB, LINER, AND BENCH.
2. DISCHARGE VALVE REMOVAL: REMOVE EXISTING GATE VALVES, CHECK VALVES, RESTRAINED FLANGE ADAPTERS AND EMERGENCY PUMP CONNECTION. REMOVE EXISTING VALVE VAULT.
3. EXISTING WET WELL PIPING MODIFICATIONS: REMOVE EXISTING SUCTION AND DISCHARGE PIPING, INCLUDING STEEL SUPPORT CHANNELS. REMOVE BLIND FLANGES ON EACH PREVIOUSLY ABANDONED PIPE. CUT ABANDONED PIPES AT LEAST 6" INSIDE THE WET WELL WALL AND GROUT FILL FLUSH IN PREPARATION FOR NEW LINER INSTALLATION.
4. EXISTING PUMP STATION EQUIPMENT BUILDING AND GENERATOR DISPOSITION: REMOVE EXISTING PUMP STATION BUILDING (CUT AND REMOVE TO A MINIMUM OF 42" BELOW EXISTING GRADE). FILL ABANDONED PUMP STATION SITE WITH CLEAN, COMPACTED SAND TO SPECIFIED FINISHED GRADE. REMOVE EXISTING GENERATOR AND CONCRETE SLAB , AND RETURN GENERATOR TO THE CITY.
5. PROPOSED PUMP MOUNTING BASE: REMOVE EXISTING CONCRETE BENCH, CONTRACTOR TO USE CAUTION DURING REMOVAL OF EXISTING BENCH. DO NOT DAMAGE EXISTING WET WELL WALLS.



LIFT STATION SITE DEMOLITION PLAN
3/8"=1'

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	12/02/2020	BID SET

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DATE:	OCTOBER 2020
DESIGNED BY:	KAL
DRAWN BY:	SEM
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SHEET CONTENTS
DEMOLITION PLAN

SHEET NO.
C-051



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HERBERT & NOVA LIFT STATION
IMPROVEMENTS & UPGRADE
HERBERT AVE. & NOVA ROAD
PORT ORANGE, FL 32127

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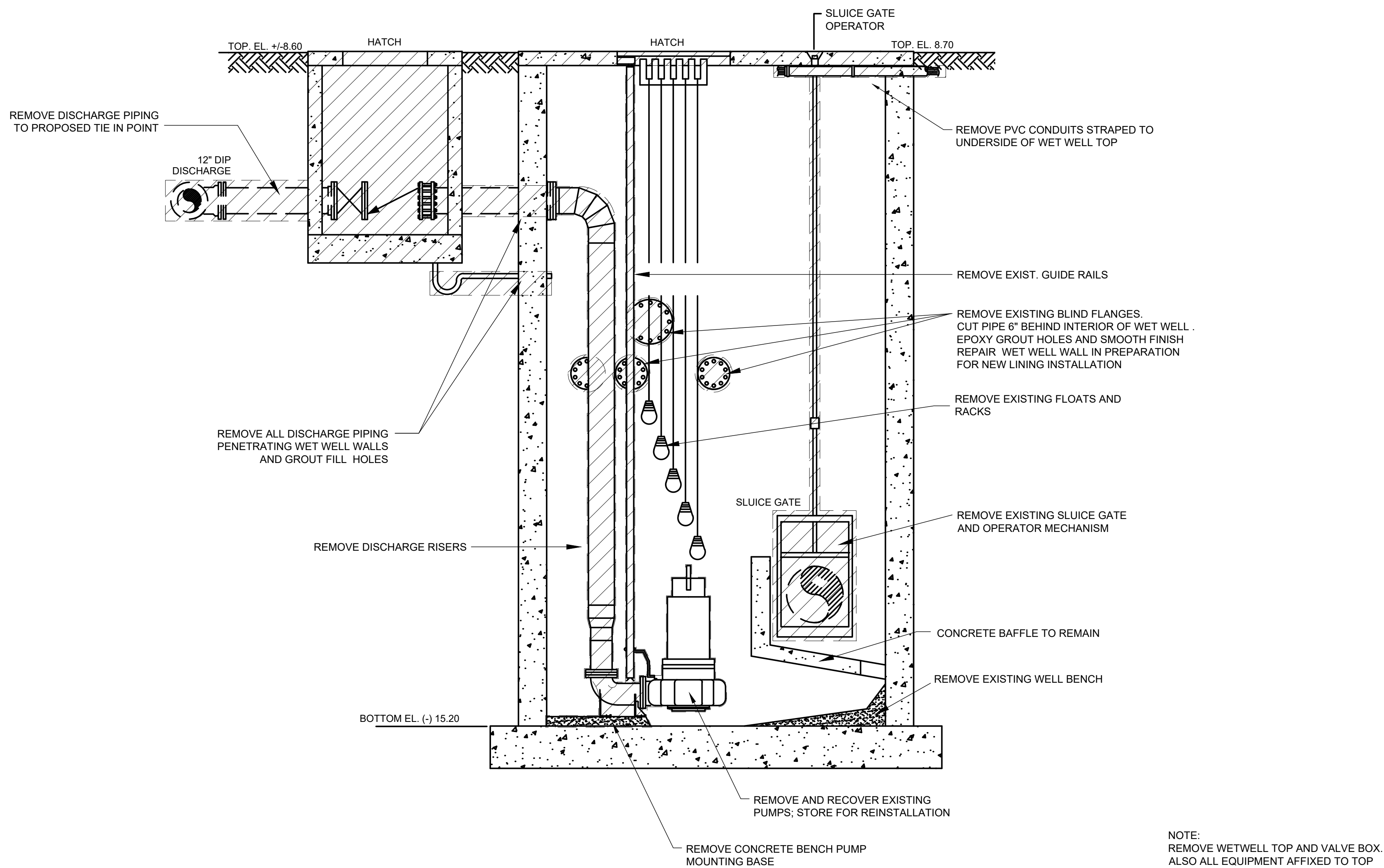
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SHEET CONTENTS
DEMOLITION DETAIL

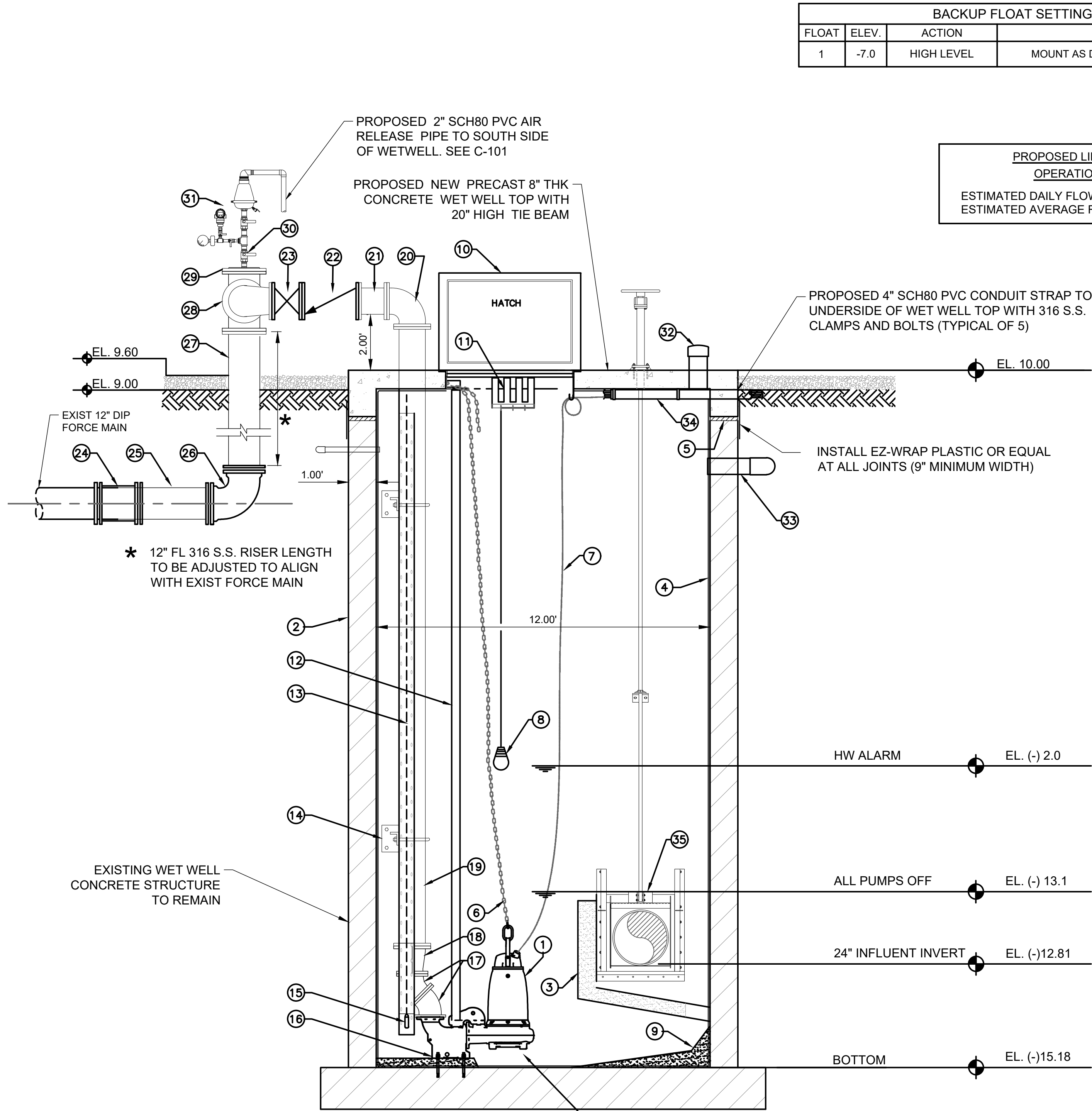
SHEET NO.

C-061



A WET WELL DEMOLITION SECTION
3/8" = 1'-0"

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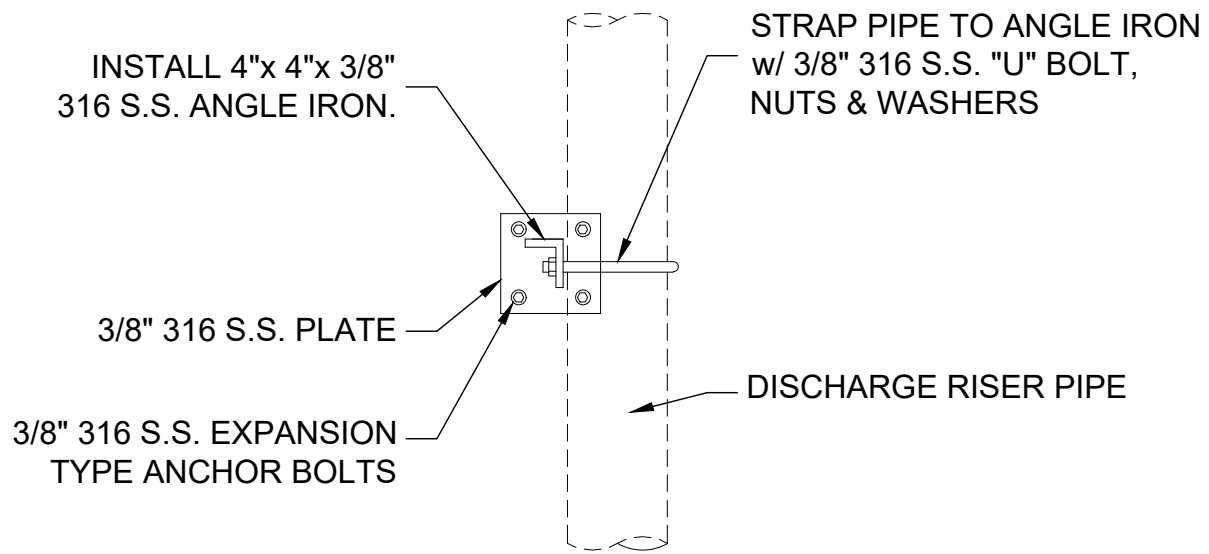


LIFT STATION WET WELLS ARE CLASSIFIED AS A CLASS 1 DIVISION 1 HAZARDOUS LOCATION

SEAL-OFF CONNECTIONS AND CONDUIT CONSTRUCTION FOR ALL CONDUITS PENETRATING INTO THE WET WELL SHALL COMPLY WITH, AND BE INSTALLED PER, NEC ARTICLE 501

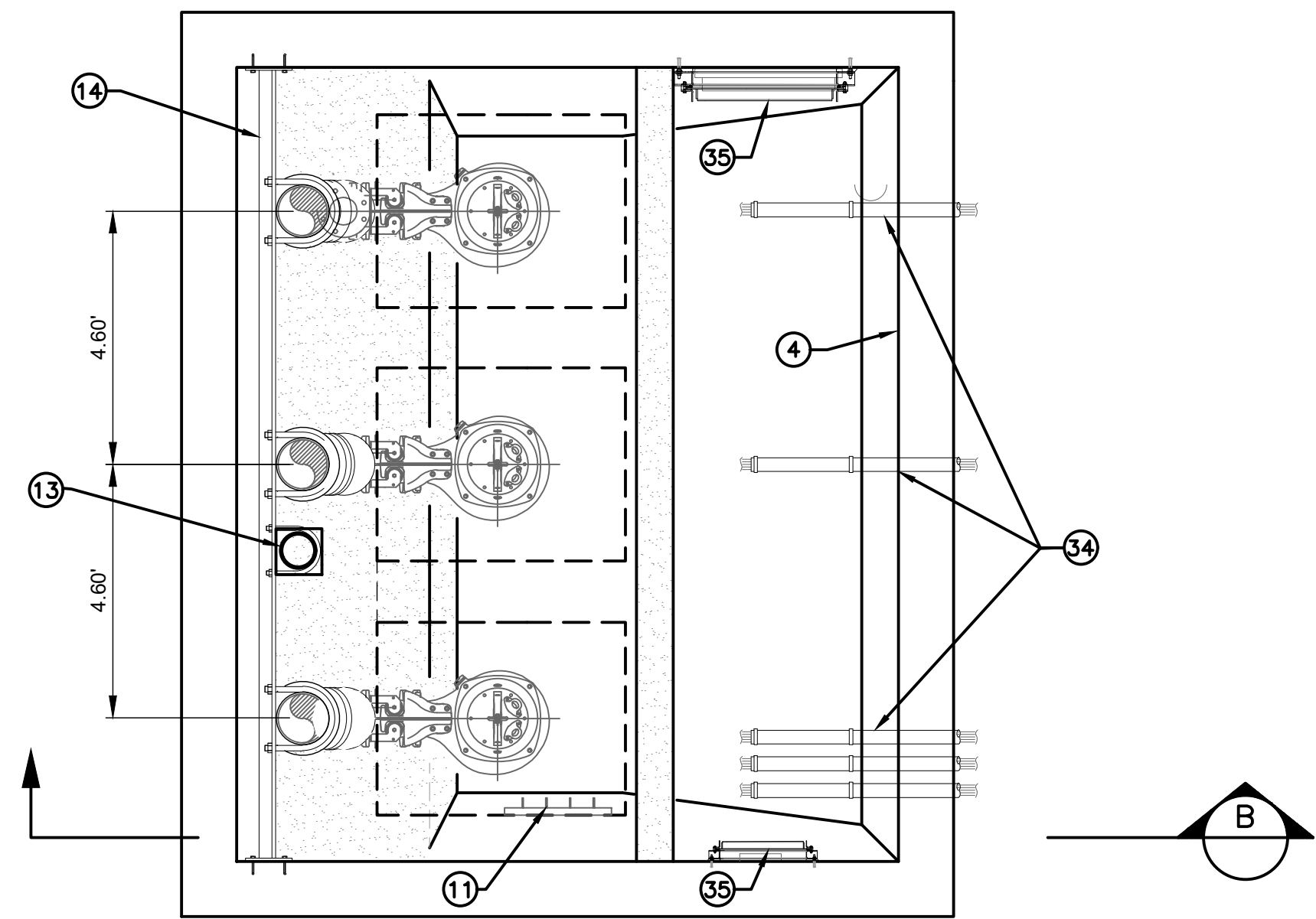
BACKUP FLOAT SETTINGS			
FLOAT	ELEV.	ACTION	NOTES
1	-7.0	HIGH LEVEL	MOUNT AS DIRECTED BY OWNER

PROPOSED LIFT STATION OPERATION DATA	
ESTIMATED DAILY FLOW = 1.3 MGD. ESTIMATED AVERAGE RUN TIME = 10 HOURS	



- 1 INSTALL (3) EXISTING SUBMERSIBLE PUMPS FLYGT NP 3202 1,450 GPM @ 85.0 FT TDH - 60HP, 460 V, 3 PH - 60HZ
- 2 EXISTING WET WELL TO REMAIN
- 3 EXISTING CONCRETE BAFFLE
- 4 INSTALL NEW LINER IN WET WELL AND NEAREST MANHOLE, RAVEN, SPECTRASHIELD, OR APPROVED EQUAL
- 5 JOINT SEALANT RAM-NEK PREFORMED FLEXIBLE PLASTIC GASKET
- 6 316 STAINLESS STEEL LIFTING CABLE/CHAIN
- 7 POWER CABLE
- 8 (1) FLOAT FOR PUMP CONTROL. SEE FLOAT SETTINGS CHART THIS SHEET
- 9 PROPOSED NEW CONCRETE FILLET
- 10 LOCKABLE ALUMINUM SPRING ASSISTED ACCESS HATCH (4.0'x 3.0' OPENING) (SEE DETAIL 4, SHEET C-501)
- 11 316 STAINLESS STEEL FLOAT CABLE HOLDER MOUNT ON NON-HINGE SIDE
- 12 316 STAINLESS STEEL PUMP GUIDE RAILS WITH STAINLESS STEEL BRACKETS/HARDWARE
- 13 6" PVC STILLING WELL WITH 1/2" HOLES AS SHOWN. 316SS U-BOLTS TO SUPPORT BRACKETS.
- 14 PIPE SUPPORT BRACKET (SEE DETAIL THIS SHEET).
- 15 BLUE RIBBON MODEL 313 AI LEVEL TRANSDUCER .
- 16 ANCHOR BASE ELBOW TO WET WELL FLOOR. INSTALL 1/2" 316SS PLATE WITH 3/4" STAINLESS STEEL ALL THREAD TO ANCHOR BASE ELBOWS TO ONE (1) BASE PLATE. BASE PLATE TO BE ANCHORED TO WETWELL WITH MIN. FOUR (4) 3/4" ALL THREAD WITH EPOXY ANCHORS (MIN. 4" EMBEDDED) IN CONCRETE FLOOR

- 17 (6) 6" FL 316 S.S. 45° ELBOWS.
- 18 (3) 10"x 6" FL 316 S.S. REDUCER.
- 19 (3) 10" FL 316 S.S. DISCHARGE RISER PIPE.
- 20 (3) 10" FL 316 S.S. 90° BENDS.
- 21 (3) 10" 316 S.S. 12" LONG FLANGED SPOOL PIECE .
- 22 (3) 10" FL CHECK VALVES.
- 23 (3) 10" FL GATE VALVES.
- 24 (1) 12" MJ DIP SLEEVE.
- 25 +/- 9 FT - 12" C-900 PVC PIPE, FORCE MAIN.
- 26 (1) 12" MJ DIP 90° BEND.
- 27 12" FL 316 S.S. PIPE.
- 28 12" FL 316 S.S. TEE.
- 29 12" 316 S.S. BLIND FLANGE W/ 2" TAP
- 30 (2) 2" 316 S.S. BALL VALVE
- 31 2" A.R.V. ARI D-025P ASSEMBLY W/ PRESSURE TRANSMITTER AND GAUGE. PROVIDE AIR VENT PIPE PER STANDARD DETAIL 1/C-501.
- 32 6" SCH80 PVC WET WELL VENT , 6" PIPE SLEEVE TO BE CAST INTO WETWELL TOP AND CAPPED.
- 33 CORE DRILL AND INSTALL 6" SCH40 PVC ODOR CONTROL PIPING,SEAL WITH NON-SHRINK GROUT.
- 34 PROPOSED 4" SCH80 PVC CONDUIT STRAP TO UNDERSIDE OF WET WELL TOP WITH 316 SS CLAMPS AND BOLTS (TYPICAL OF 5) .
- 35 S.S. SLUICE GATE AFFIXED TO WALL W/ MANUAL ACTUATOR (TYPICAL OF 2) .



WET WELL INTERIOR VIEW PLAN
NOT TO SCALE

Mead & Hunt
Mead and Hunt, Inc.
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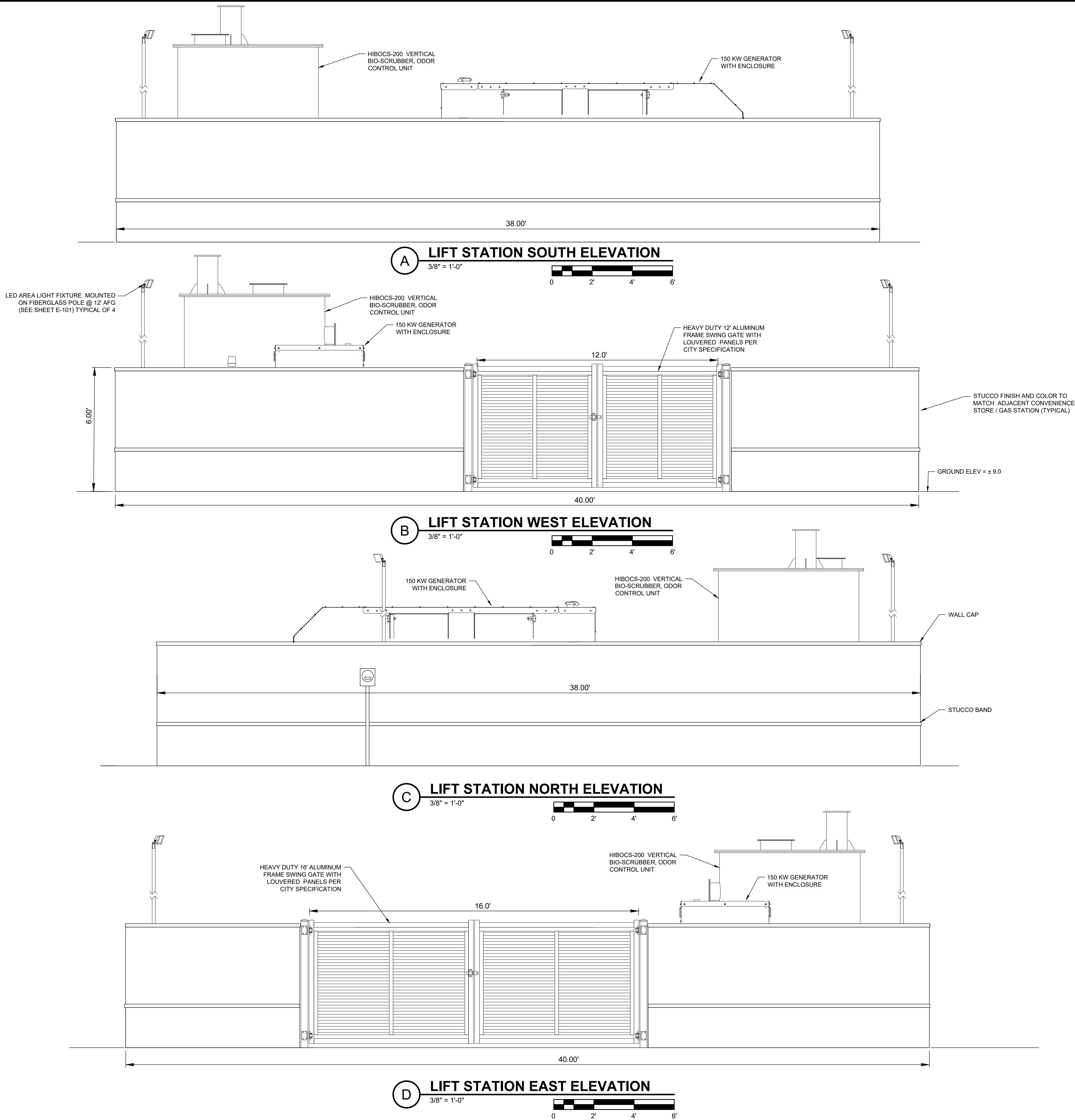
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SHEET CONTENTS
PROPOSED
LIFT STATION DETAIL

SHEET NO.

C-102

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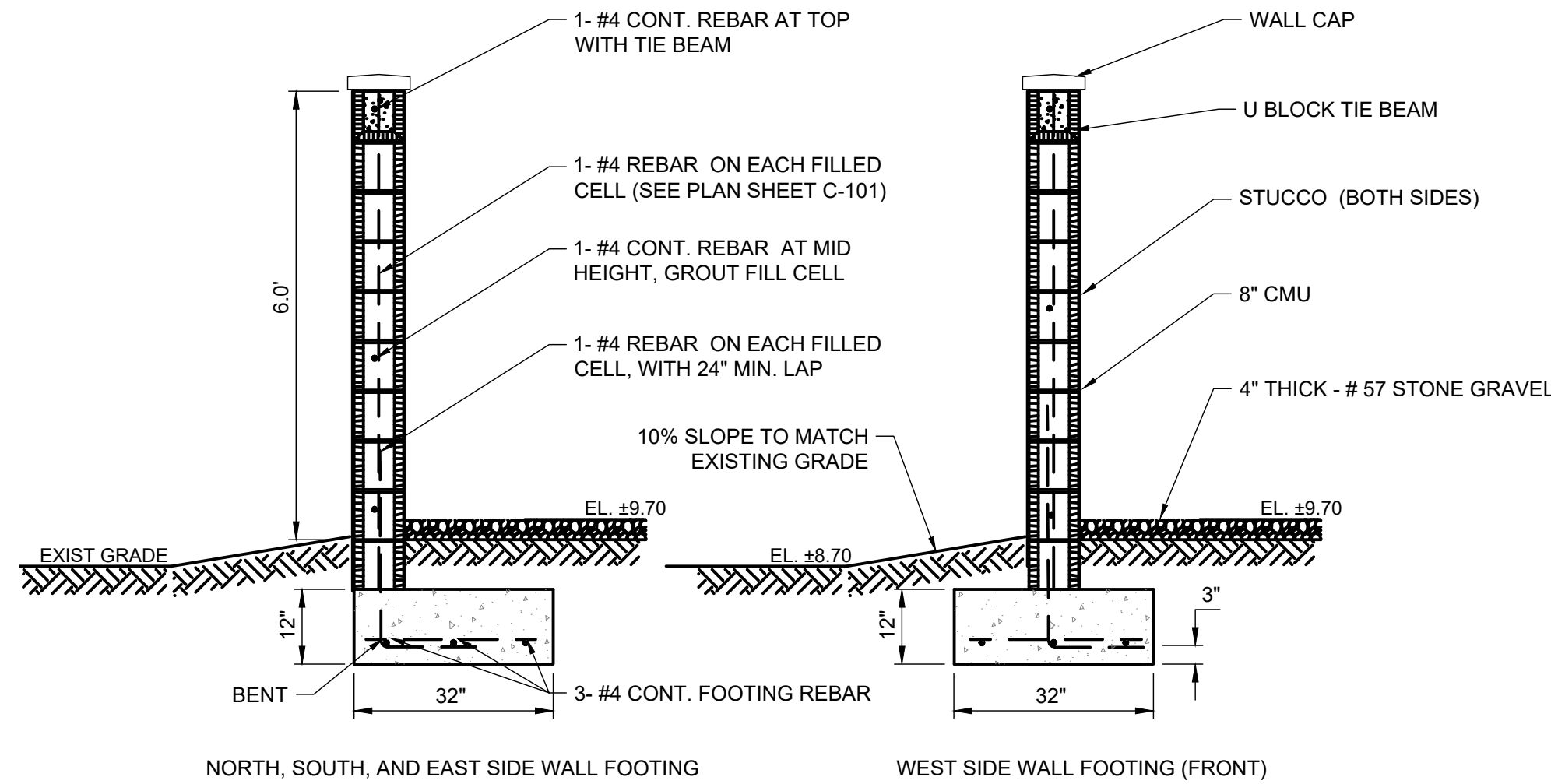
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SHEET CONTENTS
ELEVATIONS

SHEET NO.

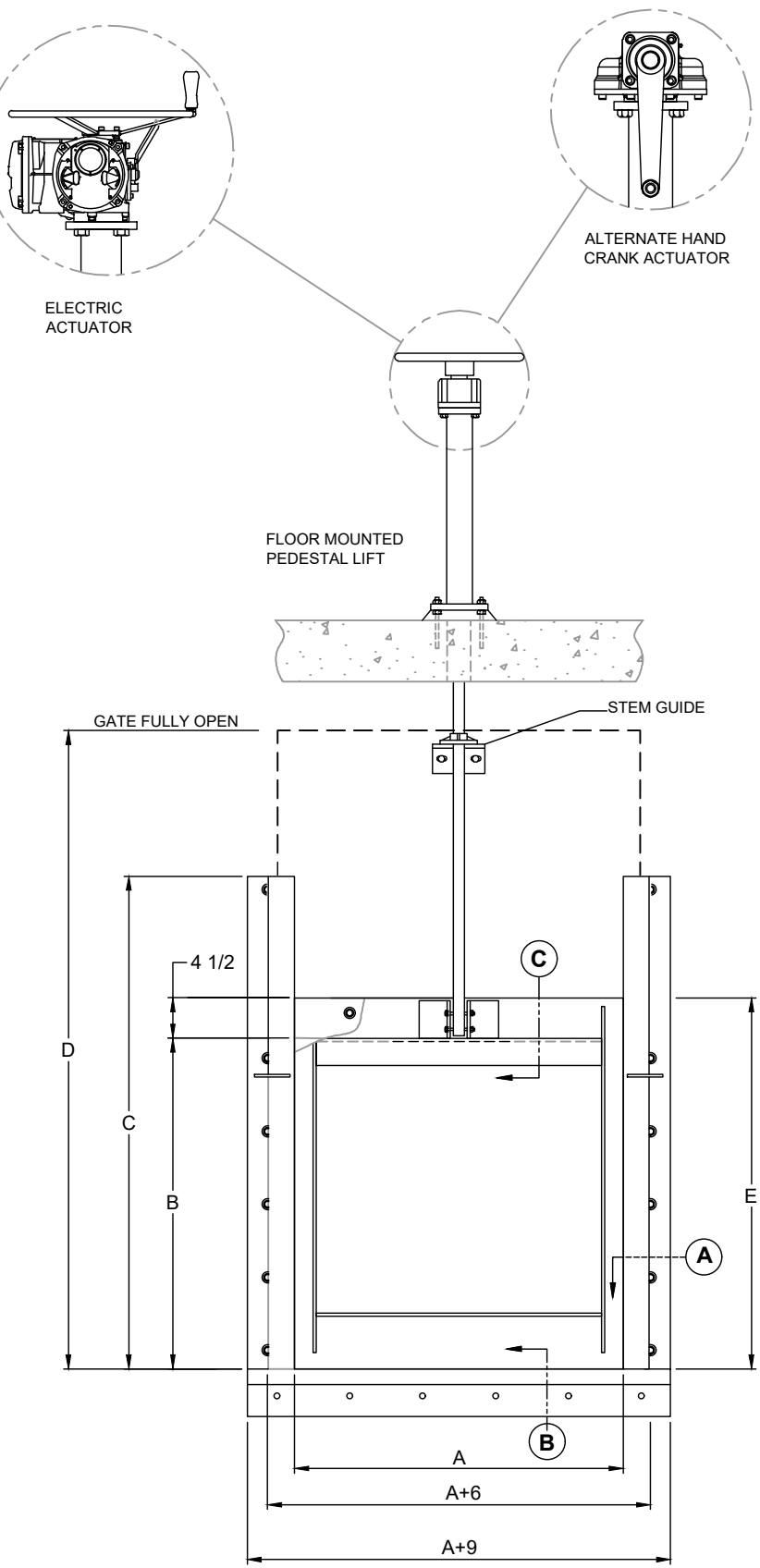
C-103

- FOUNDATIONS
1. ASSUMPTIVE DESIGN NET SOIL BEARING PRESSURE FOR SPREAD FOOTINGS IS 1000 PSF. THIS SHALL BE VERIFIED BY AN INDEPENDENT TESTING LABORATORY PRIOR TO INSTALLING FOUNDATIONS.
 2. COMPACT SOILS AT BOTTOM OF FOOTINGS AND SLABS TO 98% OF MAXIMUM DENSITY PER ASTM D1557.
- CONCRETE
1. DESIGN, MATERIAL, WORKMANSHIP, AND PREPARATION OF DETAILED FABRICATION AND PLACING DRAWINGS SHALL BE IN ACCORDANCE WITH CURRENT EDITIONS OF ACI 318, ACI SP-66, ACI SP-4, AND THE CRSI HANDBOOK.
 2. ALL CONCRETE SHALL DEVELOP THE FOLLOWING COMPRESSIVE STRENGTHS AT 28 DAYS, UNLESS OTHERWISE NOTED:
 - a. SLABS AND FOUNDATIONS 3000 PSI
 - b. BEAMS AND FILLED CELLS 3000 PSI
 3. SLUMP JUST PRIOR TO PLACING SHALL BE THE FOLLOWING (PLUS OR MINUS ONE INCH)
 - a. SLABS ON GRADE: 4 INCHES
 - b. FOUNDATIONS: 4 INCHES
 - c. FILLED CELLS: 8 INCHES
 - d. OTHER CONCRETE: 4 INCHES
 4. ALL CONCRETE SHALL BE PLACED IN THE DRY. NO CONCRETE SHALL BE PLACED LATER THAN 90 MINUTES AFTER MIXING HAS BEGUN. DEPOSIT CONCRETE IN ITS FINAL POSITION WITHOUT SEGREGATION AND REHANDLING.
 5. REINFORCING STEEL BARS SHALL BE DEFORMED AND CONFORM TO THE LATEST REQUIREMENTS OF ASTM A615 GRADE 60.
 6. REINFORCING BARS ARE CONTINUOUS UNLESS OTHERWISE NOTED. WHERE NECESSARY, MINIMUM LAP SPLICES FOR REINFORCING BARS SHALL BE 40 BAR DIAMETERS.
 7. LAP ALL WELDED WIRE MESH (W.W.M.) 12 INCHES AT SPLICES.
 8. ALL REINFORCING STEEL SHALL HAVE THE FOLLOWING MINIMUM CLEAR CONCRETE COVER:
 - a. CAST AGAINST AND PERMANENTLY TO EARTH = 3 INCHES
 - b. STIRRUPS IN BEAMS 1/2 INCH = 1
 - c. ALL OTHER CONDITIONS = 2 INCHES
 9. AT DISCONTINUOUS ENDS OF BEAMS AND SLABS, TOP BARS SHALL TERMINATE IN A STANDARD ACI HOOK, UNLESS OTHERWISE NOTED.
 10. AT OUTSIDE CORNERS OF CONCRETE BEAMS AND FOOTINGS PROVIDE #4X4'-0" LONG CORNER BARS IN EACH FACE AT SAME SPACING AS HORIZONTAL REINFORCING, U.O.N.
 11. PROVIDE DOWELS IN FOOTINGS OF SAME QUANTITY AND SIZE AS VERTICAL WALL REINFORCING. BOTTOM DOWELS SHALL HAVE A STANDARD ACI HOOK.
 12. CHAMFER ALL EXPOSED CONCRETE EDGES 3/4 INCHES X 45 DEGREES.
 13. PATCH ALL DEFECTIVE AREAS OF CONCRETE WITH CEMENT GROUT.

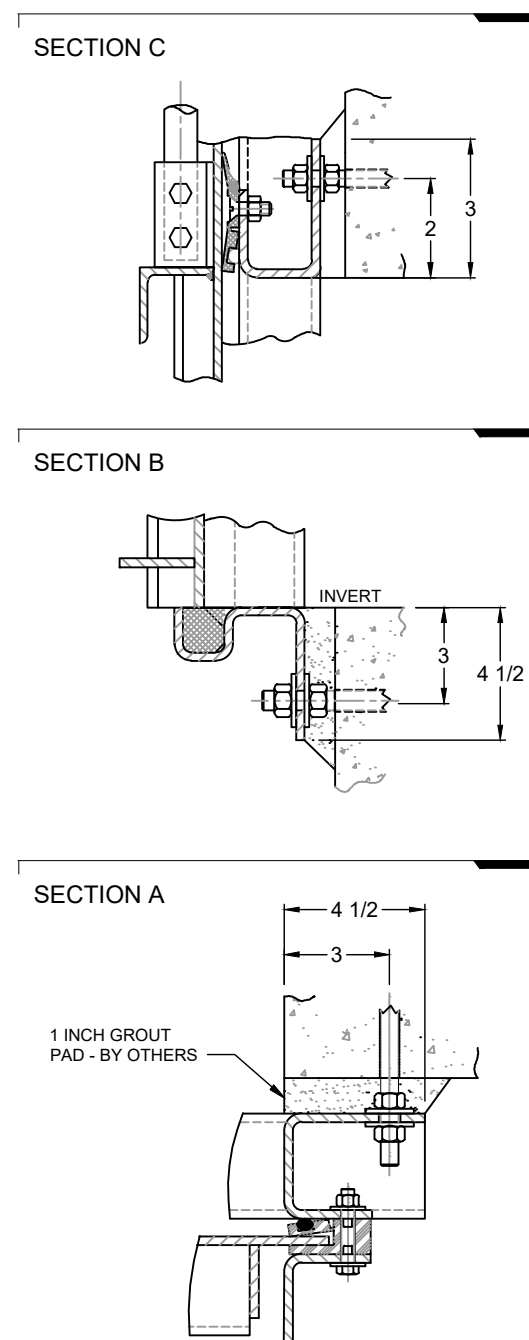


3 PERIMETER WALL DETAIL
1/2"=1'

CONTAINED SLIDE GATES

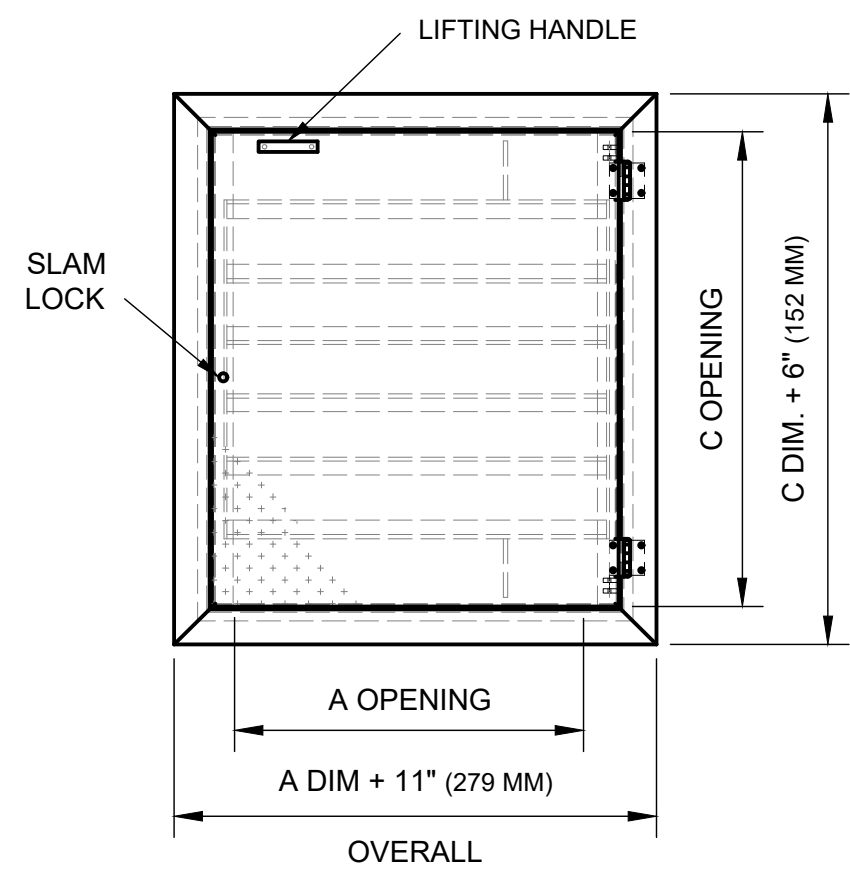


5 SLUICE GATE DETAIL
NTS



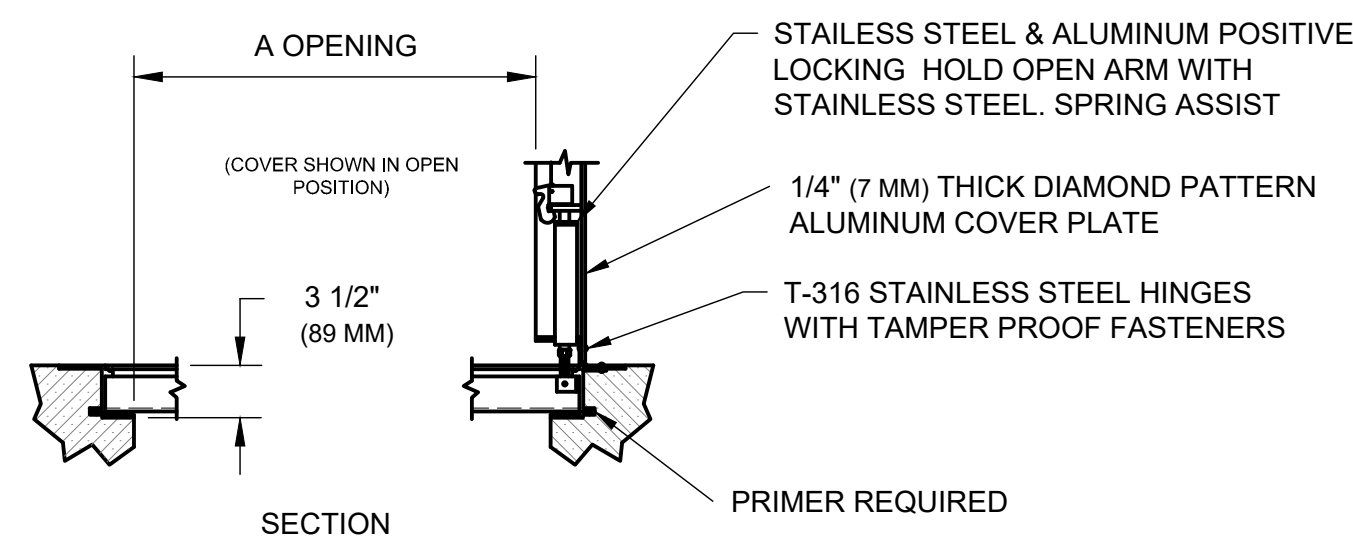
A	Gate Opening Width
B	Gate Opening Height
C	Guide Rail Height = B + 1/2 of Slide
D	Gate Full Open = 2B + 4-1/2
E	Slide Height = B + 4-1/2

SINGLE LIFT & STEM

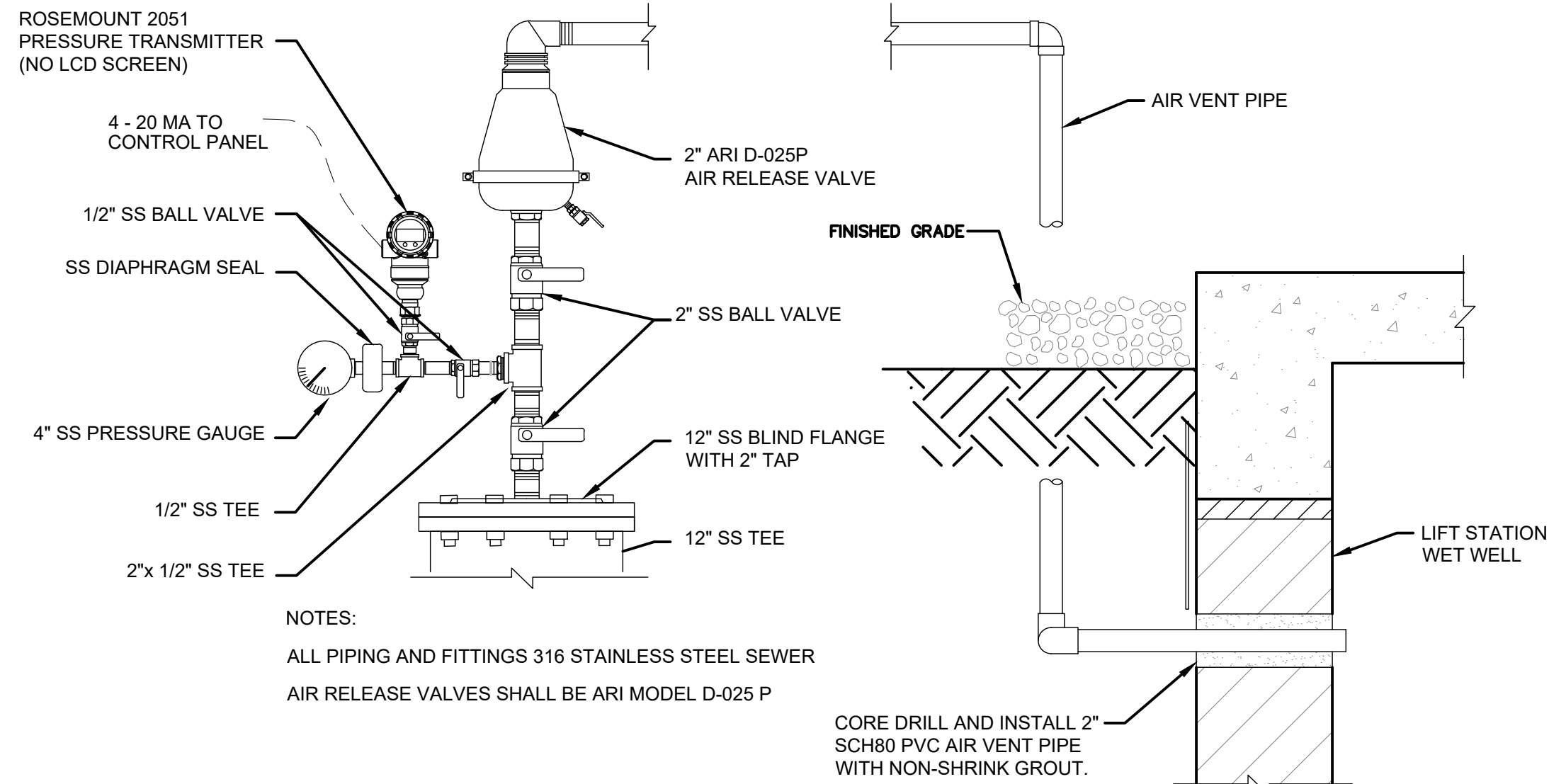


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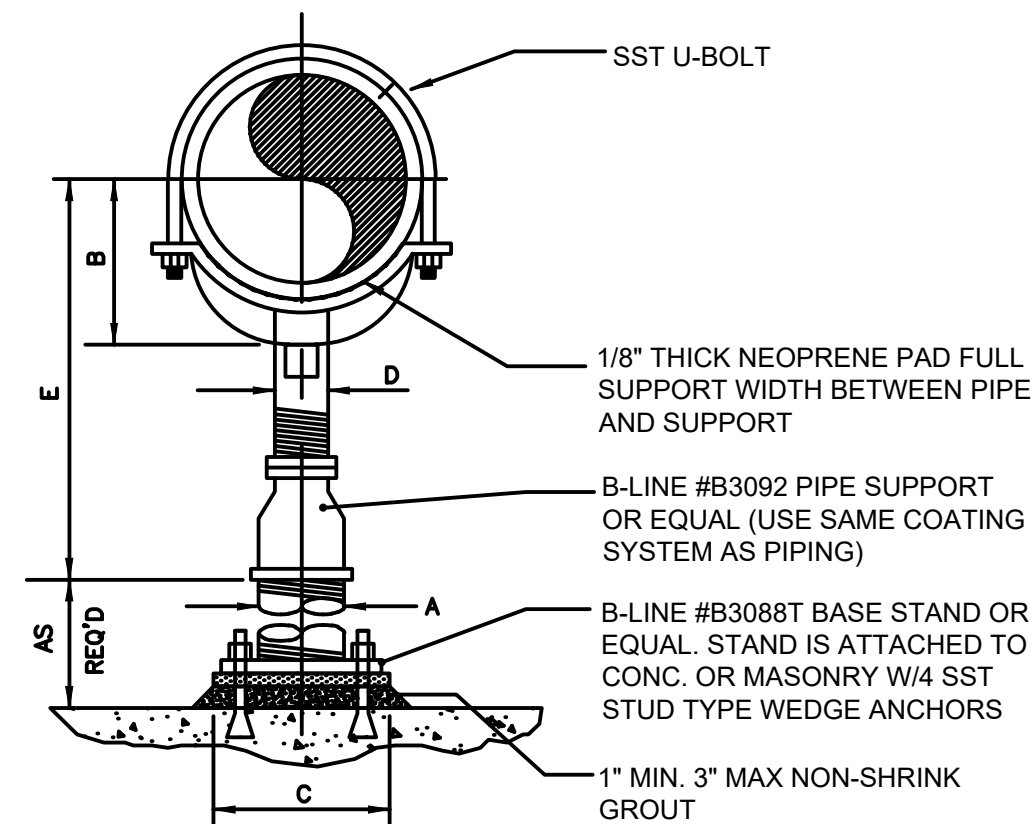
1. SUITABLE FOR USE IN OFF STREET LOCATION WHERE NOT SUBJECTED TO HIGH DENSITY TRAFFIC.
2. PROVIDE A FULL BED OF CLASS "A" CONCRETE UNDER FRAME AND SUPPORT ANGLES.
3. AUTO-LOCK T-316 STAINLESS STEEL HOLD OPEN ARM WITH RELEASE HANDLE.
4. T-316 STAINLESS STEEL HINGES AND ATTACHING HARDWARE.
5. T-316 STAINLESS STEEL SLAM LOCK WITH REMOVABLE KEY.
6. STAINLESS STEEL COMPRESSION SPRING ASSIST.
7. SINGLE LEAF CONSTRUCTION.



4 WET WELL ACCESS HATCH DETAIL
NTS



1 AIR RELEASE VALVE ASSEMBLY
PIPE INTO WET WELL DETAIL
NTS



PIPE SIZE	A	B	C	D	E	
					MIN.	MAX.
2 1/2	2 1/2	3 1/2	9	1 1/2	8	13
3	2 1/2	3 3/4	9	1 1/2	8 1/4	13 1/4
3 1/2	2 1/2	4	9	1 1/2	8 1/2	13 1/2
4	3	4 1/4	9	2 1/2	9 1/4	14
5	3	4 7/8	9	2 1/2	10	14 3/4
6	3	5 1/2	9	2 1/2	10 1/2	15 1/4
8	3	6 7/8	9	2 1/2	11 3/4	16 1/2
10	3	8 1/2	9	2 1/2	13 1/2	18 1/4
12	3	9 15/16	9	2 1/2	15	19 3/4
14	4	10 15/16	11	3	16 1/4	20 3/4
16	4	12 3/8	11	3	17 3/4	22 1/4
18	6	13 7/8	13 1/2	3 1/2	19 1/2	24
20	6	15 3/8	13 1/2	3 1/2	21	25 1/2
24	6	17 15/16	13 1/2	4	23 3/4	28 1/4

2 ADJUSTABLE PIPE SUPPORT DETAIL
NTS

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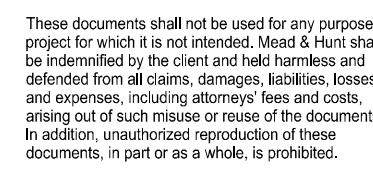
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SHEET CONTENTS
GENERAL
CONSTRUCTION
DETAILS

SHEET NO.

C-501

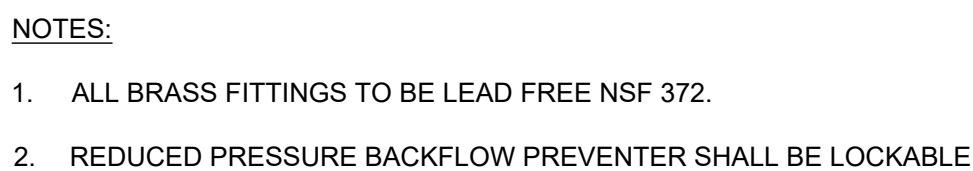


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SHEET NO. _____

Page 551 of 551



- (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

(7)

(6)

RACEWAYS SYMBOLS

 ABOVEGROUND CONDUIT
 UNDERGROUND CONDUIT
 CONCEALED CONDUIT IN CEILING OR WALL
 WIREWAY, SIZE AND TYPE AS INDICATED ON DRAWINGS
 CABLE TRAY, SIZE AND TYPE AS INDICATED ON DRAWINGS
 UNDERFLOOR DUCT
 JUNCTION BOX
 HANDHOLE
 MANHOLE

	DUPLEX RECEPTACLE TEXT INDICATES MOUNTING HEIGHT
	DOUBLE DUPLEX RECEPTACLE
	ABOVE COUNTER DUPLEX RECEPTACLE
	SIMPLEX RECEPTACLE
	SPLIT WIRED DUPLEX RECEPTACLE
	SPECIAL PURPOSE CONNECTION, SEE EQUIPMENT WIRING SCHEDULE
	FLOOR BOX
	POKE THRU
	CEILING MOUNTED DUPLEX RECEPTACLE
	CEILING MOUNTED DOUBLE DUPLEX RECEPTACLE
	SPECIAL PURPOSE RECEPTACLE, NEMA TYPE ON DRAWING
	CORD REEL

a	DENOTES SWITCH LEG FOR SWITCHED OUTLETS
D	DENOTES DEDICATED OUTLETS
EW	DENOTES ELECTRIC WATER COOLER OUTLETS
GFCI	DENOTES GROUND FAULT INTERRUPTER OUTLETS
IG	DENOTES ISOLATED GROUND OUTLETS
H	DENOTES HORIZONTALLY MOUNTED OUTLETS
TR	DENOTES TAMPER RESISTANT SAFETY OUTLETS
USB	DENOTES COMBINATION DUPLEX/USB OUTLETS
WP	DENOTES WEATHER PROOF OUTLETS
X1	DENOTES EXPLOSION PROOF CLASS 1 DIVISION 1 OUTLETS
X2	DENOTES EXPLOSION PROOF CLASS 1 DIVISION 2 OUTLETS

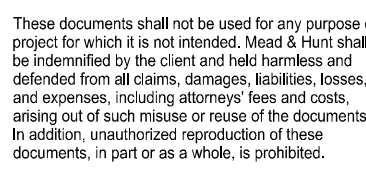
	UTILITY METER SOCKET
	SWITCHBOARD (x REPRESENTS SWITCHBOARD DESIGNATION)
	CUSTOMER METERING
	GENERATOR ANNUNCIATOR PANEL
	EMERGENCY POWER OFF
	POWER FACTOR CORRECTION CAPACITOR
	ACTIVE HARMONIC FILTER
	GROUND ACCESS WELL
	GROUND ROD
	GROUND RECEPTACLE
	LIGHTNING ROD
	GROUNDING CONDUCTOR
	PAD MOUNTED SWITCH
	GENERAL LIGHTING AND POWER TRANSFORMER-DRY TYPE
	WALL MOUNTED LIGHTING AND POWER TRANSFORMER-DRY T
	DISTRIBUTION TRANSFORMER FOR NON-LINEAR LOADS
	PLUG-IN BUS DUCT
	FEEDER BUS DUCT
	NEW PANELBOARD
	EXISTING PANELBOARD

	GROUND MOUNTED LIGHT (ABOVE OR BELOW GRADE)
	ELECTRIC HANDHOLE
	HANDHOLE, GENERIC
	ELECTRIC MANHOLE
	ELECTRIC METER
	ELECTRIC SERVICE PANEL
	ELECTRIC TRANSFORMER
	ELECTRIC PEDESTAL BOX
	FLOOD LIGHT POLE
	ALARM STROBE LIGHT
	DOUBLE LIGHT POLE
	LIGHT POLE
	POWER POLE
	DOUBLE POWER POLE
	POWER POLE WITH LIGHT

	3 PHASE MOTOR CONNECTION
	1 PHASE MOTOR CONNECTION
	EQUIPMENT CONNECTION
	COMBINATION MAGNETIC MOTOR CONTROLLER
	MANUAL MOTOR CONTROLLER (3 PHASE)
	SOLID STATE MOTOR CONTROLLER
	VARIABLE FREQUENCY MOTOR CONTROLLER
	MAGNETIC MOTOR CONTROLLER
	NON-FUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	DOUBLE THROW SWITCH
S_F	FUSED SINGLE POLE SWITCH
S_M	MOTOR RATED STARTER / DISCONNECT SWITCH
	PUSH BUTTON STATION
	MOTOR CONTROL CENTER

ACCU	AIR COOLED CONDENSING UNIT
A/E	ARCHITECT/ENGINEER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
C	CONDUIT
CF	CIRCULATION FAN
CHWP	CHILLED WATER PUMP
CP	CIRCULATION PUMP
CUH	CABINET UNIT HEATER
DH	DUCT HEATER
DO	DOOR OPERATOR
EF	EXHAUST FAN
EL	EMERGENCY LIGHT
EMT	ELECTRICAL METALLIC TUBING
ETR	EXISTING TO REMAIN
EW	ELECTRICAL WATER COOLER
EW	ELECTRICAL WATER HEATER
FA	FIRE ALARM
FAF	FORCED AIR FURNACE
GFI	GROUND FAULT INTERRUPTER
GRS	GALVANIZED RIGID STEEL
GEC	GROUNDING ELECTRODE CONDUCTOR
HD	HAND DRYER
HP	HORSEPOWER
HVAC	HEATING, VENTILATION, AIR CONDITIONING
HWB	HOT WATER BOILER
HWP	HOT WATER PUMP
IWH	INSTANTANEOUS ELECTRIC WATER HEATER
IH	INFRARED HEATER
IMC	INTERMEDIATE METALLIC CONDUIT
IWH	INSTANTANEOUS WATER HEATER
MAU	MAKE-UP AIR UNIT
MM	MULTI-MODE FIBER OPTIC CABLE
MNS	MASS NOTIFICATION SYSTEM
NIC	NOT IN CONTRACT
N	NIGHT LIGHT
NLEL	NIGHT LIGHT AND EMERGENCY LIGHT
NTS	NOT TO SCALE
PVC	POLYVINYL CHLORIDE
RCP	RADIATE CEILING PANEL
REQ'D	REQUIRED
RF	RETURN FAN
SF	SUPPLY FAN
SM	SINGLE-MODE FIBER OPTIC CABLE
SP	SUMP PUMP
SS	STAINLESS STEEL
TBR	TO BE REMOVED
TYP	TYPICAL
UC	UNIT COOLER
UG	UNDERGROUND
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
VER	VEHICLE EXHAUST REEL
WFE	WELDING FUME EXTRACTOR
WL	WET LOCATION LISTED
WP	WEATHERPROOF
3R	NEMA 3R RATING
4X	NEMA 4X RATING

1. THE SYMBOLS AND ABBREVIATIONS LIST ON THIS SHEET IS A COMPREHENSIVE STANDARD GUIDE INTENDED FOR GENERAL USE ON ALL PROJECTS. THEREFORE NOT ALL THE SYMBOLS AND ABBREVIATIONS CONTAINED IN THIS LIST ARE NECESSARILY USED ON THIS PARTICULAR PROJECT AND SHOULD BE USED FOR CLARIFICATION ONLY.
2. THE CONTRACTOR SHALL READ AND UNDERSTAND THE ENTIRE SET OF CONSTRUCTION DOCUMENTS. THIS INCLUDES BUT IS NOT LIMITED TO THE PLANS AND SPECIFICATIONS FOR ALL DISCIPLINES. THIS WILL ENSURE THAT HE UNDERSTANDS THE FULL SCOPE OF WORK AND IS ABLE TO CONVEY THE REQUIRED MATERIALS AND METHODS OF INSTALLATION TO THE HIS ESTIMATORS, SUPPLIERS AND INSTALLERS.
3. THE CONTRACTOR SHALL VISIT PROJECT SITE AND MAKE HIMSELF/HERSELF AWARE OF ALL EXISTING CONDITIONS PRIOR TO SUBMITTING A BID FOR THIS WORK.
4. PROVIDE MEANS TO FURNISH AND INSTALL.
5. COORDINATE ALL AND ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION IN ORDER TO AVOID CONFLICTS DURING CONSTRUCTION.
6. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE. DO NOT SCALE FROM THESE DRAWINGS.
7. WHERE JOB CONDITIONS REQUIRE CHANGES FROM THE CONTRACT DOCUMENTS THAT DO NOT CHANGE THE SCOPE OF INSTALLATION OR NATURE OF THE WORK REQUIRED, THE CONTRACTOR SHALL MAKE SUCH CHANGES WITHOUT ANY ADDITIONAL COST TO THE OWNER. NO OTHER CHANGES MAY BE MADE WITHOUT WRITTEN CONSENT FROM THE ENGINEER AND OWNER.
8. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE ENFORCED EDITION OF THE NATIONAL ELECTRIC CODE, NATIONAL ELECTRIC SAFETY CODE, LIFE SAFETY CODE AND ALL OTHER LOCAL AND STATE CODES AND REGULATIONS. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
9. MOUNTING HEIGHTS INDICATED ARE TO THE CENTER OF THE DEVICE U.N.O.
10. DETAILS SHOWN ON ANY DRAWING APPLY TO ALL EQUIPMENT AND MATERIAL ON THE PROJECT.
11. EQUIPMENT LOCATIONS SHOWN ARE APPROXIMATE. EXTEND CONDUIT & WIRE TO INSTALLED LOCATIONS AT NO ADDITIONAL COST TO THE OWNER.
12. ELECTRICAL SYSTEMS SHALL BE COMPLETE AND OPERABLE AT PROJECT COMPLETION.



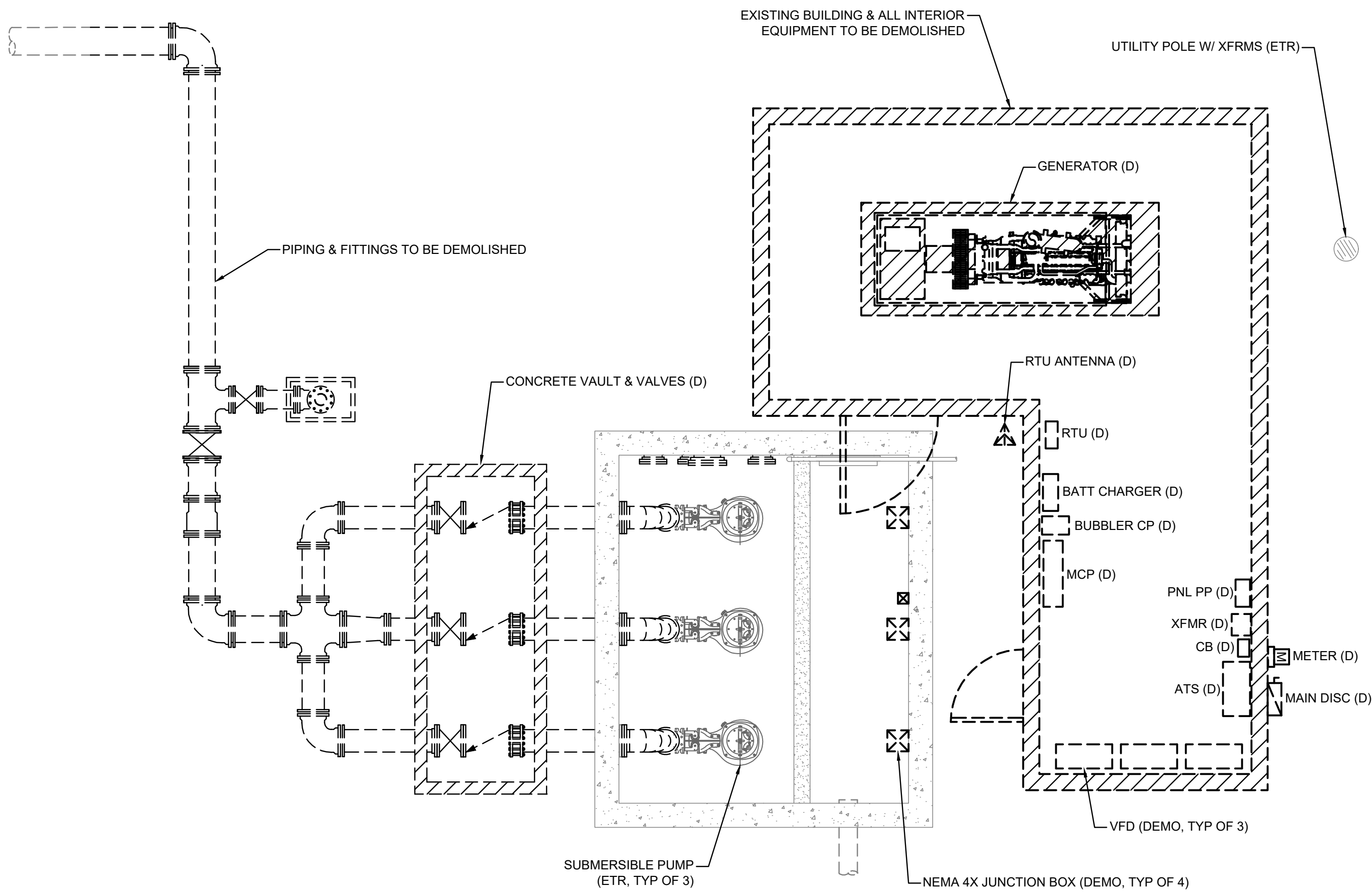
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HERBERT & NOVA LIFT STATION
IMPROVEMENTS & UPGRADE
HERBERT AVE. & NOVA ROAD
PORT ORANGE, FL 32127

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08/01/2020	90% DESIGN SET
10/15/2020	100% DESIGN SET

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DATE: AUGUST 2020
DESIGNED BY: KSK
DRAWN BY: KSK
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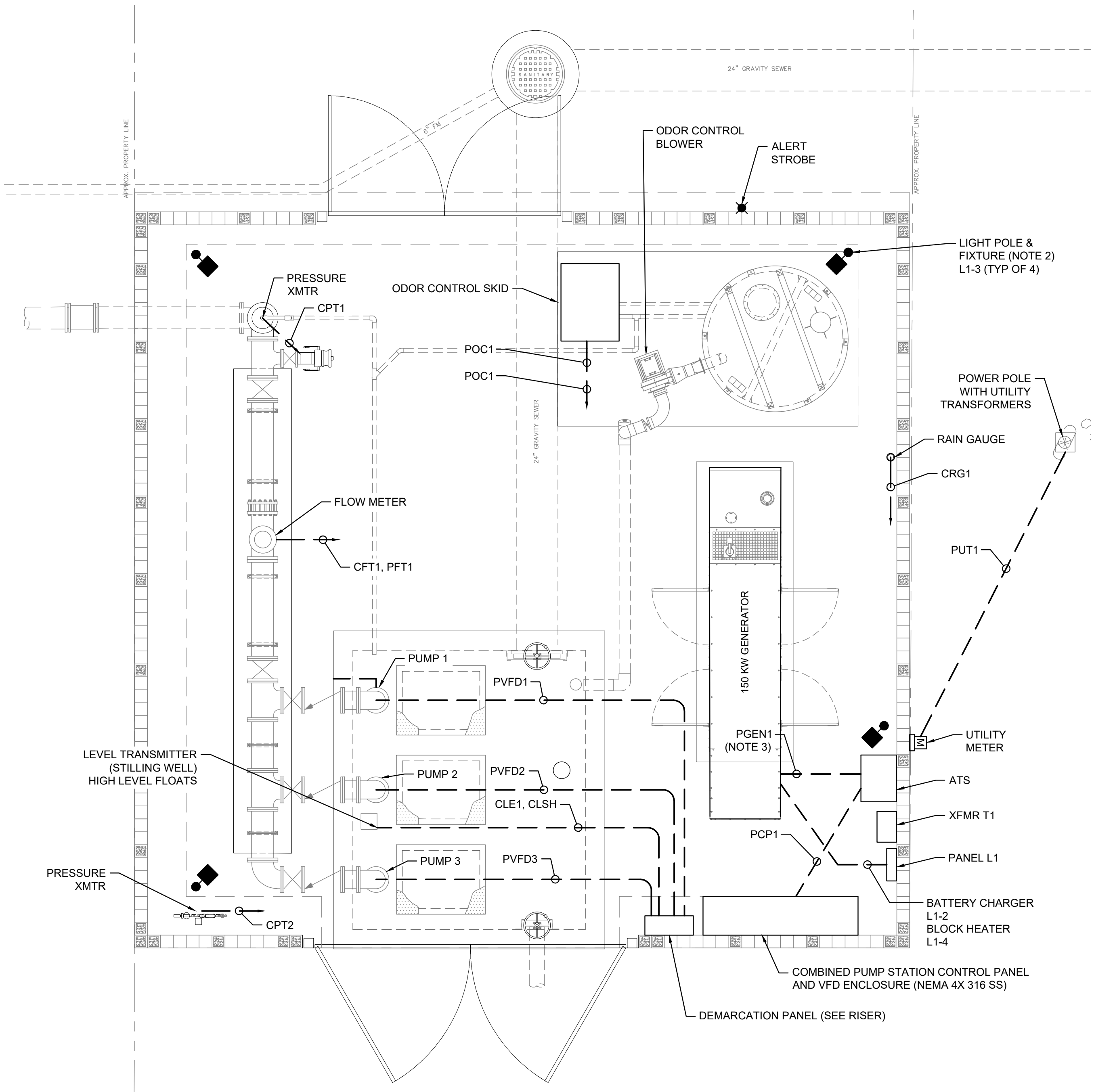
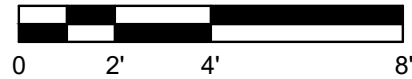
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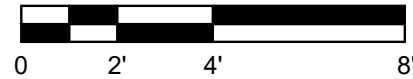
LIFT STATION ELECTRICAL DEMOLITION PLAN

1/4" = 1'-0"



LIFT STATION ELECTRICAL PLAN

1/4" = 1'-0"



NOTES:

- EXISTING STATION PUMPS SHALL REMAIN AND REUSED. ALL EXISTING ELECTRICAL, INSTRUMENTATION AND CONTROLS EQUIPMENT AND DEVICES SHALL BE DEMOLISHED.
- PROVIDE LED AREA LIGHT MOUNTED AT 12'-0" AFG TO DIRECT BURIAL ROUND FIBERGLASS POLE. BASIS OF DESIGN FOR AREA LIGHT SHALL BE LITHONIA #RSX1 LED P1 30K R3 MVOLT SPA PE DBLXD. SUBMIT EQUIVALENT FOR APPROVAL.
- PROVIDE A 1" CONDUIT WITH REQUIRED CONTROLS CABLING BETWEEN THE GENERATOR AND AUTOMATIC TRANSFER SWITCH.

Mead & Hunt

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SHEET CONTENTS
ELECTRIC PLAN

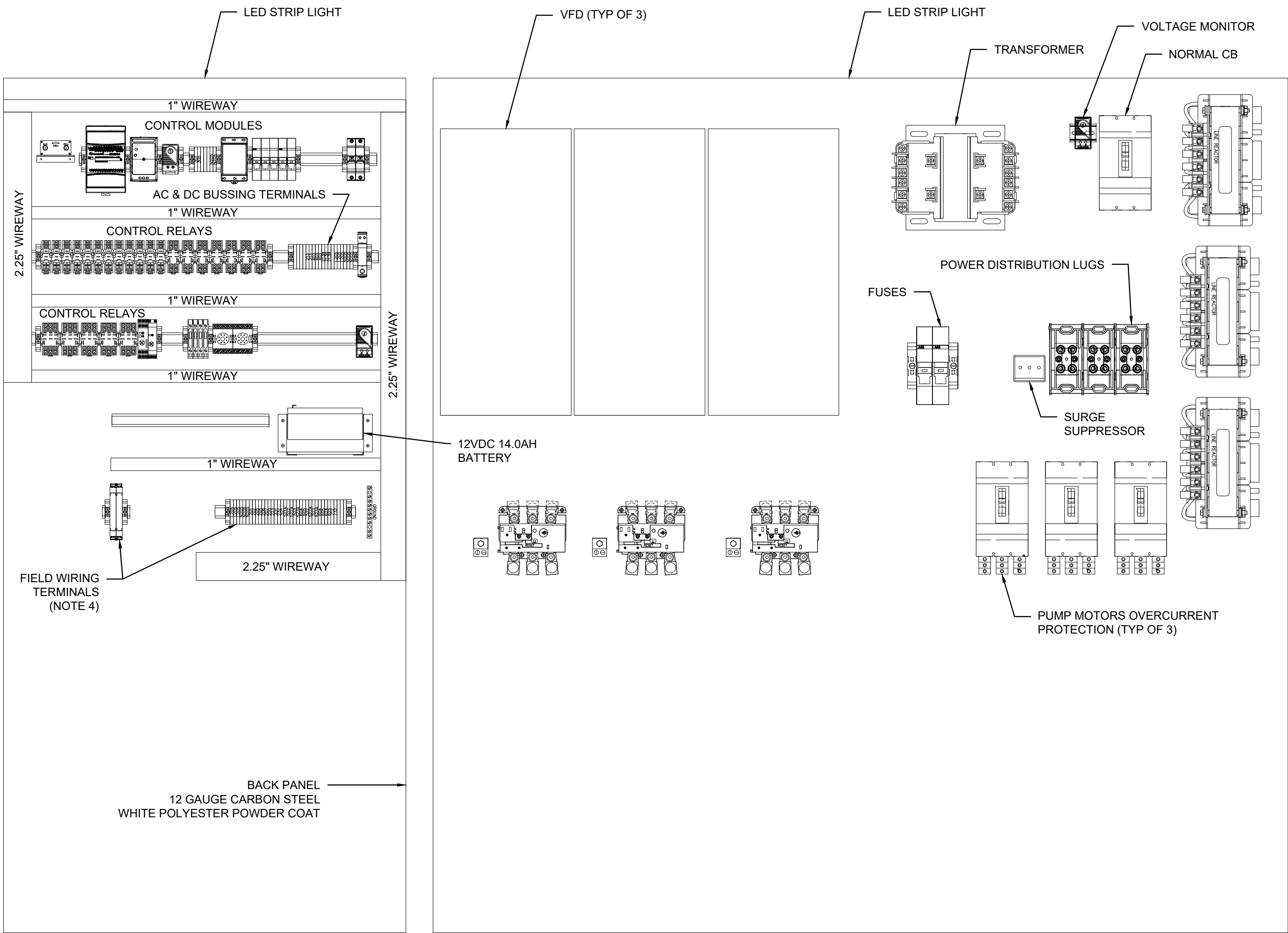
SHEET NO.

E-101

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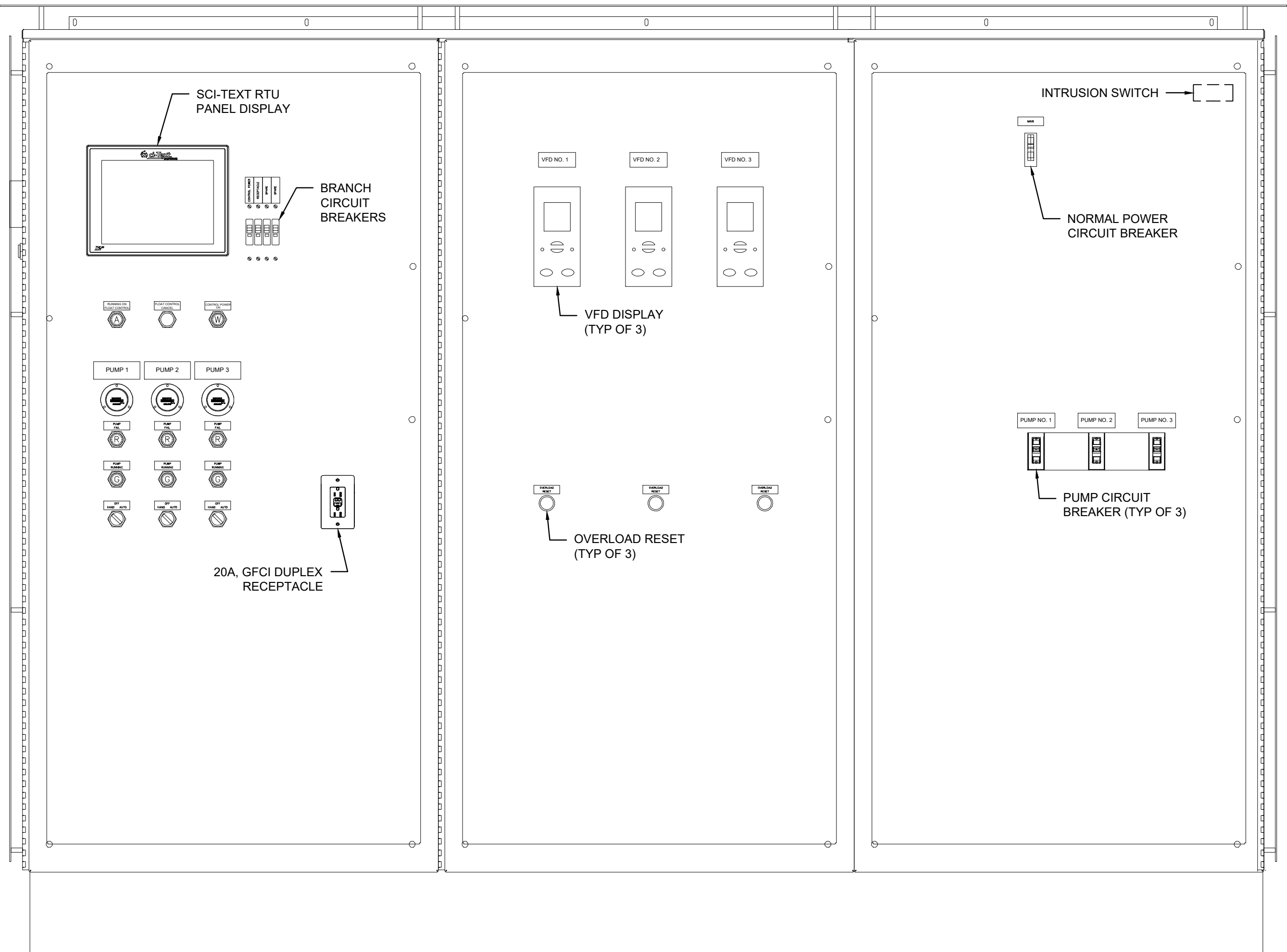
2

CONTROL BACK PANEL LAYOUT



1

CONTROL PANEL FRONT ELEVATION
(OUTER DOOR NOT SHOWN FOR CLARITY)



NOTES:

- PANEL SUPPLIER SHALL PROVIDE LAYOUT AND SCHEMATIC DRAWINGS OF THE CONTROL PANEL FOR REVIEW.
- COORDINATION WITH THE RISER DIAGRAM ON SHEET E-701 FOR SPECIFIC INFORMATION ON OVERCURRENT PROTECTION SIZING AND OTHER REQUIREMENTS.
- ENCLOSURE SHALL BE MINIMUM 72"H X 96"W X 24"D, NEMA 4X RATING, 316 SS, POWDER COATED WHITE, 3-POINT PADLOCK HANDLE AND SUN SHIELD.
- PROVIDE AN INTRINSICALLY SAFE BARRIER FOR ALL FIELD WIRING THAT ROUTES TO THE WET WELL.

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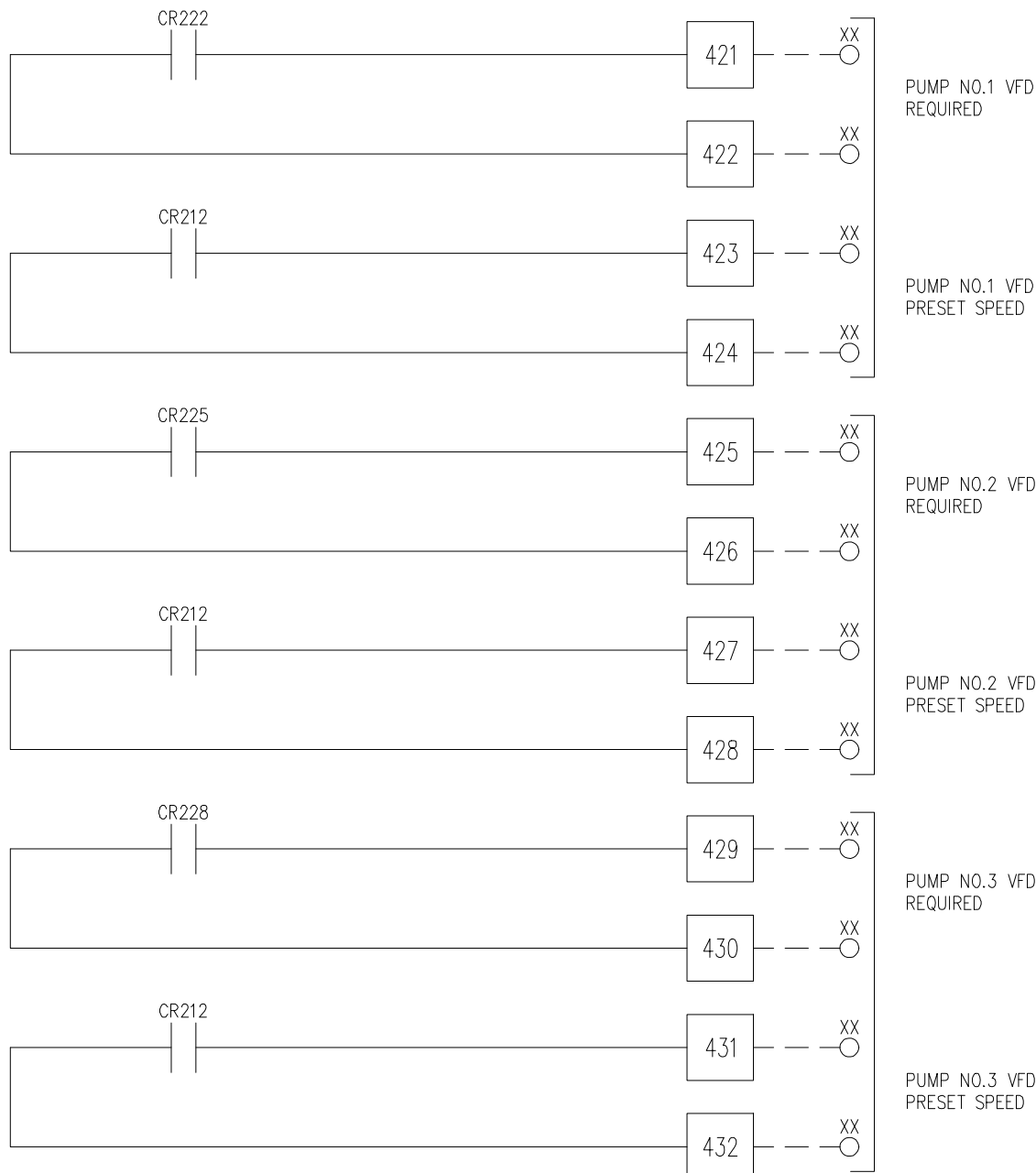
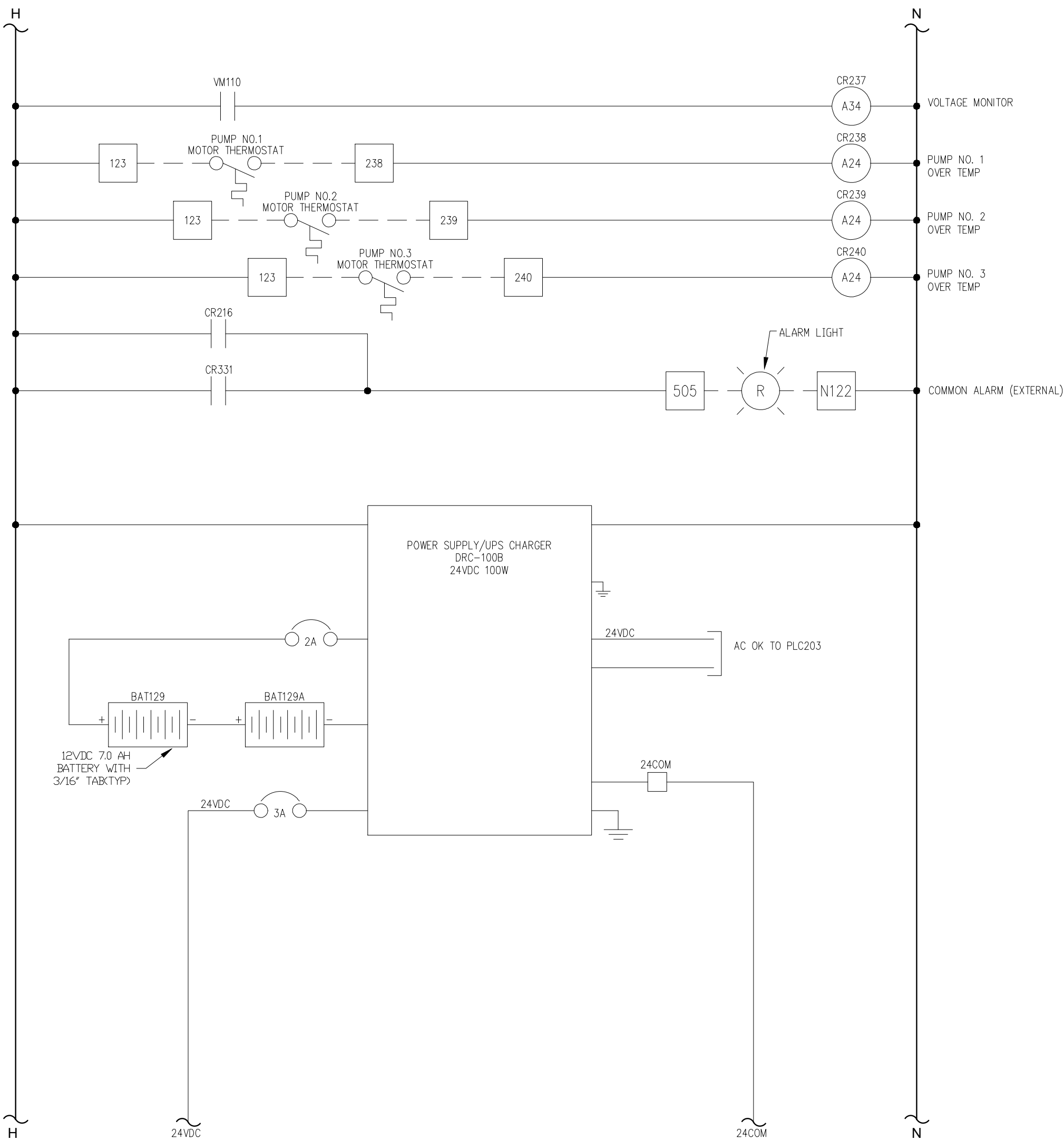
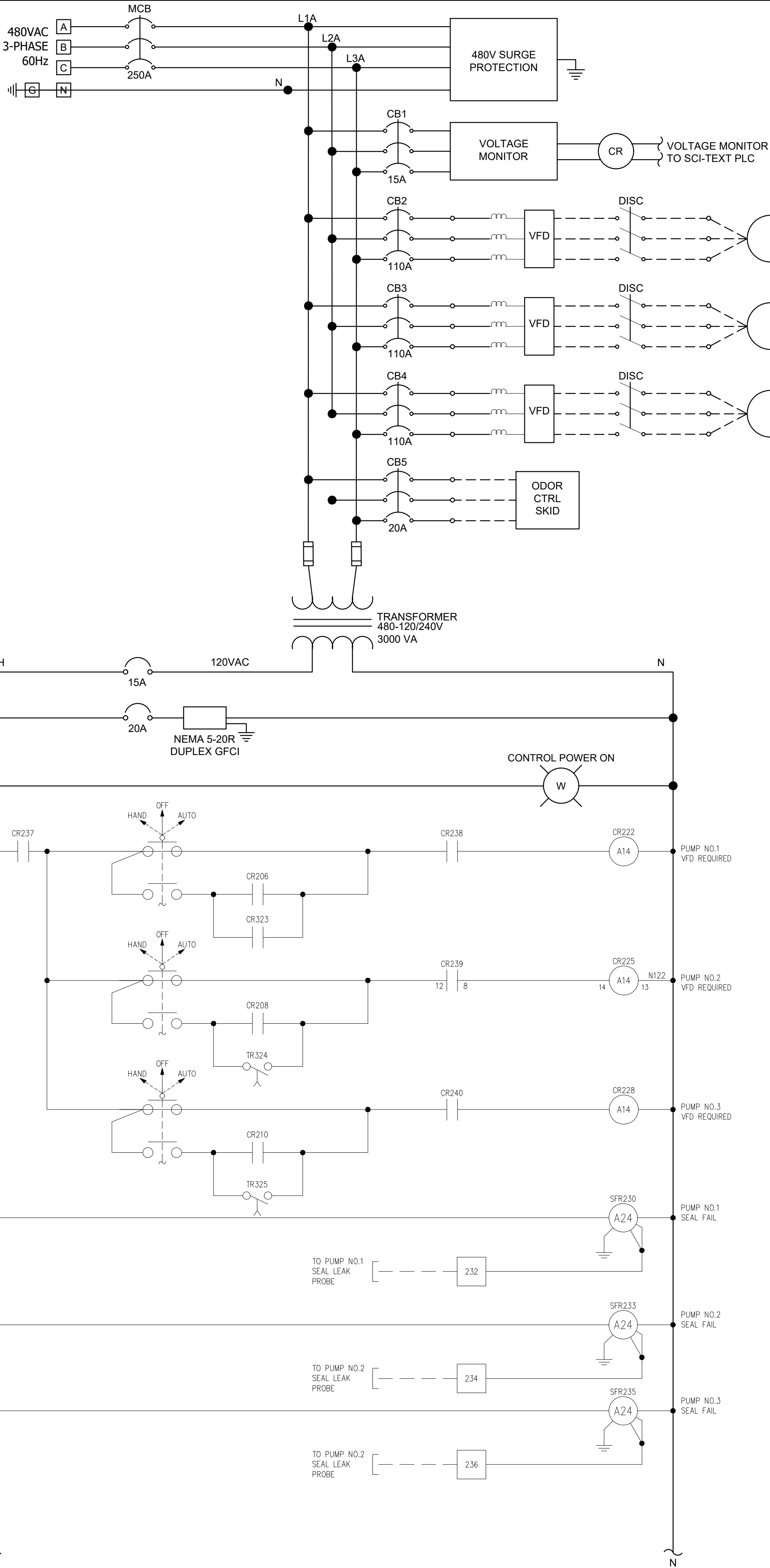
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SHEET CONTENTS
ELECTRICAL DETAILS

SHEET NO.

E-501



1 CONTROL PANEL WIRING DIAGRAM
NO SCALE

NOTES

- THE SCHEMATIC SHOWN IS A BASIC REPRESENTATION OF THE VARIOUS CONNECTIONS, FUNCTIONS AND LOGIC REQUIRED FOR THE CONTROL PANEL. IT DOES NOT SHOW THE ENTIRE EXTENT OF ALL WIRING CONNECTIONS, TERMINAL BLOCKS, ETC. NECESSARY FOR A COMPLETE AND OPERATIONAL PANEL.
- PROVIDE A COMPLETE WIRING SCHEMATIC SUBMITTAL FOR REVIEW BY THE OWNER/ENGINEER.

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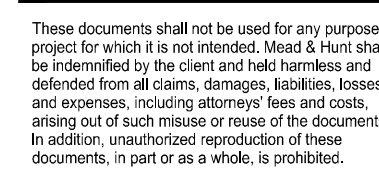
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SHEET CONTENTS
ELECTRICAL DETAILS

SHEET NO.

E-502



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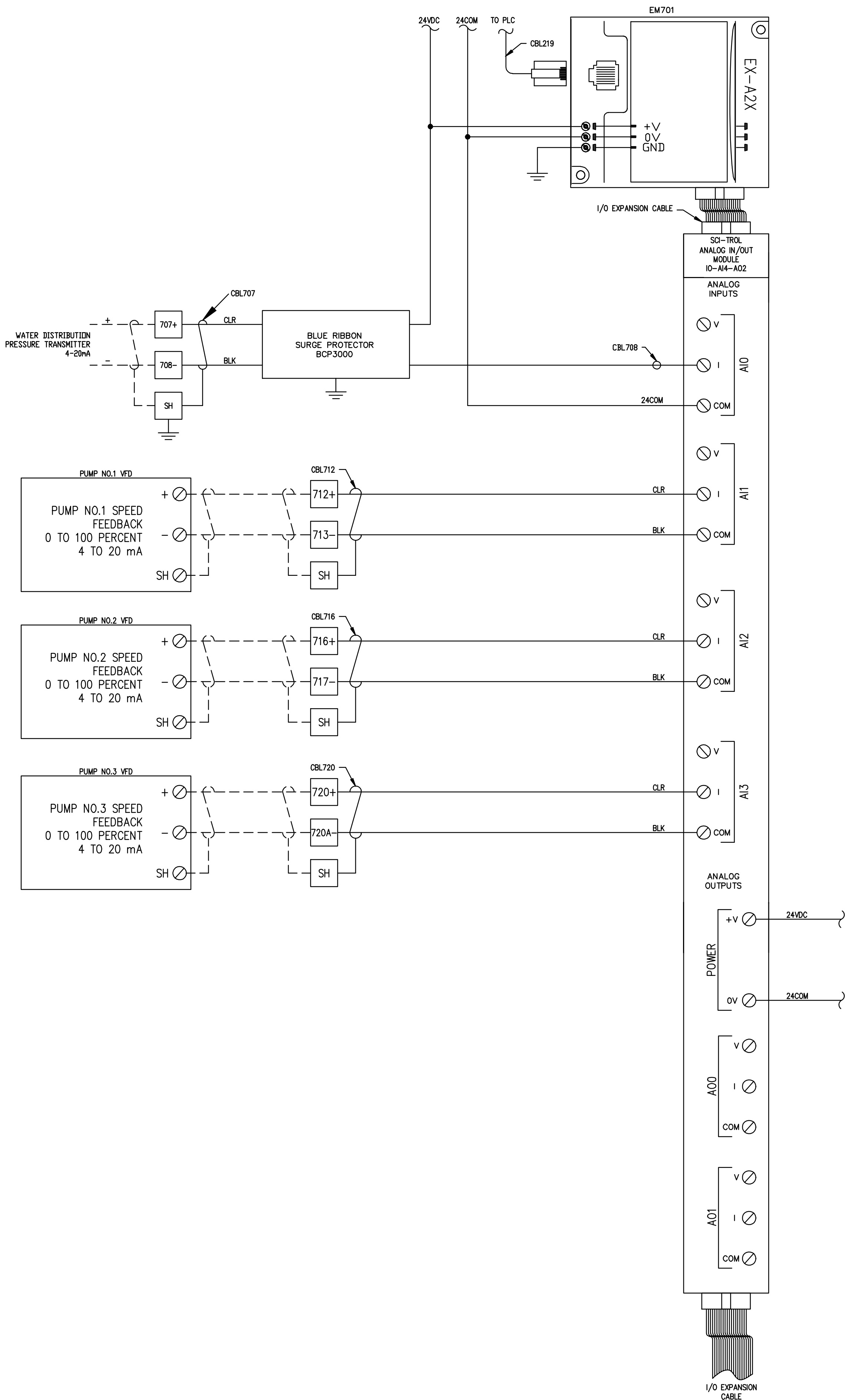
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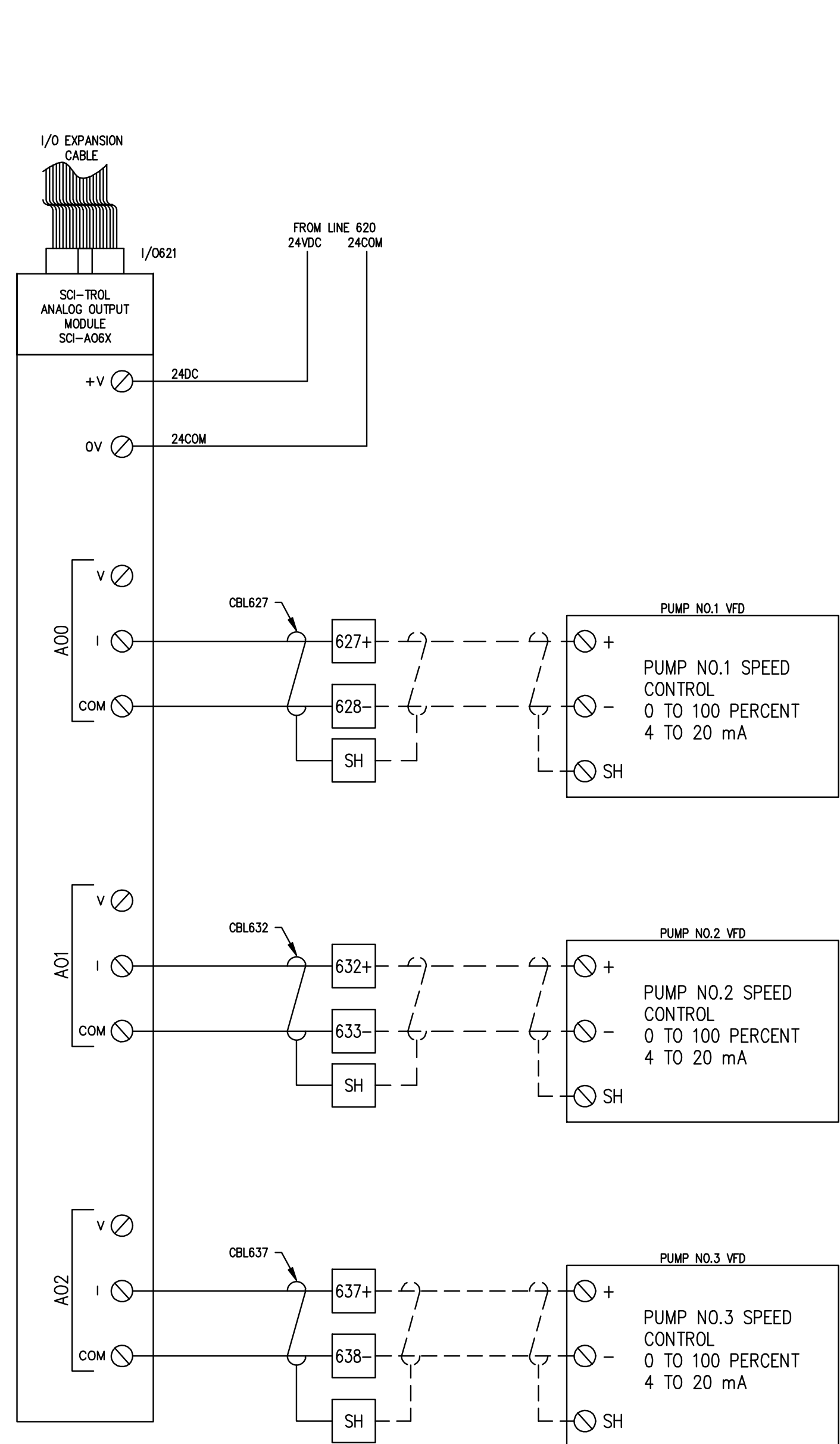
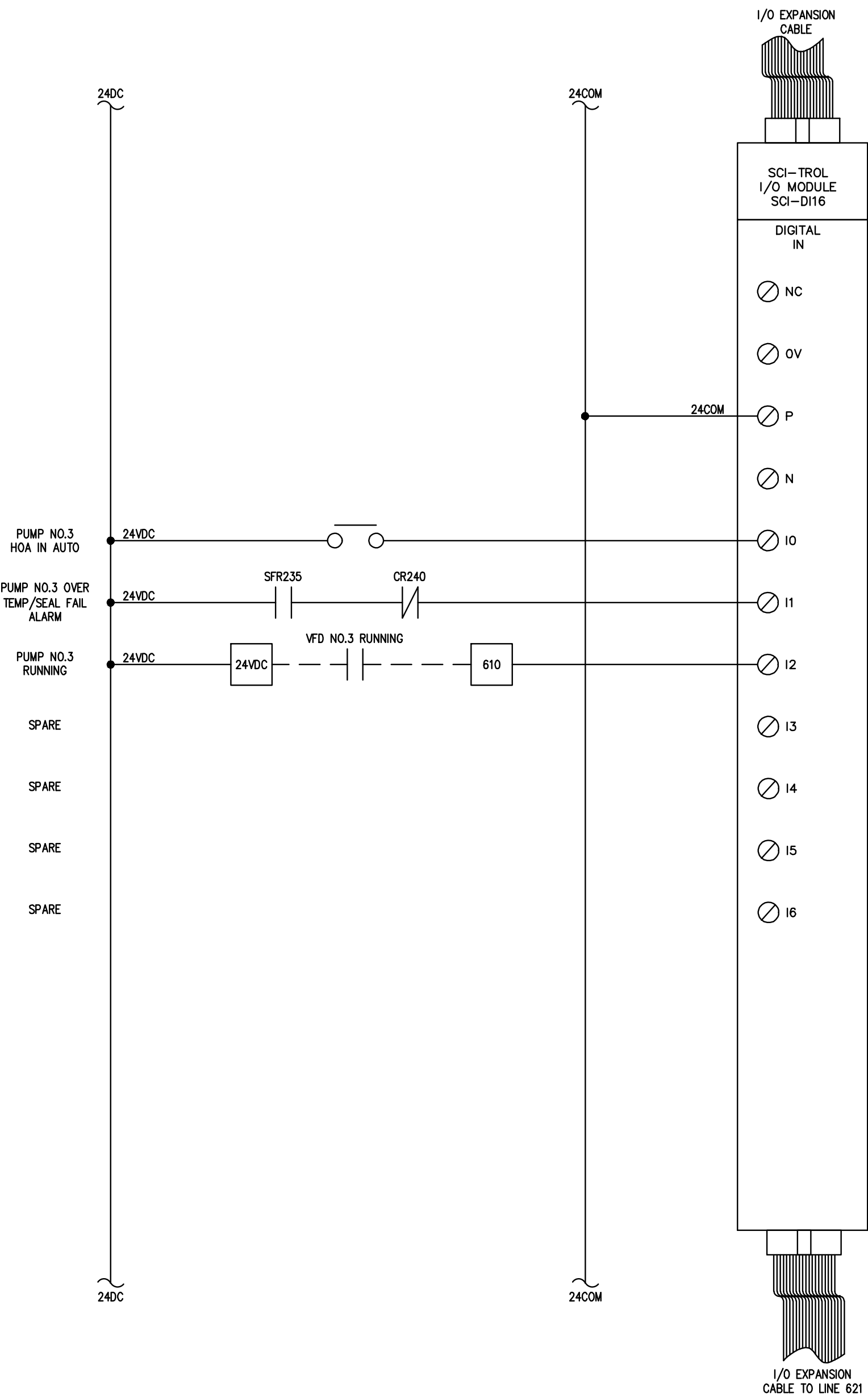
1. THE SCHEMATIC SHOWN IS A BASIC REPRESENTATION OF THE VARIOUS CONNECTIONS, FUNCTIONS AND LOGIC REQUIRED FOR THE CONTROL PANEL. IT DOES NOT SHOW THE ENTIRE EXTENT OF ALL WIRING CONNECTIONS, TERMINAL BLOCKS, ETC. NECESSARY FOR A COMPLETE AND OPERATIONAL PANEL.
2. PROVIDE A COMPLETE WIRING SCHEMATIC SUBMITTAL FOR REVIEW BY THE OWNER/ENGINEER.

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1 CONTROL PANEL WIRING DIAGRAM

NO SCALE



NOTES

- THE SCHEMATIC SHOWN IS A BASIC REPRESENTATION OF THE VARIOUS CONNECTIONS, FUNCTIONS AND LOGIC REQUIRED FOR THE CONTROL PANEL. IT DOES NOT SHOW THE ENTIRE EXTENT OF ALL WIRING CONNECTIONS, TERMINAL BLOCKS, ETC. NECESSARY FOR A COMPLETE AND OPERATIONAL PANEL.
- PROVIDE A COMPLETE WIRING SCHEMATIC SUBMITTAL FOR REVIEW BY THE OWNER/ENGINEER.



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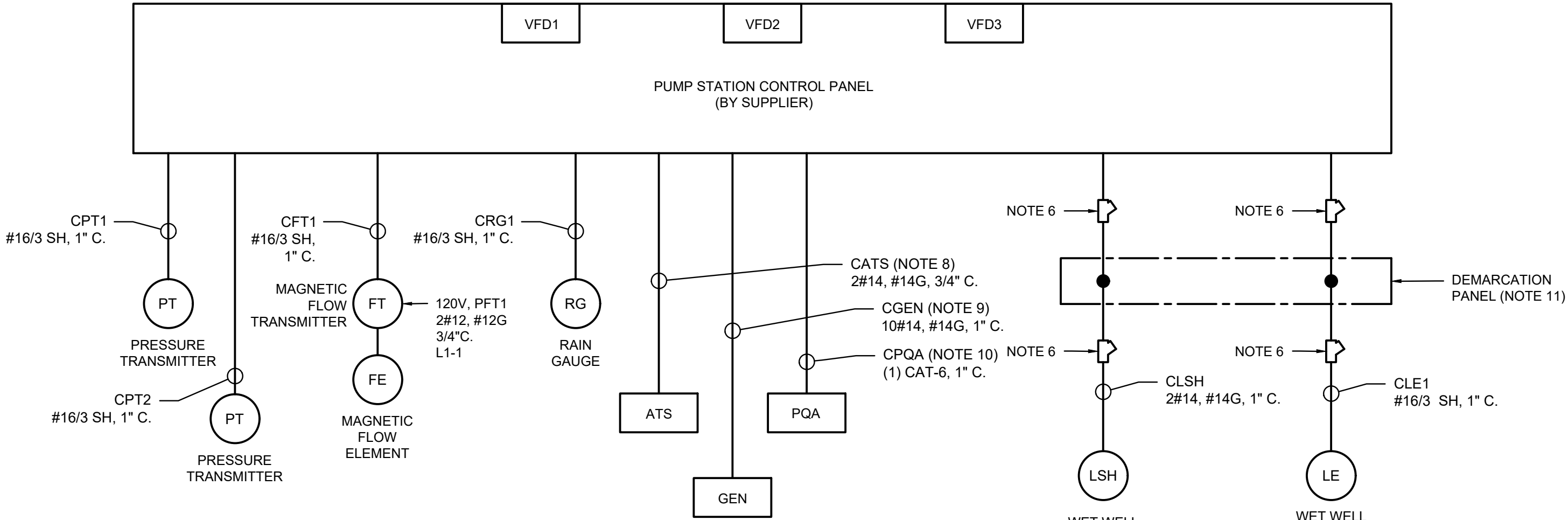
SHEET CONTENTS
ELECTRICAL DETAILS

SHEET NO.

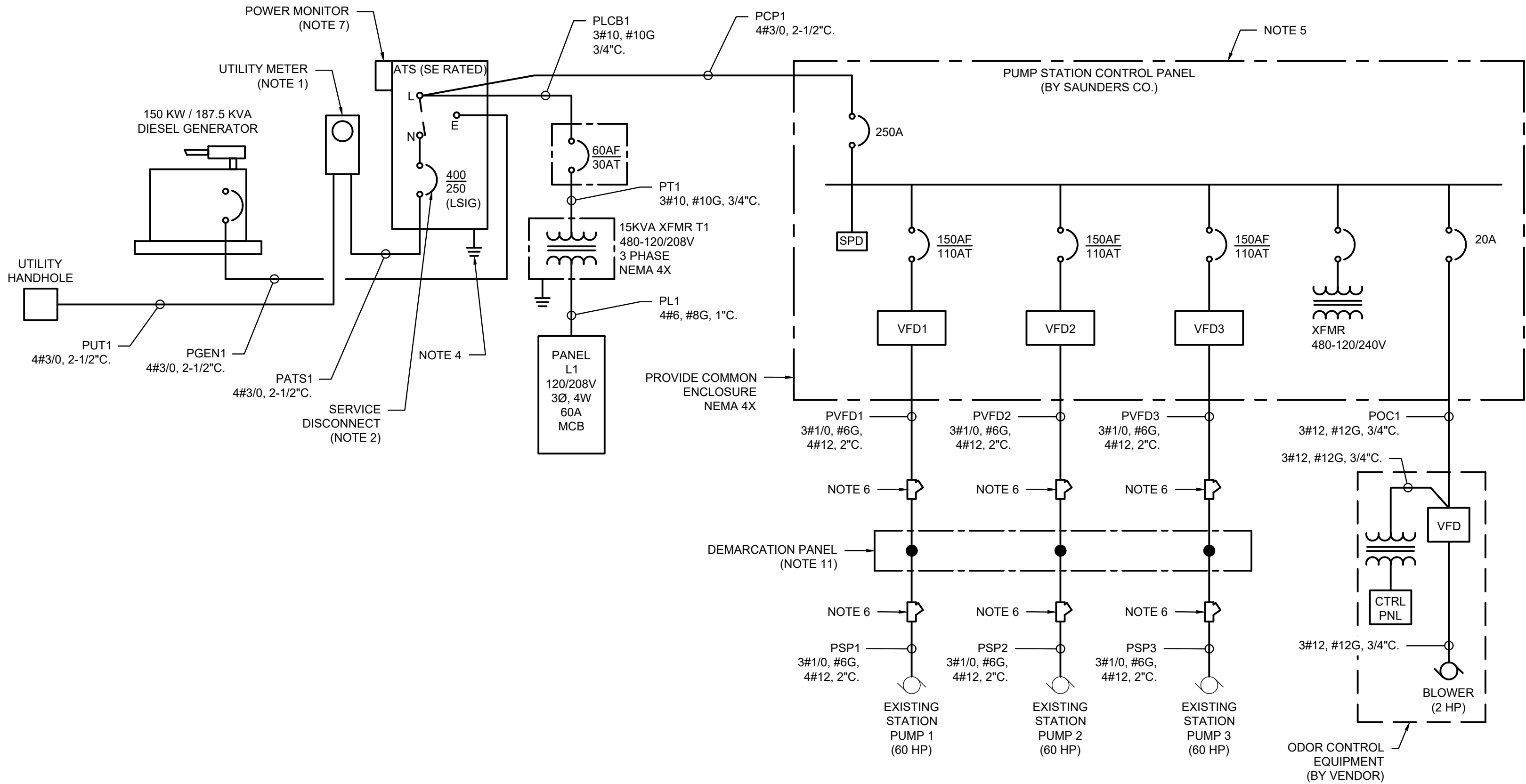
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Panelboard:		Panel L1												
Bus Ampacity	100	Volts	208Y/120		Panel Source:	XMFR T1								
Branch Brkr Space	18 Poles	Phase	3		Feed-Thru Lugs	None								
Main Type	MCB	Wires	4		Sub-Feed Lugs	None								
MCB Amps	60	Delta/Wye Mounting	Wye Surface		Sub-Feed Brkr #1	None								
		Enclosure	NEMA 4X		Sub-Feed Brkr #2	None								
		SCCR	10 kA											
		SE Rated	No											
		Pnl MCA	10 A											
Comments:					SPD									
					Iso Grd									



2 INTERCONNECT RISER DIAGRAM
NO SCALE



1 ELECTRICAL RISER DIAGRAM
NO SCALE

NOTES:

- COORDINATE WITH UTILITY COMPANY FOR ALL METER ENCLOSURE REQUIREMENTS.
- CIRCUIT BREAKER SHALL BE 480V, 3-POLE, MOLDED CASE TYPE, MINIMUM 35,000 AIC RATING.
- PROVIDE A SERVICE ENTRANCE SURGE PROTECTION DEVICE. LEA INTERNATIONAL PV200-277/480-3Y OR APPROVED EQUIVALENT.
- PROVIDE A COMPLETE GROUNDING SYSTEM IN ACCORDANCE WITH NEC ARTICLE 250. PROVIDE (2) 10'-0" X 3/4" DIAMETER COPPER GROUND RODS PLACED 20'-0" APART AND BONDED TO THE GROUNDING ELECTRODE CONDUCTOR (GEC). BOND TO THE REBAR IN THE ELECTRICAL EQUIPMENT RACK CONCRETE PAD.
- PUMP STATION CONTROL PANEL AND VFD ENCLSOURE PROVIDED BY SAUNDERS CO. NOT ALL OVERCURRENT PROTECTION OR OTHER DEVICES PROVIDED IN THE PANEL ARE SHOWN.
- PROVIDE EXPLOSION PROOF CONDUIT SEAL FITTINGS TO ISOLATE WET WELL GASES FROM THE ELECTRICAL GEAR. EATON EYS SERIES OR APPROVED EQUIVALENT.
- PROVIDE A PRE-WIRED, MULTI-FUNCTION POWER AND ENERGY METER WITH 8MB OF MEMORY, CURRENT TRANSFORMERS AND A NEMA 4X ENCLOSURE. BASIS OF DESIGN SHALL BE ACCUENERGY ACUPANEL9104X-IIW-5A-P3-WEB-PUSH-I01-0. SUBMIT EQUIVALENT FOR APPROVAL PRIOR TO BID. PROVIDE WITH ETHERNET COMMUNICATION MODULE.
- PROVIDE MONITORING FOR ATS ON ALTERNATE POWER SOURCE.
- PROVIDE MONITORING FOR THE FOLLOWING GENERATOR DATA POINTS:
 - LOW FUEL
 - HIGH TEMP
 - HIGH OIL PRESSURE
 - COMMON ALARM
 - LOW BATTERY
- PROVIDE ETHERNET COMMUNICATIONS FOR THE POWER QUALITY ANALYZER. COORDINATE WITH OWNER AND SUPPLIER FOR REQUIRED MONITORING POINTS AND INTEGRATION.
- PROVIDE A MINIMUM 30" WIDE X 36" TALL X 12" DEEP JUNCTION BOX, NEMA 4X RATED, WITH A HINGED DOOR WITH LOCKABLE LATCH. PROVIDE WIRE TERMINALS FOR PUMP POWER WIRING AND WET WELL FIELD INSTRUMENT WIRING.

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SHEET CONTENTS
RISER DIAGRAMS

SHEET NO.

E-701

CITY OF PORT ORANGE, FLORIDA

INVITATION TO BID

"Attachment A" BID SET – Drawings

Herbert and Nova Master Lift Station Rehabilitation

Drawings & Specifications can be found on the City of Port Orange website. See link for attachment of documents: <https://www.port-orange.org/bids.aspx>

"Attachment A" ITB 21-09 Bid Set - Drawings for Herbert and Nova Master Lift Station Rehabilitation



ITB #21-09

Prepared by: Michael Hall, Purchasing Agent

Release Date: March 8, 2021

Bid Due Date & Time: March 8, 2021 @ 2:30 PM

City of Port Orange, Florida

1000 City Center Circle

Port Orange, FL 32129

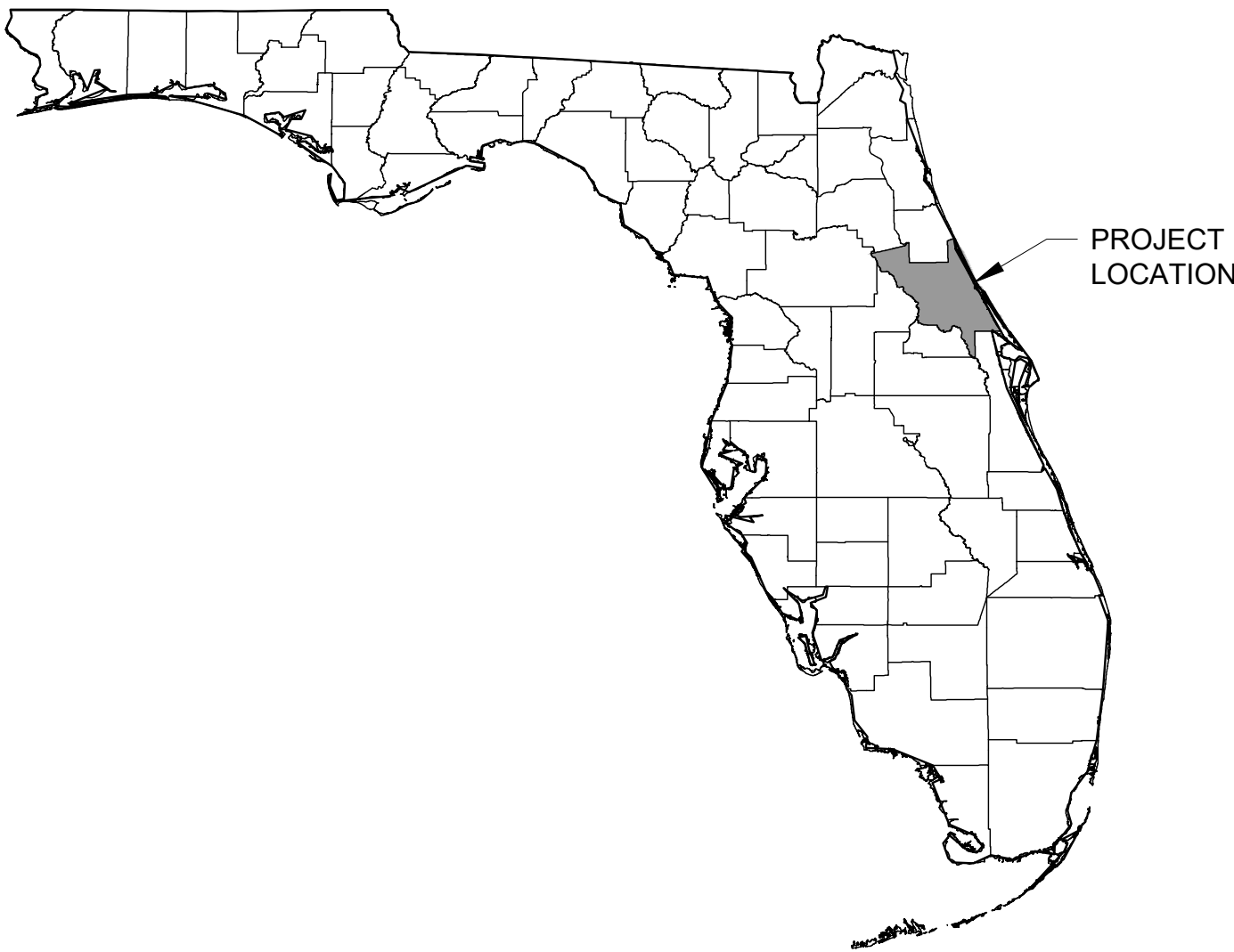
(386) 506-5740

purchdiv@port-orange.org

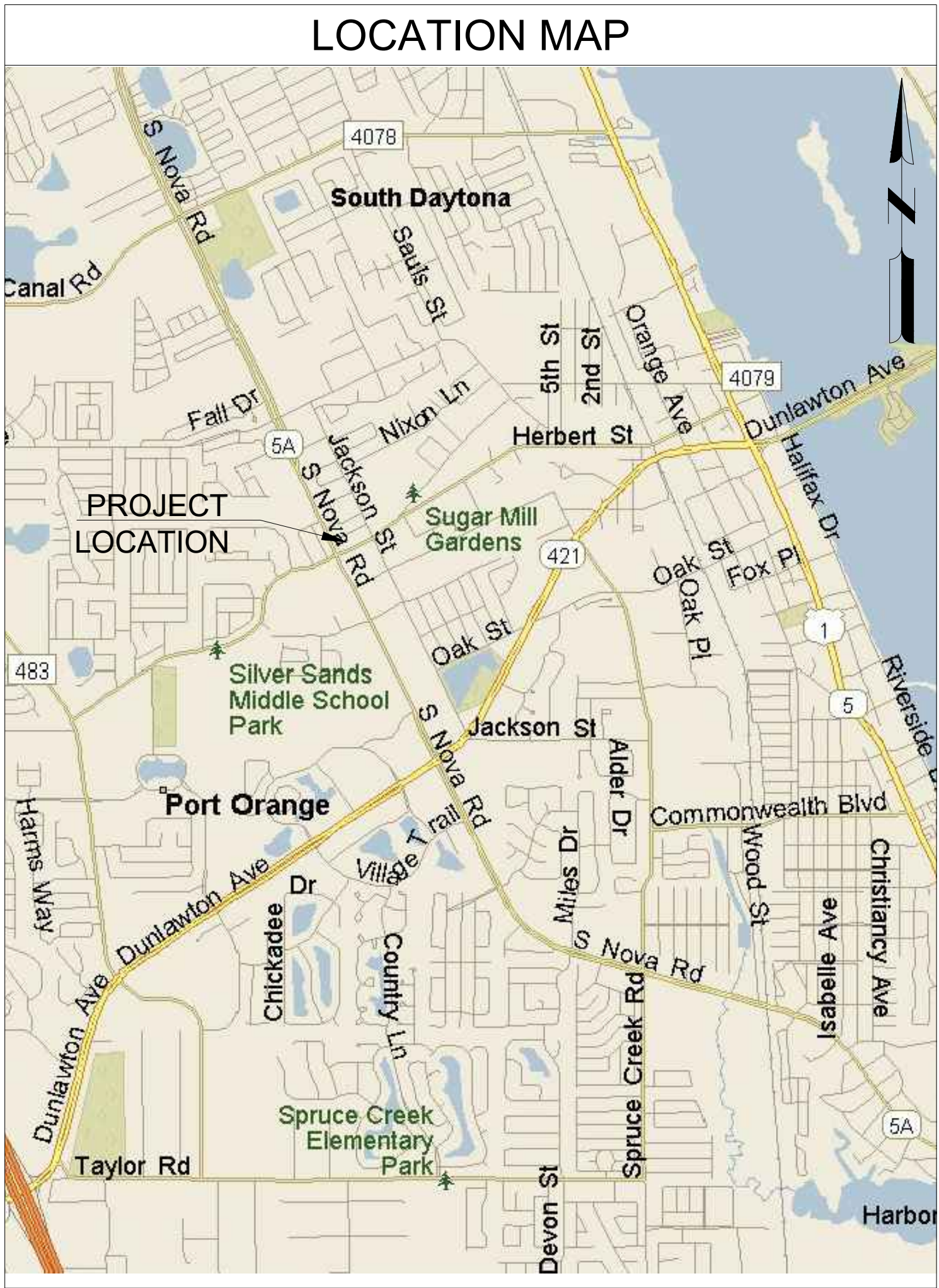
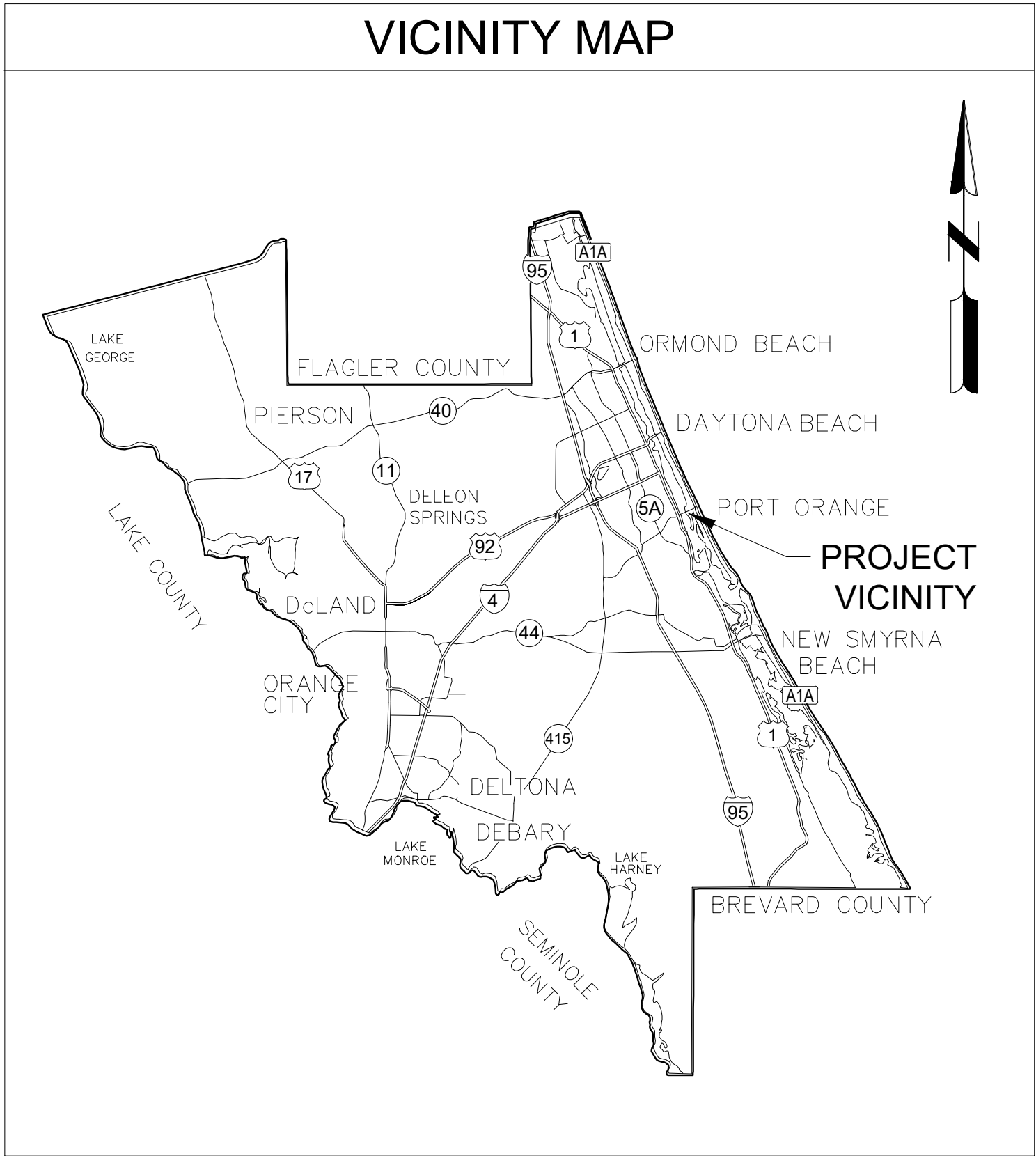
www.port-orange.org

CITY OF PORT ORANGE
HERBERT & NOVA LIFT STATION
IMPROVEMENTS & UPGRADE

BID # 21-09
BID SET
DECEMBER 2020



VOLUSIA COUNTY



LOCATION MAP

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G-002	SYMBOLS AND ABBREVIATIONS
C-001	EXIST SITE PLAN
C-021	POLLUTION PREVENTION PLAN
C-022	TEMPORARY BY-PASS PLAN
C-051	DEMOLITION PLAN
C-061	DEMOLITION DETAIL
C-101	PROPOSED LIFT STATION SITE PLAN
C-102	PROPOSED LIFT STATION DETAIL
C-103	PROPOSED ELEVATIONS
C-501	GENERAL CONSTRUCTION DETAILS
C-502	STANDARD CONSTRUCTION DETAILS
E-001	LEGEND, ABBREVIATIONS AND NOTES
E-101	ELECTRICAL PLAN
E-501	ELECTRICAL DETAILS
E-502	ELECTRICAL DETAILS
E-503	ELECTRICAL DETAILS
E-504	ELECTRICAL DETAILS
E-701	RISER DIAGRAMS

CIVIL ENGINEER: KEVIN A. LEE, P.E.

P.E. NUMBER: 71501

ELECTRICAL ENGINEER: KEFF S. KURELLA, P.E.

P.E. NUMBER: 62496

CITY OF PORT ORANGE
PROJECT MANAGER: STEVE PARNELL



Know what's below.
Call before you dig.

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SHEET CONTENTS
COVER SHEET

SHEET NO.

G-001

A
ABD. ABANDON OR ABANDONED
AC. ACRE
A/C AIR CONDITIONING
ACCOMP ASPHALT COATED CORRUGATED METAL PIPE
ACP ASBESTOS CEMENT PIPE
AFF ABOVE FINISHED FLOOR
AFG ABOVE FINISHED GRADE
AHD AHEAD
AIR ALUMINUM
AL. ALTERNATE
APPROX. APPROXIMATE
ARCH. ARCHITECTURE
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
BLDG. BASE LINE
BLK. BUILDING
BLM. BLOCK
BMC. BENCHMARK
BOC. BACK OF CURB
BOT. BOTTOM
BRG. BEARING
BS. BLACK STEEL PIPE
BV. BALL VALVE
BWV BACKWASH WATER

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
CL. CENTER LINE
CL. CLASS
CL.F. CHAIN LINK FENCE
CLR. CLEAR/CLEARANCE
CMP. CORRUGATED METAL PIPE
CMPA CORRUGATED METAL PIPE ARCH
C.M.U. CONCRETE MASONRY UNIT
COND. 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
CS. CHLORINE SOLUTION
CTR. CENTER
CULV. CULVERT
CY. CUBIC YARD
CYL. CYLINDER
CU.FT. CUBIC FEET
CU.IN. CUBIC INCHES
CV. CHECK VALVE

D
DBL. DEGREE OF CURVATURE
DET. DETAIL
D.F. DRINKING FOUNTAIN
D.F. DIESEL FUEL
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
DW. DRIVEWAY

E
EA. EAST
ECC. EACH
ECC. ECCENTRIC
EFF. EACH FACE
EFF. EFFLUENT
E. EASEMENT LINE
EL. ELEVATION
ELEC. ELECTRIC/ELECTRICAL
ELIP. 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
F.L.F. 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
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
HOUR. HOUR
HT. HEIGHT
HVAC. HEATING, VENTILATION & AIR COND
H.W.L. HIGH WATER LEVEL
HWY. HIGHWAY
HYDR. HYDRAULIC

J
J.B. JUNCTION BOX
JT. JOINT

L
LAB. LABORATORY
LAT. LATERAL
LAT. 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
M.H. MANHOLE
MIN. MINIMUM
MISC. MISCELLANEOUS
M.J. MECHANICAL JOINT
MOD. MODIFY/MODIFIED
MON. MONUMENT
M.W. MANWAY
M.W.L. MEAN WATER LEVEL
M.G. 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

O
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
PAVT. 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
PL. 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
P.P. 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
P.V. POLYVINYL CHLORIDE - PIPE
P.VMT. PAVEMENT
PW. POTABLE WATER
PWL. PEAK WATER LEVEL
PWR. POWER

Q
Q. FLOW RATE

R
R. RADIUS
RAS. RETURN ACTIVATED SLUDGE
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

R
RED. REDUCER
REBAR. REINFORCING STEEL
REF. REFERENCE
REINF. REINFORCE/REINFORCED
REMP. REINFORCED PLASTIC MORTAR PIPE
REM. REMOVE/REMOVABLE
REQD. REQUIRED
R.DRN. ROOF DRAIN
RW. RIVETED
R.J. RESTRAINED JOINT
RM. ROOM
RND. ROUND
RPM. REVOLUTIONS PER MINUTE
RR. 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.F. SLOPE (FT/FT)
S.F. SANITARY
SCHED. SCHEDULE
SE. SOUTHEAST
SE. SECONDARY EFFLUENT
SER. SECONDARY EFFLUENT RETURN
SECT. SECTION
SF. SQUARE FOOT
SG. 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
TIB. 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. 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
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

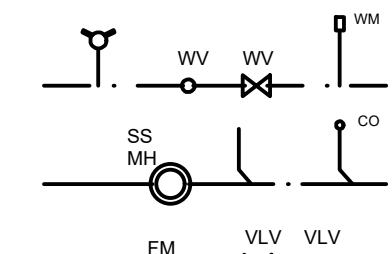
U
U.D. UNDERDRAIN
U.G. UNDERGROUND
U.G.P. UNDERGROUND POWER
ULT. ULTIMATE
U.O.N. UNLESS OTHERWISE NOTED
U.P. UTILITY POLE
U.T.C. UNDERGROUND TELEPHONE CABLE
UTIL. UTILITY
UN. UNION

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

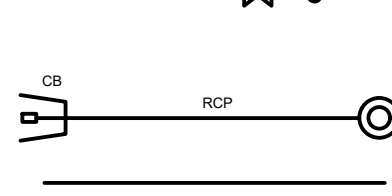
W
W. WEST
W/ WITH (COMBINED FORM)
WAS. WASTE ACTIVATED SLUDGE
W.C. WATER CLOSET (TOILET)
W.C.O. WALL CLEANOUT
W.F. WIDE FLANGE
W.G. WATER GAUGE
W.H.C. WELDED HALF COUPLING
W.L. WATER LINE
WM. WATER MAIN
W/O. WITHOUT
W.P. WATER PROOF
WP-1. WEATHER PROTECTED-1
W.S. WATER SURFACE
W.S.E.L. WATER SURFACE 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



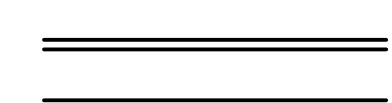
WATER MAIN, SERVICE,
METER, VALVES, & FH



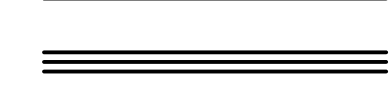
SAN. SEWER, MH, LATERAL &
LATERAL WITH CLEANOUT



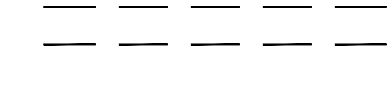
FORCE MAIN WITH
VALVE SYMBOLS



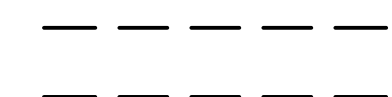
STORM DRAINAGE WITH
CATCH BASIN & MANHOLE



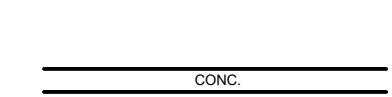
PAVED
SHOULDER



ROADWAY
PAVEMENT



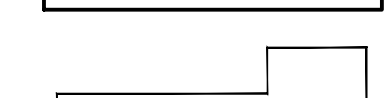
CURB



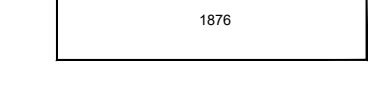
DROP
GUTTER



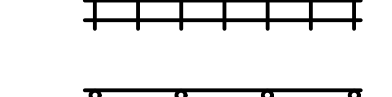
CURB & GUTTER



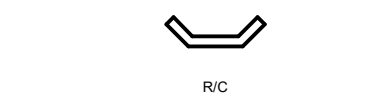
UNPAVED
ROAD



UNPAVED DRIVE
UNPAVED PARKING



TRAIL



CONCRETE SIDEWALK



FENCE



WALL



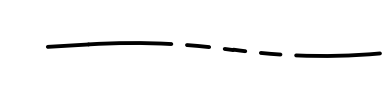
BUILDING OR STRUCTURE
- ROOF EDGE



RAILROAD



GUARDRAIL



HEADWALL



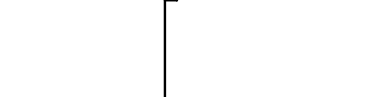
SLAB - UTILITY PAD
RAISED CONCRETE



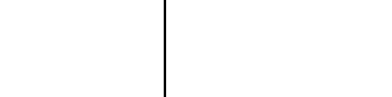
POOL



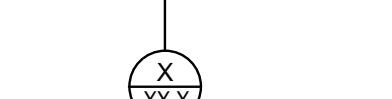
SINGLE BUSH



BRUSH - SHRUBBERY



SINGLE TREE



TREE CANOPY



PALM
TREE



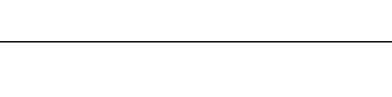
DRAINAGE DITCH EDGE
OF WATER



DETAIL
SECTION



WALL
SECTIONS



BUILDING
SECTION

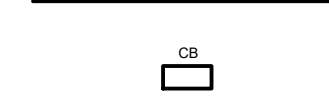
PIPING LEGEND



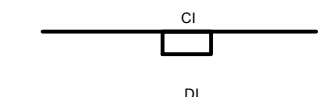
STREAM OR
CREEK



APPARENT
MARSH OR
WETLANDS



CHANGE OF PAVEMENT



PAINTLINES



CATCH BASIN



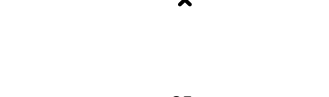
CURB
INLET



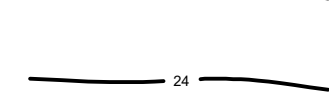
DROP
INLET



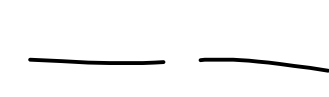
WOOD DECKS & DOCKS



BREAKLINE



SPOT ELEVATION



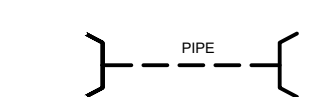
DTM SPOT
ELEVATION



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



LIGHT
POLE



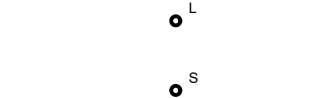
TRAFFIC
LIGHT
SUPPORT
POLE



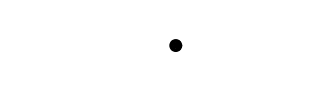
LIGHT
POST



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

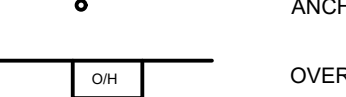
POST



POST



FLAG
POLE



MAIL BOX



ANCHOR, GUY



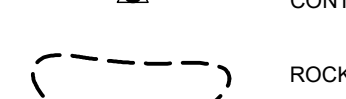
OVERHANG



MINOR BUILDING, SHED



HORIZONTAL CONTROL
POINT



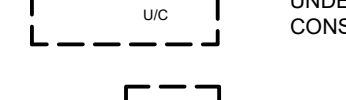
HORIZONTAL CONTROL
POINT



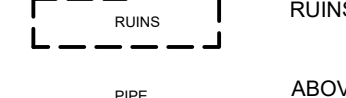
HORIZONTAL & VERTICAL
CONTROL POINT



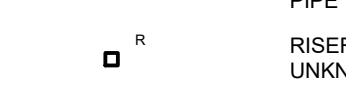
ROCK & BOULDERS PILES



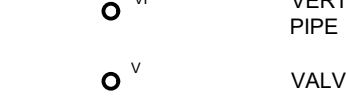
SMALL TANKS



RAILROAD
SWITCH



BUILDINGS
UNDER
CONSTRUCTION



RUINS



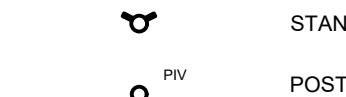
ABOVE GROUND
PIPE



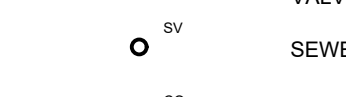
RISER TYPE
UNKNOWN



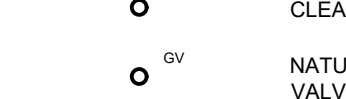
VERTICAL
PIPE



VALVE - TYPE UNKNOWN



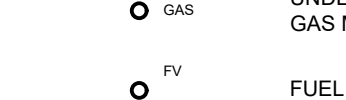
FIRE
HYDRANT



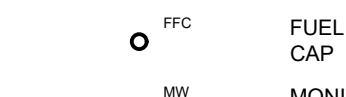
WATER VALVE



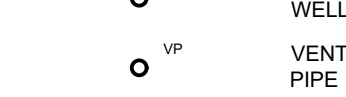
WATER METER



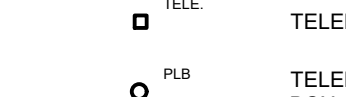
SPRINKLER
CONTROL VALVE



STANDPIPE



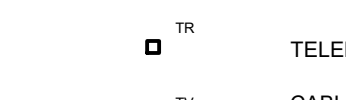
POST INDICATOR
VALVE



SEWER VALVE



CLEAN OUT



NATURAL GAS
VALVE



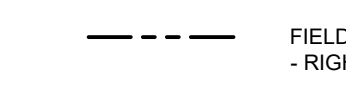
NATURAL GAS
METER



FUEL VALVE



FUEL FILLER
CAP



MONITOR
WELL



VENT
PIPE

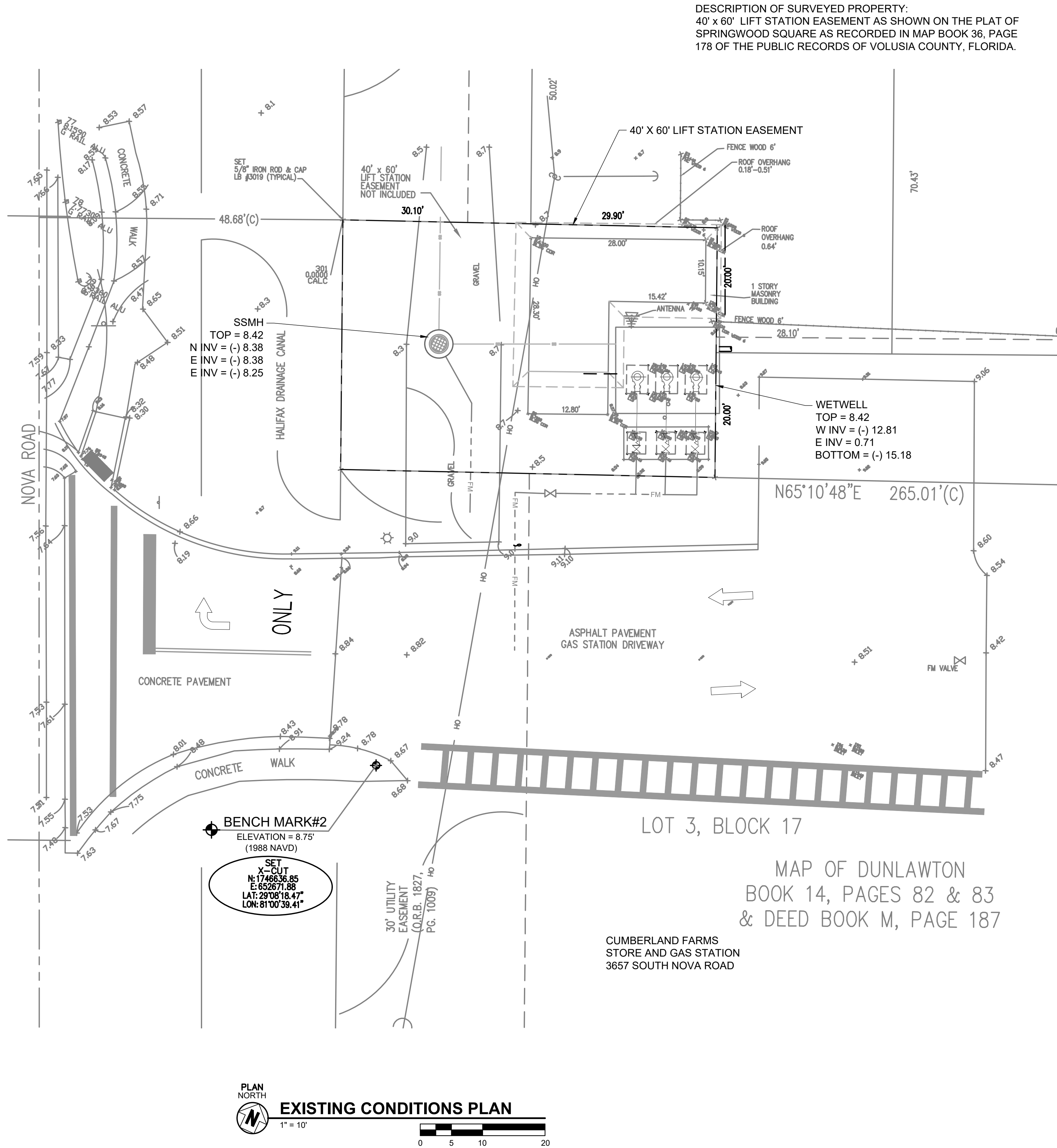


TELEPHONE BOOTH



TELEPHONE PULL
BOX

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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
HERBERT & NOVA LIFT STATION
IMPROVEMENTS & UPGRADE
HERBERT AVE. & NOVA ROAD
PORT ORANGE, FL 32127

ISSUED
04/28/2020 60% DESIGN SET
08/01/2020 90% DESIGN SET
10/15/2020 100% DESIGN SET
12/02/2020 BID SET

NOT FOR CONSTRUCTION

M&H NO.: 1000715-181687.01
DATE: OCTOBER 2020
DESIGNED BY: KAL
DRAWN BY: SEM
CHECKED BY: MCM
DO NOT SCALE DRAWINGS

SHEET CONTENTS
EXISTING SITE PLAN

SHEET NO.

C-001

ALL EROSION CONTROL MEASURES SHALL REMAIN
IN PLACE UNTIL COMPLETION OF CONSTRUCTION.

4. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THESE PLANS AND FIELD CONDITIONS PRIOR TO CONSTRUCTION.



—□—□— SILT FENCE
 CONSTRUCTION ENTRANCE



- 

REV. 12/18

FILE NAME:
M21.DWG

DETAIL REF:
M-21



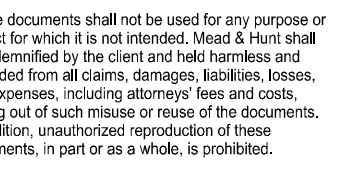
1. MATERIALS, CONSTRUCTION METHODS AND MAINTENANCE SHALL BE IN ACCORDANCE WITH THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL (LATEST EDITION).
2. CONTRACTOR SHALL PROVIDE SILT FENCES OR HAVE BEST MANAGEMENT PRACTICES IMPLEMENTED AS REQUIRED AT ALL STORMWATER DISCHARGE POINTS FOR EROSION CONTROL AND SEDIMENT CONTROL DURING CONSTRUCTION.
3. CONTRACTOR SHALL ROUGH GRADE STORMWATER SWALES AND RETENTION AREAS PRIOR TO CONSTRUCTION OF SITE IMPROVEMENTS.
4. CONTRACTOR SHALL MEET ALL PERMIT CONDITIONS AS ESTABLISHED BY THE CITY OF PORT ORANGE AND ALL OTHER APPLICABLE AGENCIES, INCLUDING BUT NOT LIMITED TO COUNTY, FDOT, AND THE SURWMD.
5. CONTRACTOR WILL BE ALLOWED TO USE A SMALL PIECE OF EQUIPMENT UP 6' WIDTH AND 1.5 TON WEIGHT, TO CLEAR A NARROW PATH TO INSTALL THE SILT FENCE.



REV. 12/18

FILE NAME:
M23.DWG

DETAIL REF:
M-23



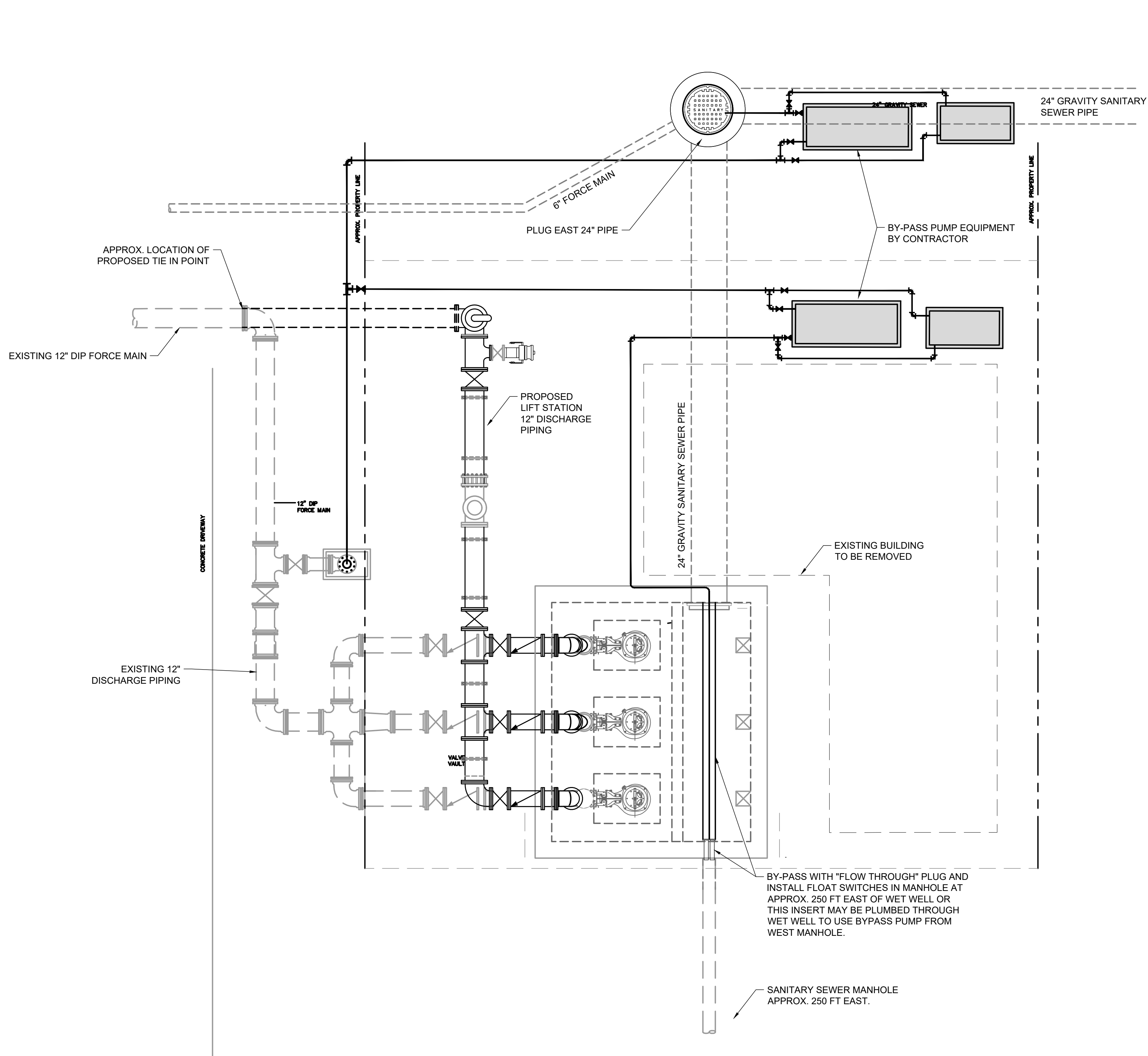
8/2020	60% DESIGN SET
1/2020	90% DESIGN SET
5/2020	100% DESIGN SET
2/2020	BID SET

NO.: 1000715-181687.01
 DATE: OCTOBER 2020
 DESIGNED BY: KAL
 CHECKED BY: SEM
 APPROVED BY: MCM
 DO NOT SCALE DRAWINGS

FILE NO.

C-021

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**LIFT STATION
TEMPORARY BY-PASS**
1/4" = 1'-0"

NOTE:
CONTRACTOR IS RESPONSIBLE FOR
TEMPORARY BY-PASS PIPING LAY-OUT

**Mead
& Hunt**

Mead and Hunt, Inc.
4401 Eastport Parkway
Port Orange, FL 32127
phone: 386-761-6810
meadhunt.com
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**CITY OF PORT ORANGE
HERBERT & NOVA LIFT STATION
IMPROVEMENTS & UPGRADE
HERBERT AVE. & NOVA ROAD
PORT ORANGE, FL 32127**

ISSUED
04/28/2020 60% DESIGN SET
08/01/2020 90% DESIGN SET
10/15/2020 100% DESIGN SET
12/02/2020 BID SET

NOT FOR CONSTRUCTION

M&H NO.: 1000715-181687.01
DATE: OCTOBER 2020
DESIGNED BY: KAL
DRAWN BY: SEM
CHECKED BY: MCM
DO NOT SCALE DRAWINGS

SHEET CONTENTS
TEMPORARY
BY-PASS PLAN

SHEET NO.
C-022

1. GENERAL NOTES: BY-PASS PUMPING WILL BE REQUIRED DURING CONSTRUCTION. CONTRACTOR WILL COORDINATE OUTAGES WITH THE CITY. SEE SPECIFICATIONS FOR ADDITIONAL INFO. USE CAUTION DURING DEMOLITION AND CONSTRUCTION INSIDE WET WELL. COMPLETELY REMOVE TOP SLAB, LINER, AND BENCH.
2. DISCHARGE VALVE REMOVAL: REMOVE EXISTING GATE VALVES, CHECK VALVES, RESTRAINED FLANGE ADAPTERS AND EMERGENCY PUMP CONNECTION. REMOVE EXISTING VALVE VAULT.
3. EXISTING WET WELL PIPING MODIFICATIONS: REMOVE EXISTING SUCTION AND DISCHARGE PIPING, INCLUDING STEEL SUPPORT CHANNELS. REMOVE BLIND FLANGES ON EACH PREVIOUSLY ABANDONED PIPE. CUT ABANDONED PIPES AT LEAST 6" INSIDE THE WET WELL WALL AND GROUT FILL FLUSH IN PREPARATION FOR NEW LINER INSTALLATION.
4. EXISTING PUMP STATION EQUIPMENT BUILDING AND GENERATOR DISPOSITION: REMOVE EXISTING PUMP STATION BUILDING (CUT AND REMOVE TO A MINIMUM OF 42" BELOW EXISTING GRADE). FILL ABANDONED PUMP STATION SITE WITH CLEAN, COMPACTED SAND TO SPECIFIED FINISHED GRADE. REMOVE EXISTING GENERATOR AND CONCRETE SLAB, AND RETURN GENERATOR TO THE CITY.
5. PROPOSED PUMP MOUNTING BASE: REMOVE EXISTING CONCRETE BENCH, CONTRACTOR TO USE CAUTION DURING REMOVAL OF EXISTING BENCH. DO NOT DAMAGE EXISTING WET WELL WALLS.



C-051



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IMPROVEMENTS & UPGRADE
HERBERT AVE. & NOVA ROAD
PORT ORANGE, FL 32127

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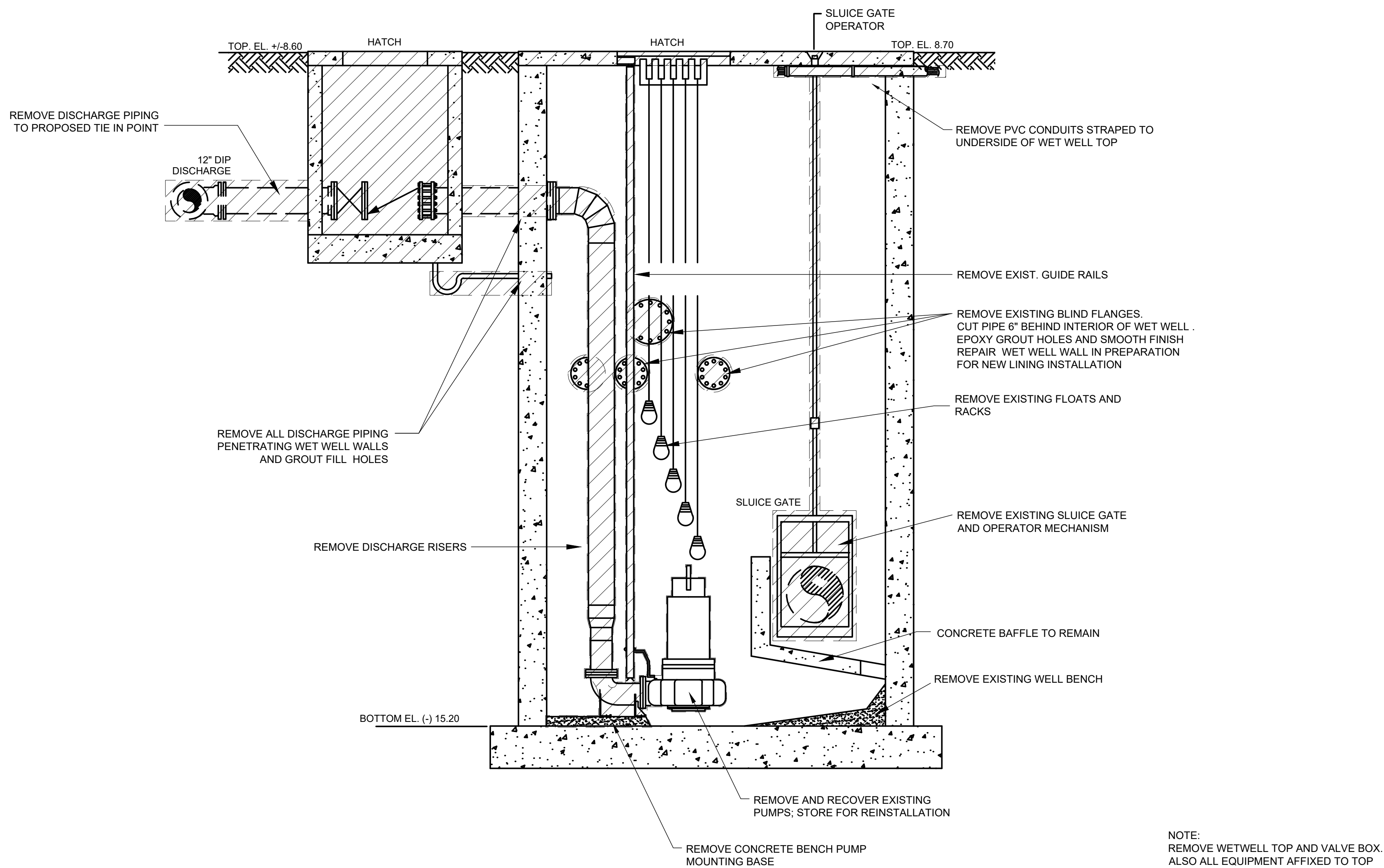
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SHEET CONTENTS
DEMOLITION DETAIL

SHEET NO.

C-061



A WET WELL DEMOLITION SECTION
3/8" = 1'-0"



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SHEET CONTENTS
PROPOSED
LIFT STATION
SITE PLAN

SHEET NO.

C-101

NOTES:

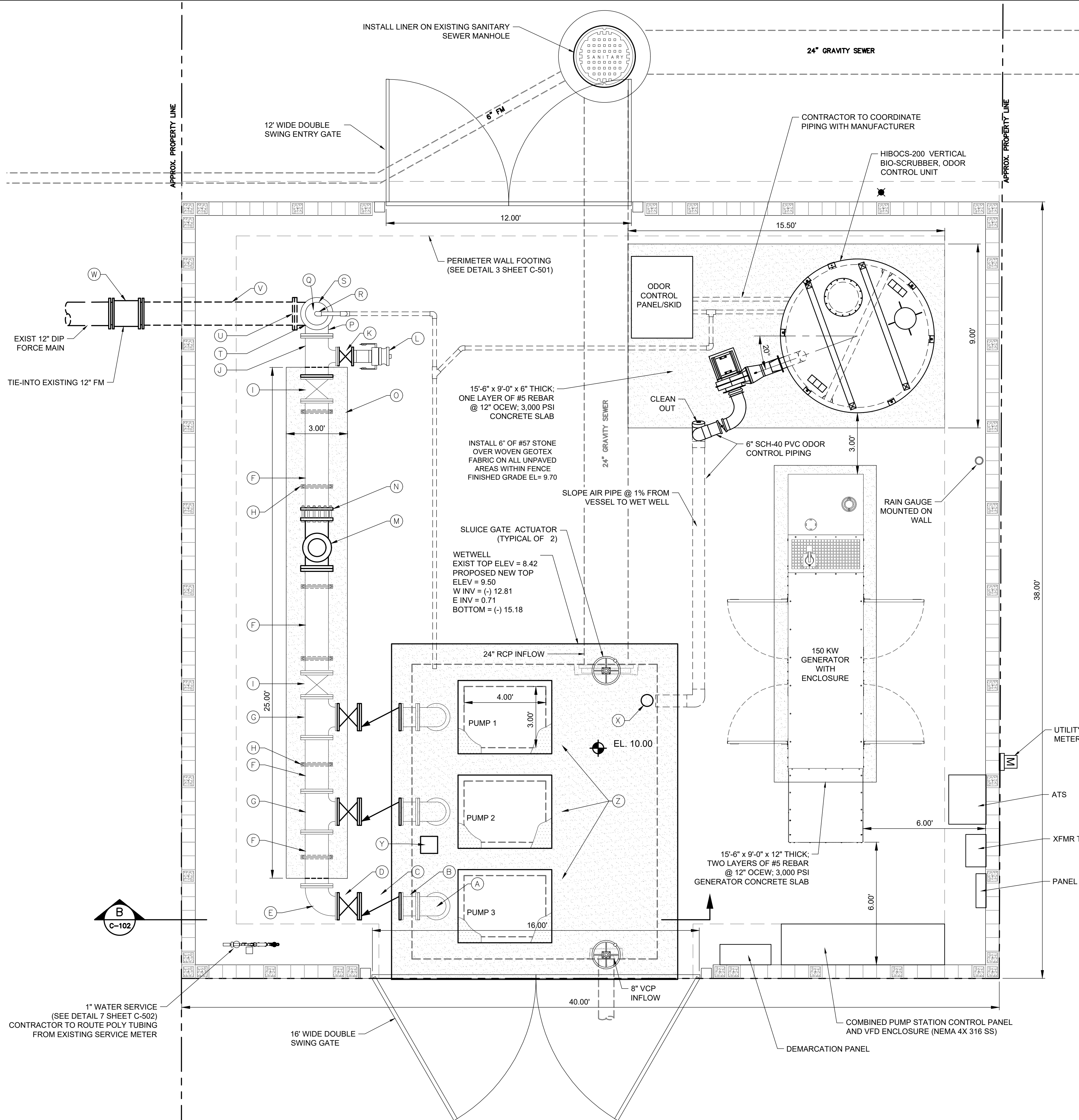
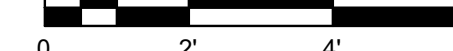
- ACCESS HATCHES TO BE CAST IN TOP SLAB, OPENING SHALL BE MINIMUM 48" X 36", ALUMINUM COVER WITH PROVISIONS FOR EXTERNAL LOCKING WITH A PADLOCK AND SHALL INCLUDE AN INTEGRAL TWO LEAF FALL THROUGH PROTECTION SYSTEM. REFER TO DETAIL 4 SHEET C-501.
- VENT PIPE SHALL BE 6" DIAMETER SCH 40 PVC WITH FLANGE ADAPTOR TO CONNECT THE ODOR CONTROL UNIT. VENT SHALL HAVE 8" CLEARANCE FROM TOP OF THE LIFT STATION SLAB.
- STAINLESS STEEL UPPER GUIDE BRACKET SHALL BE ATTACHED TO ACCESS HATCH.
- STAINLESS STEEL GUIDE RAILS SHALL BE OF ONE-PIECE CONSTRUCTION, REGARDLESS OF WET WELL DEPTH.
- ALL PENETRATIONS THROUGH WET WELL WALLS SHALL BE SEALED WITH A NON-SHRINK GROUT.
- ANCHOR BOLTS SHALL BE 316 STAINLESS STEEL. ANCHOR TYPE AND METHOD OF INSTALLATION SHALL BE AS RECOMMENDED BY THE PUMP MANUFACTURER.
- LINER SHALL BE INSTALLED FOR INTERIOR WALLS, UNDERSIDE OF THE TOP SLAB AND ANY EXPOSED CONCRETE SURFACES WITHIN THE WET WELL.
- A SUBMERSIBLE PRESSURE TRANSDUCER SHALL BE INSTALLED PER THE MANUFACTURER'S CABLE MOUNTING INSTALLATION INSTRUCTIONS. A SINGLE STAINLESS STEEL HOOK SHALL BE PROVIDED FOR TRANSDUCER INSTALLATION.
- 316 FLANGED STAINLESS STEEL PIPE AND FITTINGS SHALL BE INSTALLED FROM THE WET WELL TO THE FIRST UNDERGROUND FITTING AND CONTINUE WITH C-900 PVC TO THE TIE-IN TO THE EXISTING FORCE MAIN.
- EZ-WRAP SEAL SHALL BE APPLIED TO EXTERIOR JOINTS. MINIMUM OF 12" WIDE WRAP REQUIRED FOR ALL LIFT STATION JOINTS. APPLICATORS MUST BE FACTORY TRAINED IN APPLICATION OF THE WRAP.
- FLOAT AND TRANSDUCER SHALL BE INSTALLED IN AN AREA WHERE FLOW TURBULENCE IS MINIMAL.
- ALL DISCHARGE PIPING IN THE WET WELL SHALL BE 316 S.S..
- PUMPS TO BE INSTALLED WITH BASE PLATE PROVIDED BY THE PUMP MANUFACTURER.

- (A) (3) 10" FL 316 S.S. 90° BENDS.
- (B) (3) 10" FL SPOOL PIECE 12" LONG.
- (C) (3) 10" FL CHECK VALVES.
- (D) (3) 10" FL GATE VALVES.
- (E) (1) 12"x 10" FL 316 S.S. 90° BEND.
- (F) (5) 12" FL 316 S.S. SPOOL PIECES (LENGTH VARIES).
- (G) (2) 12"x 10" FL 316 S.S. TEE.
- (H) (6) 12" ADJUSTABLE PIPE SUPPORT BRACKET (SEE DETAIL 2 SHEET C-501).
- (I) (2) 12" FL GATE VALVE.
- (J) (1) 12"x 6" FL 316 S.S. TEE.
- (K) (1) 6" FL GATE VALVE.
- (L) (1) 6" EMERGENCY BY-PASS CONNECTION.
- (M) (1) 12" McCROMETER ULTRA MAG FLOW METER.
- (N) (1) 12" MEGA FLANGE.
- (O) 4" THK. 24"x 3' FIBERMESH REINFORCED CONCRETE SLAB OVER COMPACTED FILL.
- (P) (1) 12" FL 316 S.S. TEE.
- (Q) (1) 12" 316 S.S. BLIND FLANGE W/ 2" TAP.
- (R) (2) 2" BALL VALVE.
- (S) (1) 2" A.R.V. ASSEMBLY W/ PRESSURE TRANSMITTER AND GAUGE. PROVIDE AIR VENT PIPE PER STANDARD DETAIL 1/C-501.
- (T) (1) 12" FL 316 S.S. RISER PIPE.
- (U) (1) 12" MJ DIP 90° BEND.
- (V) +/- 9FT 12" C-900 PVC FORCE MAIN.
- (W) (1) 12" MJ DIP SLEEVE.
- (X) 6" SCH80 PVC WET WELL VENT, 6" PIPE SLEEVE TO BE CAST INTO WETWELL TOP AND CAPPED.
- (Y) 10"x10" HATCH FOR LEVEL TRANSDUCER.
- (Z) (3) LOCKABLE ALUMINUM SPRING ASSISTED ACCESS HATCH (SEE DETAIL 4 SHEET C-501)

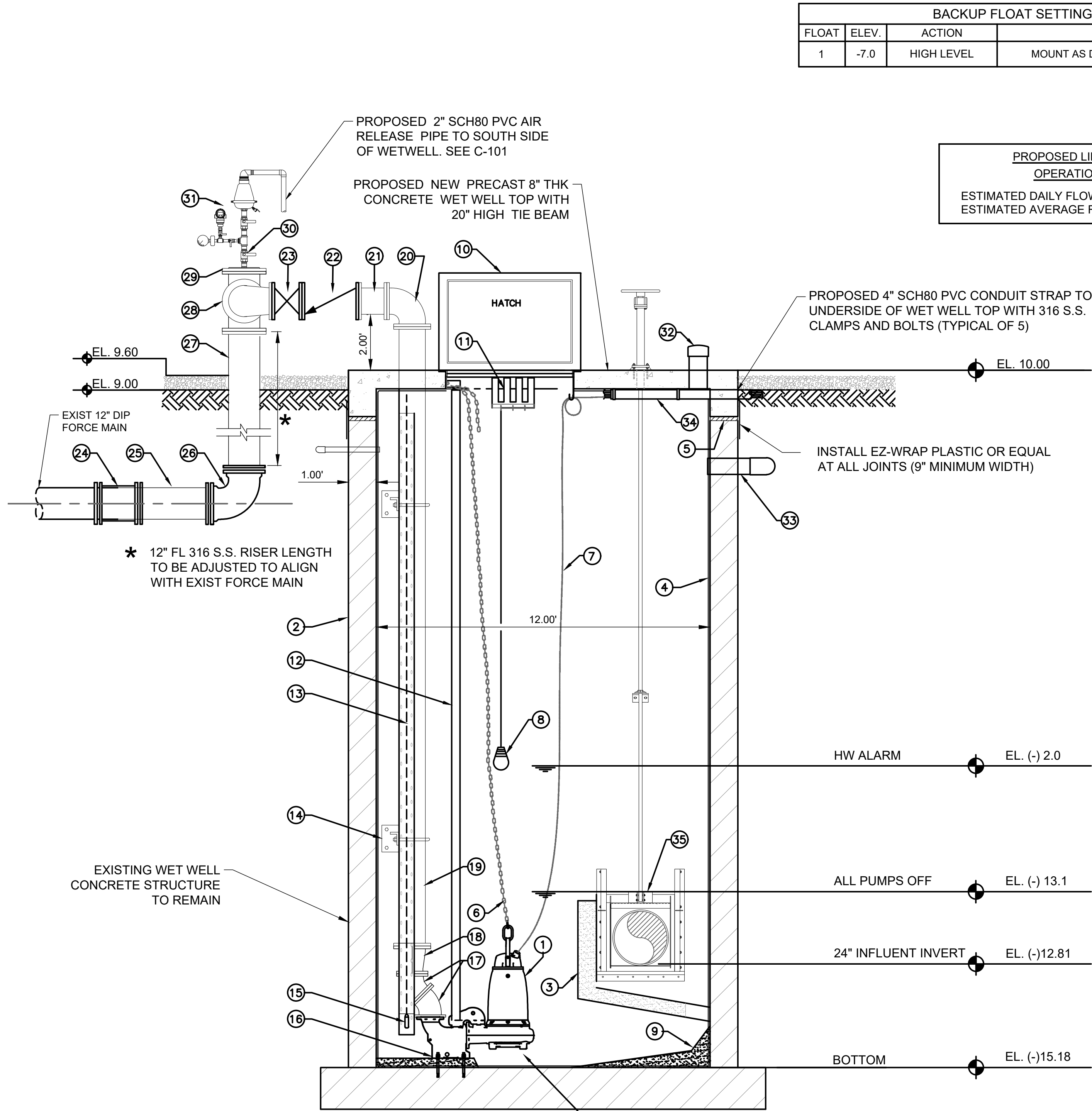


LIFT STATION PLAN

3/8" = 1'-0"



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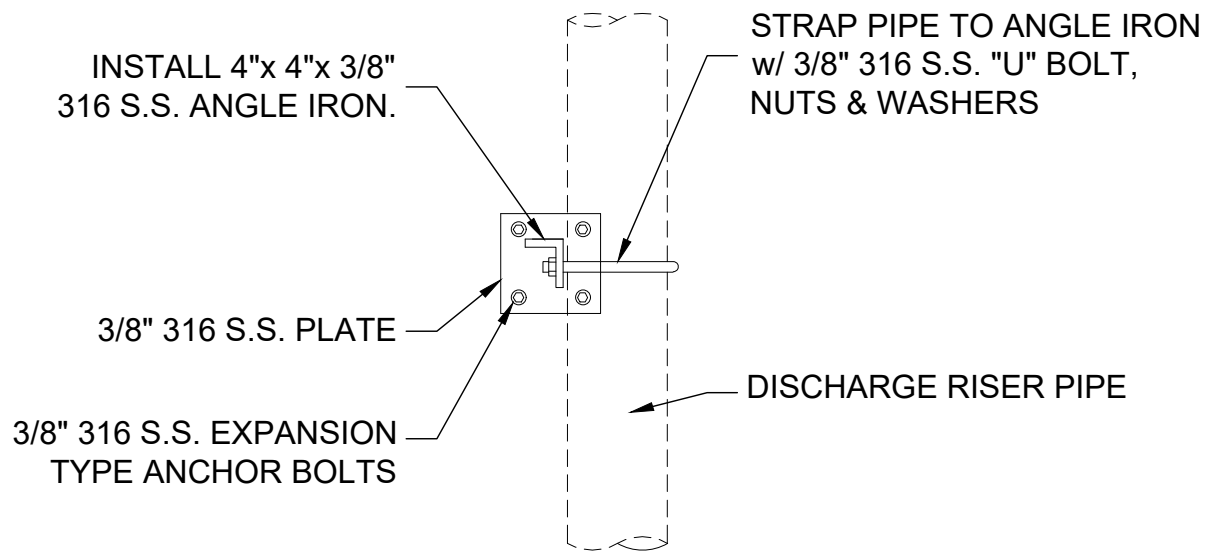
B WETWELL SECTION
SCALE: 3/8" = 1'

LIFT STATION WET WELLS ARE CLASSIFIED AS A
CLASS 1 DIVISION 1 HAZARDOUS LOCATION

SEAL-OFF CONNECTIONS AND CONDUIT
CONSTRUCTION FOR ALL CONDUITS PENETRATING
INTO THE WET WELL SHALL COMPLY WITH, AND
BE INSTALLED PER, NEC ARTICLE 501

BACKUP FLOAT SETTINGS			
FLOAT	ELEV.	ACTION	NOTES
1	-7.0	HIGH LEVEL	MOUNT AS DIRECTED BY OWNER

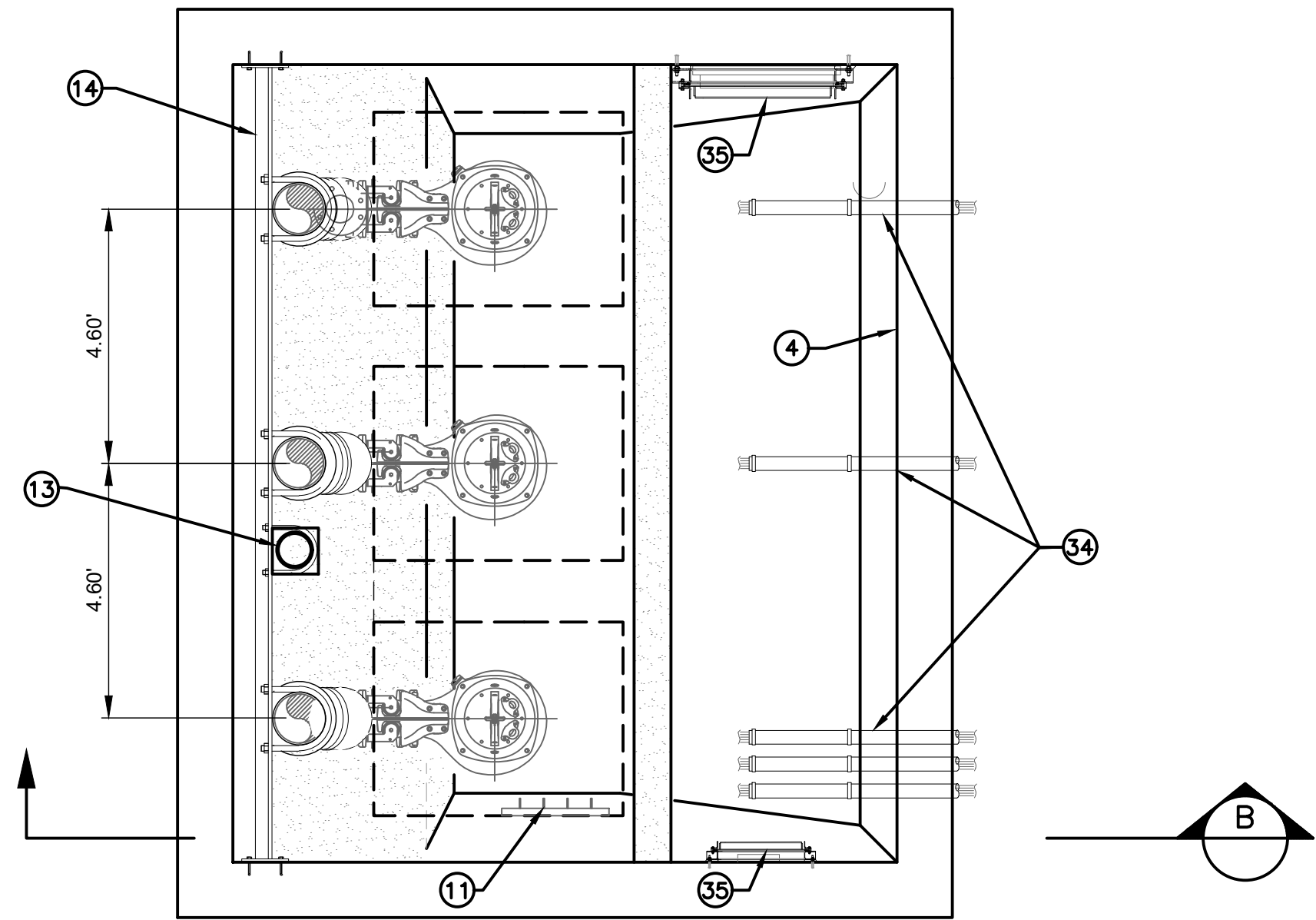
PROPOSED LIFT STATION OPERATION DATA	
ESTIMATED DAILY FLOW = 1.3 MGD. ESTIMATED AVERAGE RUN TIME = 10 HOURS	



PIPE SUPPORT BRACKET DETAIL
NOT TO SCALE

- 1 INSTALL (3) EXISTING SUBMERSIBLE PUMPS FLYGT NP 3202 1,450 GPM @ 85.0 FT TDH - 60HP, 460 V, 3 PH - 60HZ
- 2 EXISTING WET WELL TO REMAIN
- 3 EXISTING CONCRETE BAFFLE
- 4 INSTALL NEW LINER IN WET WELL AND NEAREST MANHOLE, RAVEN, SPECTRASHIELD, OR APPROVED EQUAL
- 5 JOINT SEALANT RAM-NEK PREFORMED FLEXIBLE PLASTIC GASKET
- 6 316 STAINLESS STEEL LIFTING CABLE/CHAIN
- 7 POWER CABLE
- 8 (1) FLOAT FOR PUMP CONTROL. SEE FLOAT SETTINGS CHART THIS SHEET
- 9 PROPOSED NEW CONCRETE FILLET
- 10 LOCKABLE ALUMINUM SPRING ASSISTED ACCESS HATCH (4.0'x 3.0' OPENING) (SEE DETAIL 4, SHEET C-501)
- 11 316 STAINLESS STEEL FLOAT CABLE HOLDER MOUNT ON NON-HINGE SIDE
- 12 316 STAINLESS STEEL PUMP GUIDE RAILS WITH STAINLESS STEEL BRACKETS/HARDWARE
- 13 6" PVC STILLING WELL WITH 1/2" HOLES AS SHOWN. 316SS U-BOLTS TO SUPPORT BRACKETS.
- 14 PIPE SUPPORT BRACKET (SEE DETAIL THIS SHEET).
- 15 BLUE RIBBON MODEL 313 AI LEVEL TRANSDUCER .
- 16 ANCHOR BASE ELBOW TO WET WELL FLOOR. INSTALL 1/2" 316SS PLATE WITH 3/4" STAINLESS STEEL ALL THREAD TO ANCHOR BASE ELBOWS TO ONE (1) BASE PLATE. BASE PLATE TO BE ANCHORED TO WETWELL WITH MIN. FOUR (4) 3/4" ALL THREAD WITH EPOXY ANCHORS (MIN. 4" EMBEDDED) IN CONCRETE FLOOR

- 17 (6) 6" FL 316 S.S. 45° ELBOWS.
- 18 (3) 10"x 6" FL 316 S.S. REDUCER.
- 19 (3) 10" FL 316 S.S. DISCHARGE RISER PIPE.
- 20 (3) 10" FL 316 S.S. 90° BENDS.
- 21 (3) 10" 316 S.S. 12" LONG FLANGED SPOOL PIECE .
- 22 (3) 10" FL CHECK VALVES.
- 23 (3) 10" FL GATE VALVES.
- 24 (1) 12" MJ DIP SLEEVE.
- 25 +/- 9 FT - 12" C-900 PVC PIPE, FORCE MAIN.
- 26 (1) 12" MJ DIP 90° BEND.
- 27 12" FL 316 S.S. PIPE.
- 28 12" FL 316 S.S. TEE.
- 29 12" 316 S.S. BLIND FLANGE W/ 2" TAP
- 30 (2) 2" 316 S.S. BALL VALVE
- 31 2" A.R.V. ARI D-025P ASSEMBLY W/ PRESSURE TRANSMITTER AND GAUGE. PROVIDE AIR VENT PIPE PER STANDARD DETAIL 1/C-501.
- 32 6" SCH80 PVC WET WELL VENT , 6" PIPE SLEEVE TO BE CAST INTO WETWELL TOP AND CAPPED.
- 33 CORE DRILL AND INSTALL 6" SCH40 PVC ODOR CONTROL PIPING,SEAL WITH NON-SHRINK GROUT.
- 34 PROPOSED 4" SCH80 PVC CONDUIT STRAP TO UNDERSIDE OF WET WELL TOP WITH 316 SS CLAMPS AND BOLTS (TYPICAL OF 5) .
- 35 S.S. SLUICE GATE AFFIXED TO WALL W/ MANUAL ACTUATOR (TYPICAL OF 2) .



WET WELL INTERIOR VIEW PLAN
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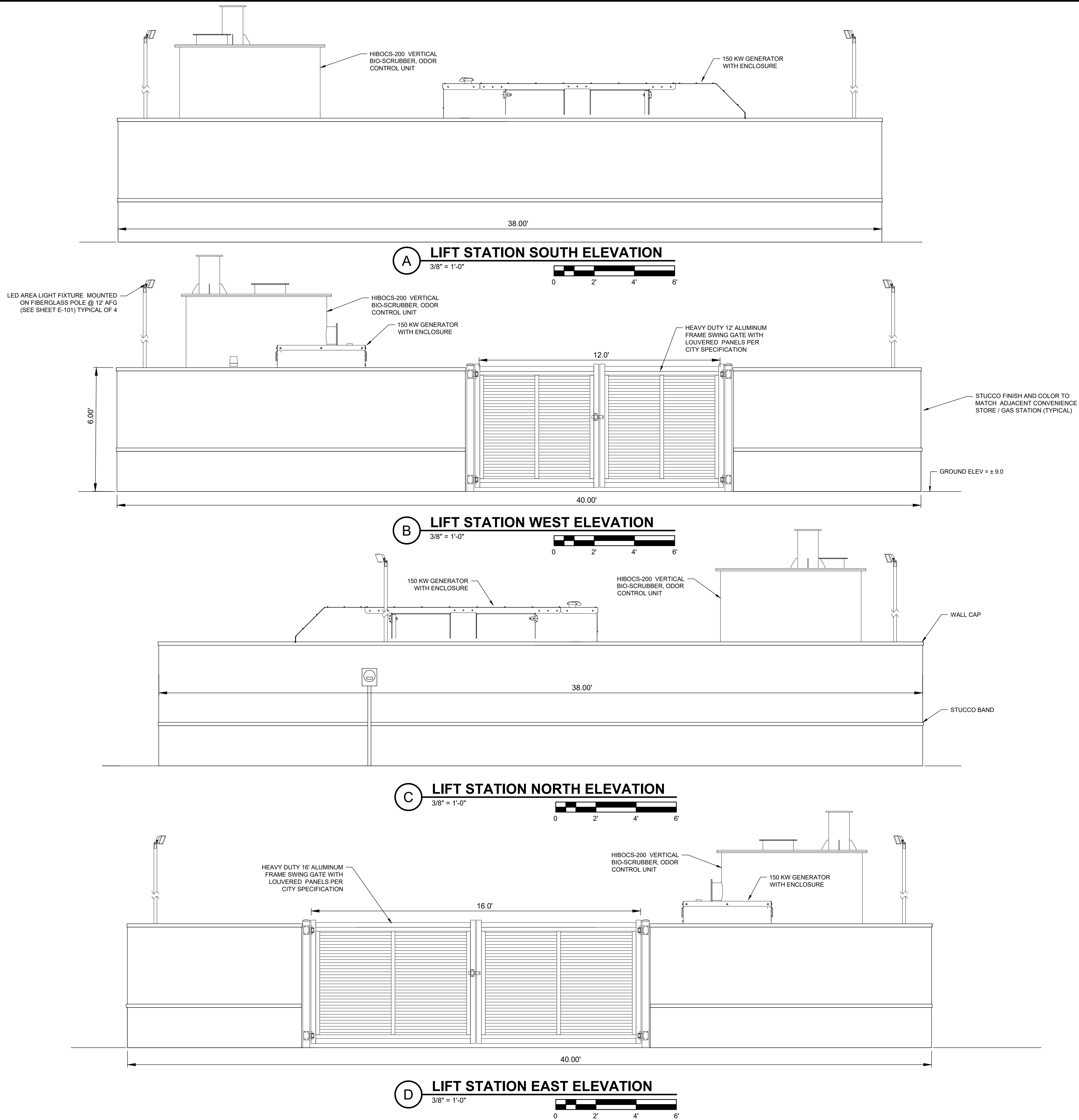
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SHEET CONTENTS
PROPOSED
LIFT STATION DETAIL

SHEET NO.

C-102

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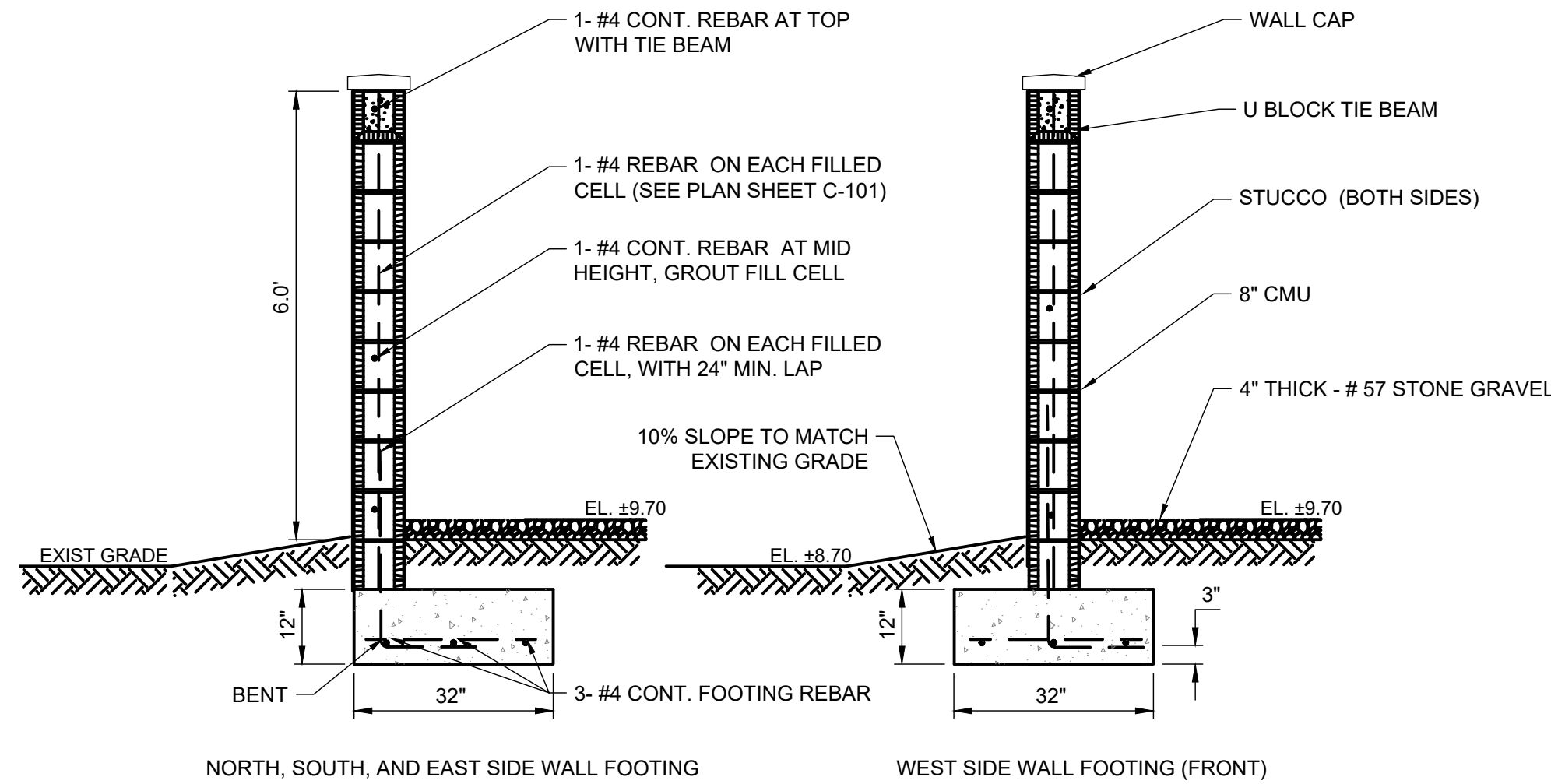
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SHEET CONTENTS
ELEVATIONS

SHEET NO.

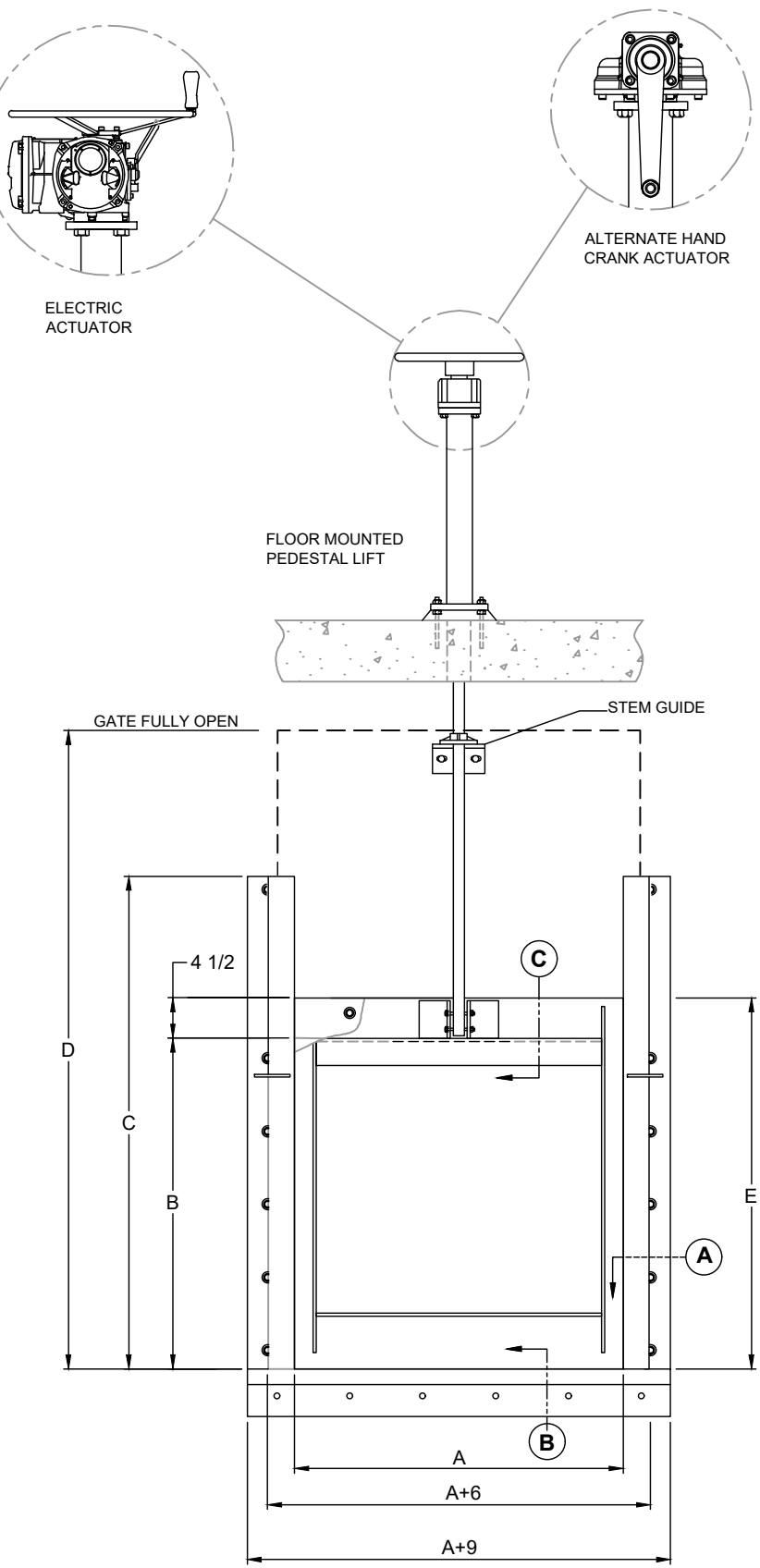
C-103

- FOUNDATIONS**
1. ASSUMPTIVE DESIGN NET SOIL BEARING PRESSURE FOR SPREAD FOOTINGS IS 1000 PSF. THIS SHALL BE VERIFIED BY AN INDEPENDENT TESTING LABORATORY PRIOR TO INSTALLING FOUNDATIONS.
 2. COMPACT SOILS AT BOTTOM OF FOOTINGS AND SLABS TO 98% OF MAXIMUM DENSITY PER ASTM D1557.
- CONCRETE**
1. DESIGN, MATERIAL, WORKMANSHIP, AND PREPARATION OF DETAILED FABRICATION AND PLACING DRAWINGS SHALL BE IN ACCORDANCE WITH CURRENT EDITIONS OF ACI 318, ACI SP-66, ACI SP-4, AND THE CRSI HANDBOOK.
 2. ALL CONCRETE SHALL DEVELOP THE FOLLOWING COMPRESSIVE STRENGTHS AT 28 DAYS, UNLESS OTHERWISE NOTED:
 - a. SLABS AND FOUNDATIONS 3000 PSI
 - b. BEAMS AND FILLED CELLS 3000 PSI
 3. SLUMP JUST PRIOR TO PLACING SHALL BE THE FOLLOWING (PLUS OR MINUS ONE INCH)
 - a. SLABS ON GRADE: 4 INCHES
 - b. FOUNDATIONS: 4 INCHES
 - c. FILLED CELLS: 6 INCHES
 - d. OTHER CONCRETE: 4 INCHES
 4. ALL CONCRETE SHALL BE PLACED IN THE DRY. NO CONCRETE SHALL BE PLACED LATER THAN 90 MINUTES AFTER MIXING HAS BEGUN. DEPOSIT CONCRETE IN ITS FINAL POSITION WITHOUT SEGREGATION AND REHANDLING.
 5. REINFORCING STEEL BARS SHALL BE DEFORMED AND CONFORM TO THE LATEST REQUIREMENTS OF ASTM A615 GRADE 60.
 6. REINFORCING BARS ARE CONTINUOUS UNLESS OTHERWISE NOTED. WHERE NECESSARY, MINIMUM LAP SPLICES FOR REINFORCING BARS SHALL BE 40 BAR DIAMETERS.
 7. LAP ALL WELDED WIRE MESH (W.W.M.) 12 INCHES AT SPLICES.
 8. ALL REINFORCING STEEL SHALL HAVE THE FOLLOWING MINIMUM CLEAR CONCRETE COVER:
 - a. CAST AGAINST AND PERMANENTLY TO EARTH = 3 INCHES
 - b. STIRRUPS IN BEAMS 1/2 INCH = 1
 - c. ALL OTHER CONDITIONS = 2 INCHES
 9. AT DISCONTINUOUS ENDS OF BEAMS AND SLABS, TOP BARS SHALL TERMINATE IN A STANDARD ACI HOOK, UNLESS OTHERWISE NOTED.
 10. AT OUTSIDE CORNERS OF CONCRETE BEAMS AND FOOTINGS PROVIDE #4X4'-0" LONG CORNER BARS IN EACH FACE AT SAME SPACING AS HORIZONTAL REINFORCING, U.O.N.
 11. PROVIDE DOWELS IN FOOTINGS OF SAME QUANTITY AND SIZE AS VERTICAL WALL REINFORCING. BOTTOM DOWELS SHALL HAVE A STANDARD ACI HOOK.
 12. CHAMFER ALL EXPOSED CONCRETE EDGES 3/4 INCHES X 45 DEGREES.
 13. PATCH ALL DEFECTIVE AREAS OF CONCRETE WITH CEMENT GROUT.

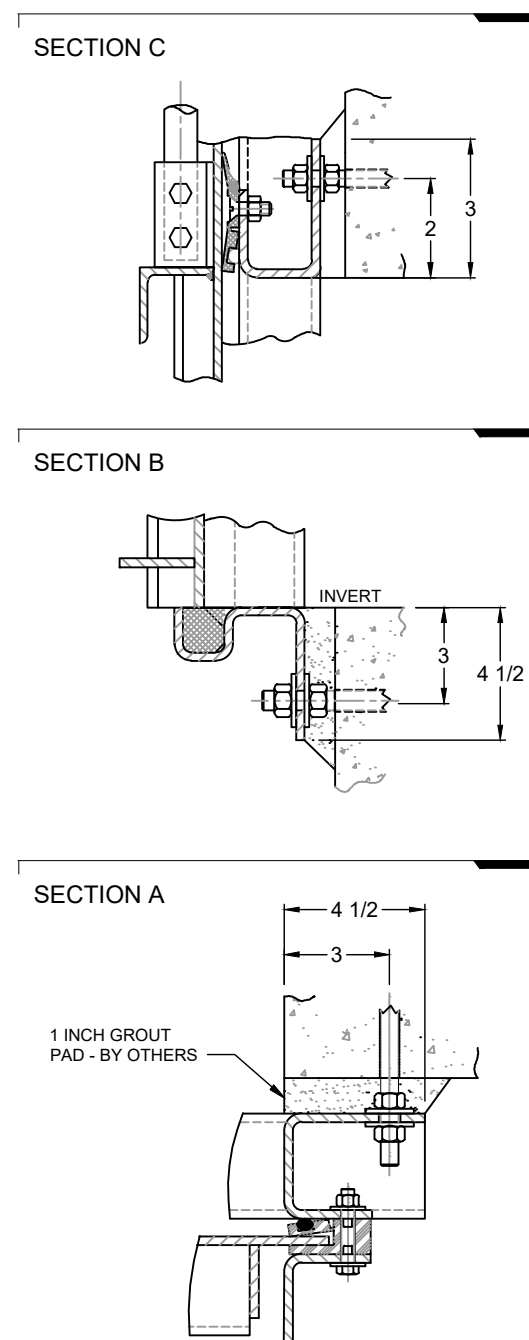


3 PERIMETER WALL DETAIL
1/2"=1'

CONTAINED SLIDE GATES

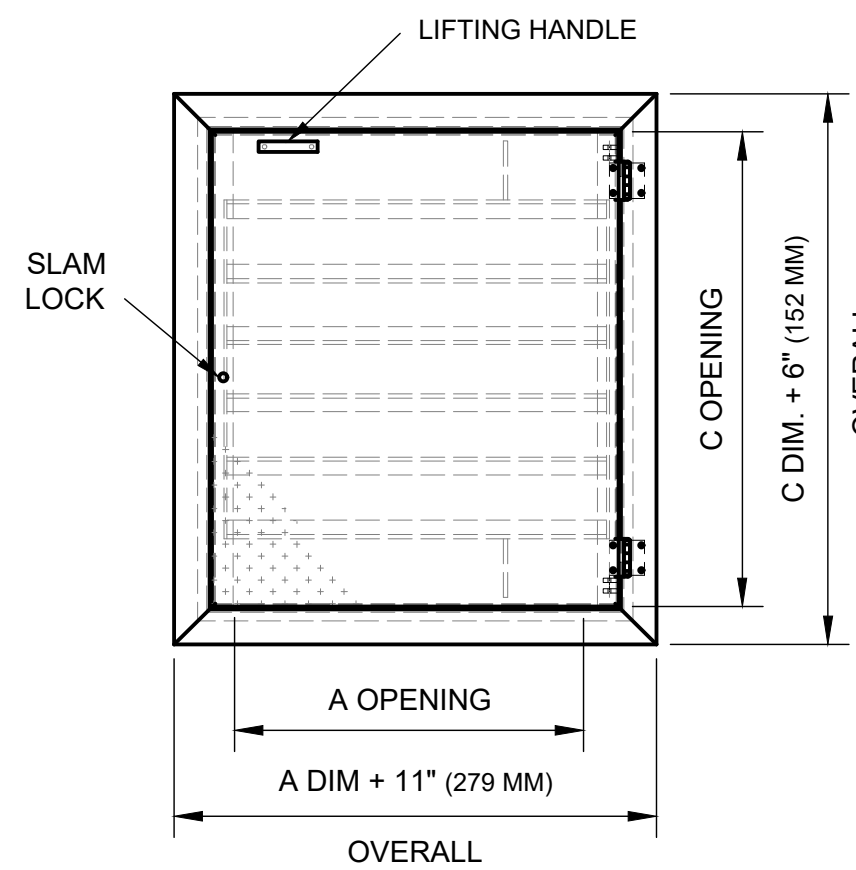


5 SLUICE GATE DETAIL
NTS



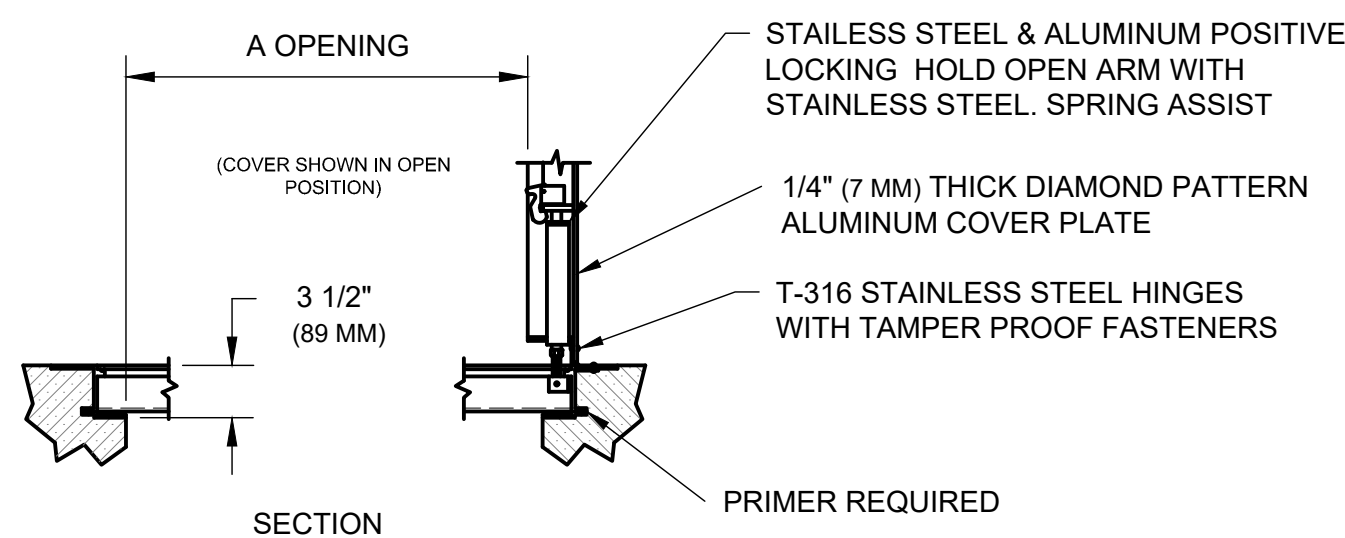
A	Gate Opening Width
B	Gate Opening Height
C	Guide Rail Height = B + 1/2 of Slide
D	Gate Full Open = 2B + 4-1/2
E	Slide Height = B + 4-1/2

SINGLE LIFT & STEM

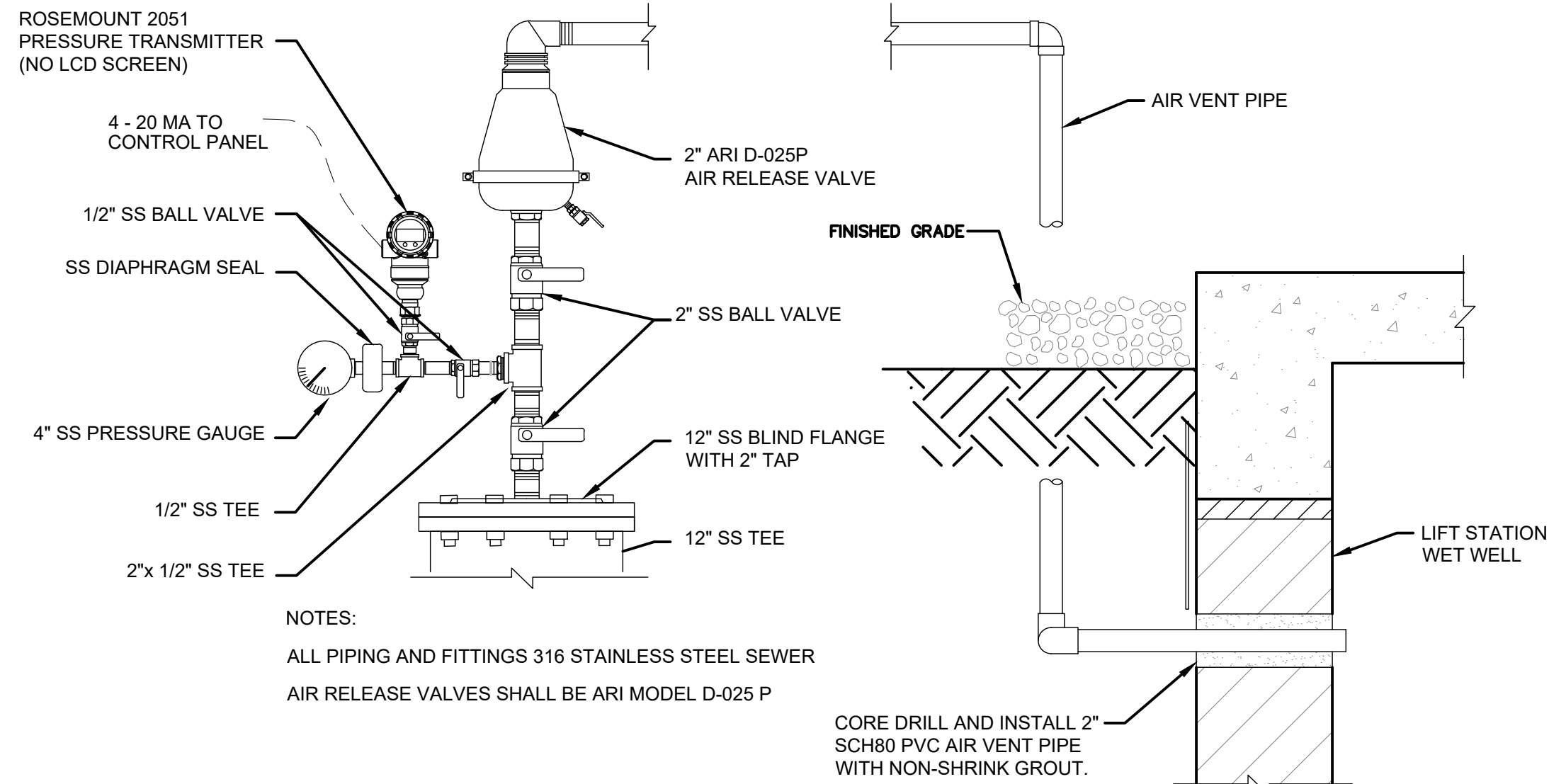


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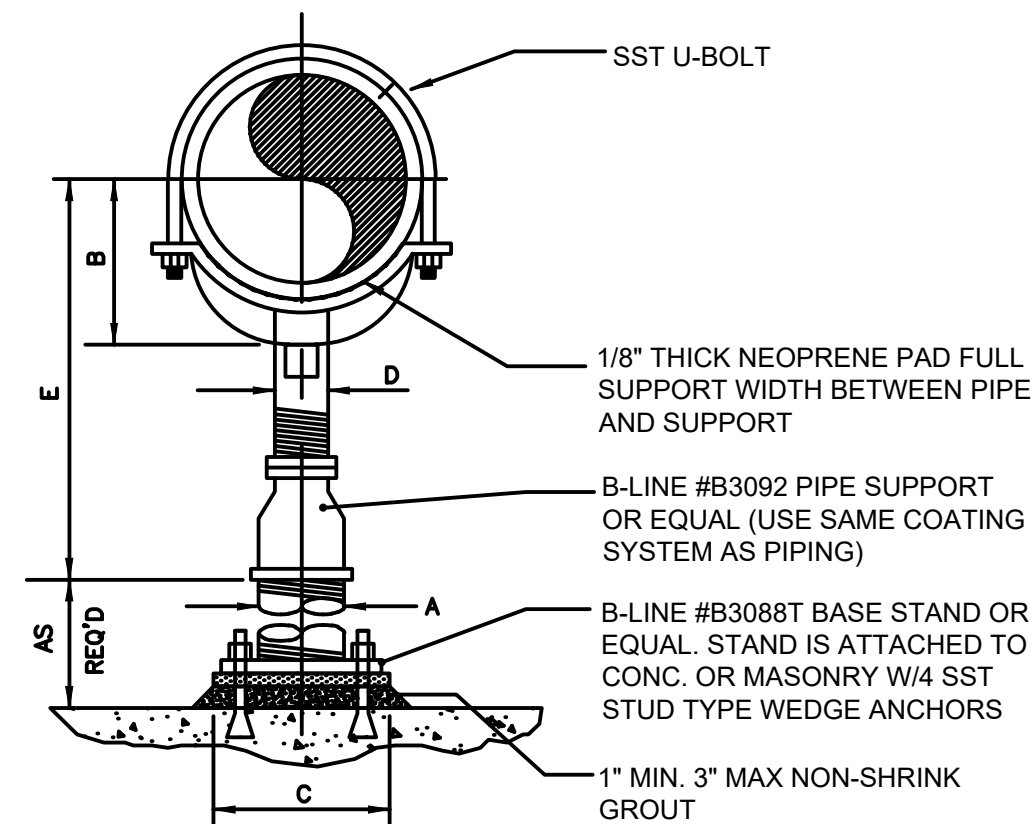
1. SUITABLE FOR USE IN OFF STREET LOCATION WHERE NOT SUBJECTED TO HIGH DENSITY TRAFFIC.
2. PROVIDE A FULL BED OF CLASS "A" CONCRETE UNDER FRAME AND SUPPORT ANGLES.
3. AUTO-LOCK T-316 STAINLESS STEEL HOLD OPEN ARM WITH RELEASE HANDLE.
4. T-316 STAINLESS STEEL HINGES AND ATTACHING HARDWARE.
5. T-316 STAINLESS STEEL SLAM LOCK WITH REMOVABLE KEY.
6. STAINLESS STEEL COMPRESSION SPRING ASSIST.
7. SINGLE LEAF CONSTRUCTION.



4 WET WELL ACCESS HATCH DETAIL
NTS



1 AIR RELEASE VALVE ASSEMBLY
PIPE INTO WET WELL DETAIL
NTS



PIPE SIZE	A	B	C	D	E	
					MIN.	MAX.
2 1/2	2 1/2	3 1/2	9	1 1/2	8	13
3	2 1/2	3 3/4	9	1 1/2	8 1/4	13 1/4
3 1/2	2 1/2	4	9	1 1/2	8 1/2	13 1/2
4	3	4 1/4	9	2 1/2	9 1/4	14
5	3	4 7/8	9	2 1/2	10	14 3/4
6	3	5 1/2	9	2 1/2	10 1/2	15 1/4
8	3	6 7/8	9	2 1/2	11 3/4	16 1/2
10	3	8 1/2	9	2 1/2	13 1/2	18 1/4
12	3	9 15/16	9	2 1/2	15	19 3/4
14	4	10 15/16	11	3	16 1/4	20 3/4
16	4	12 3/8	11	3	17 3/4	22 1/4
18	6	13 7/8	13 1/2	3 1/2	19 1/2	24
20	6	15 3/8	13 1/2	3 1/2	21	25 1/2
24	6	17 15/16	13 1/2	4	23 3/4	28 1/4

2 ADJUSTABLE PIPE SUPPORT DETAIL
NTS

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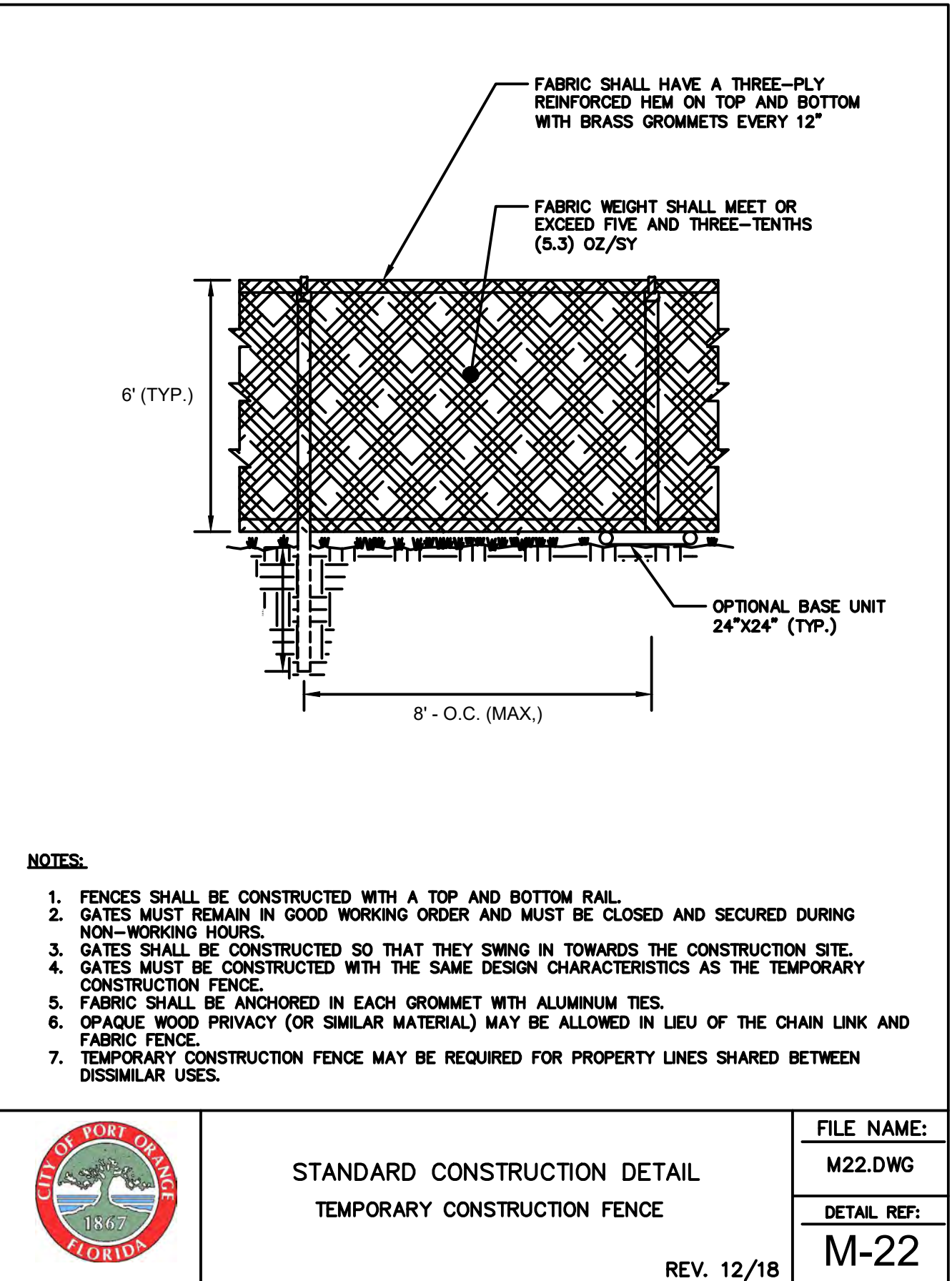
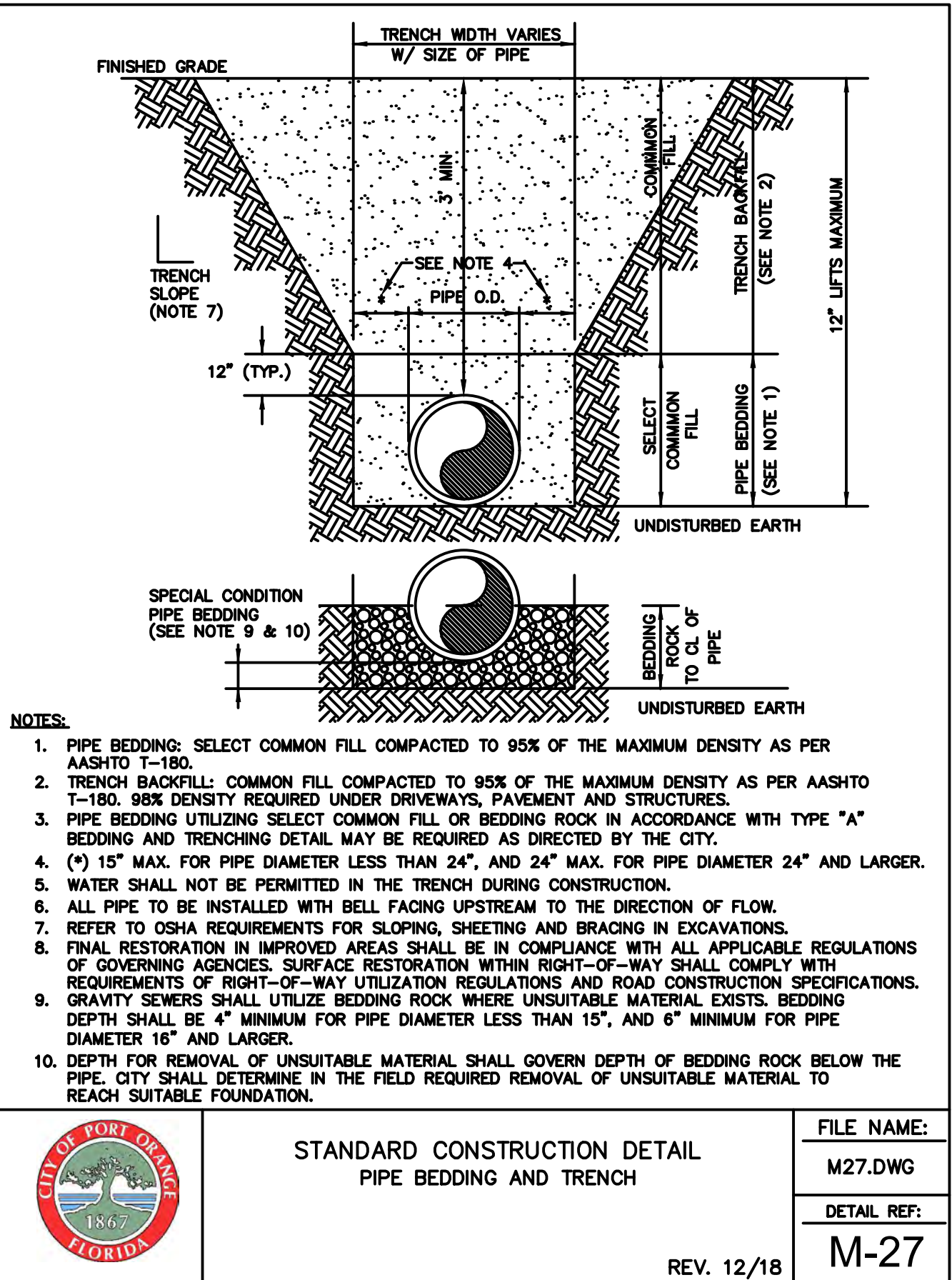
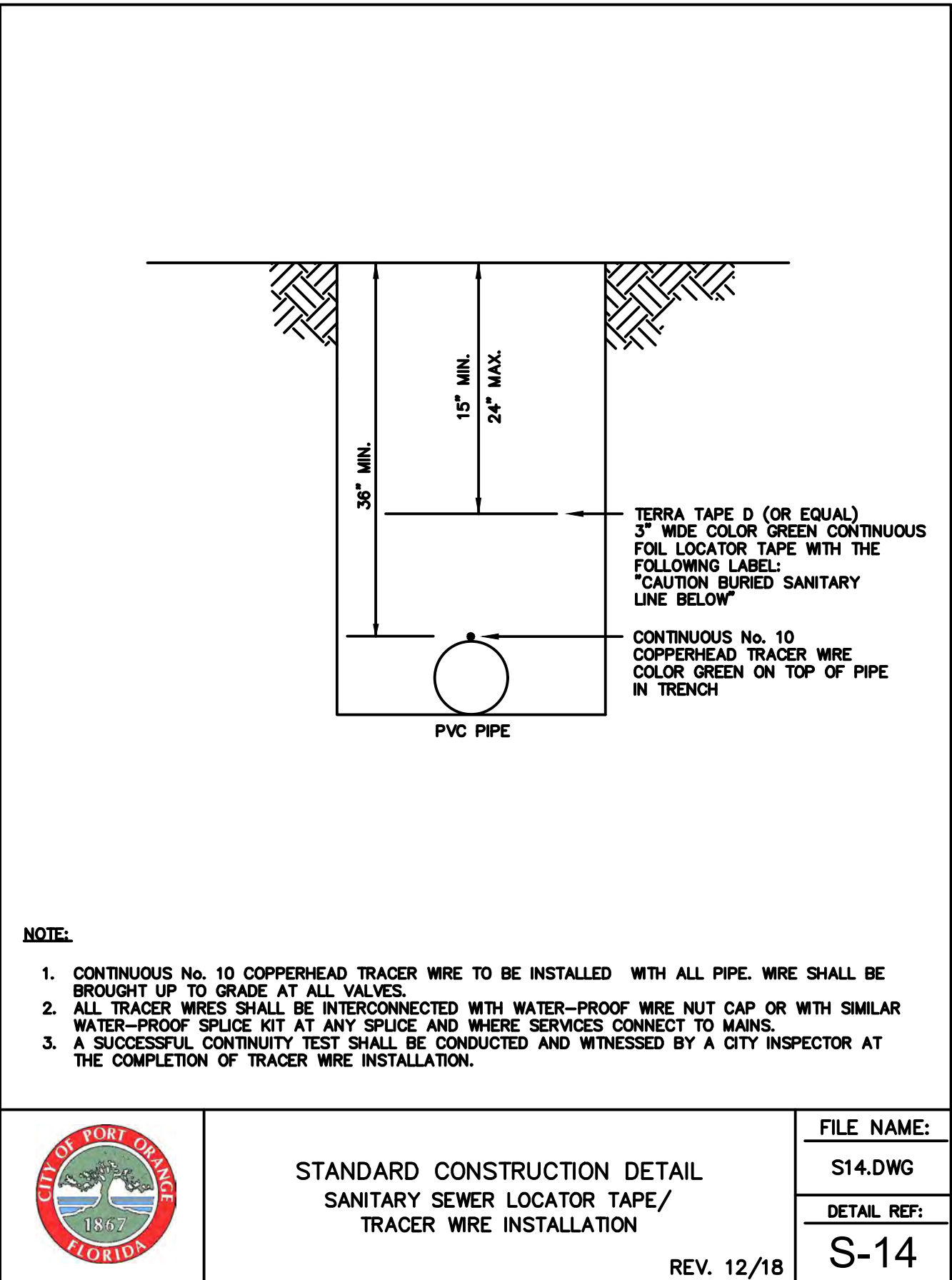
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SHEET CONTENTS
GENERAL
CONSTRUCTION
DETAILS

SHEET NO.

C-501



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SHEET CONTENTS
STANDARD
CONSTRUCTION
DETAILS

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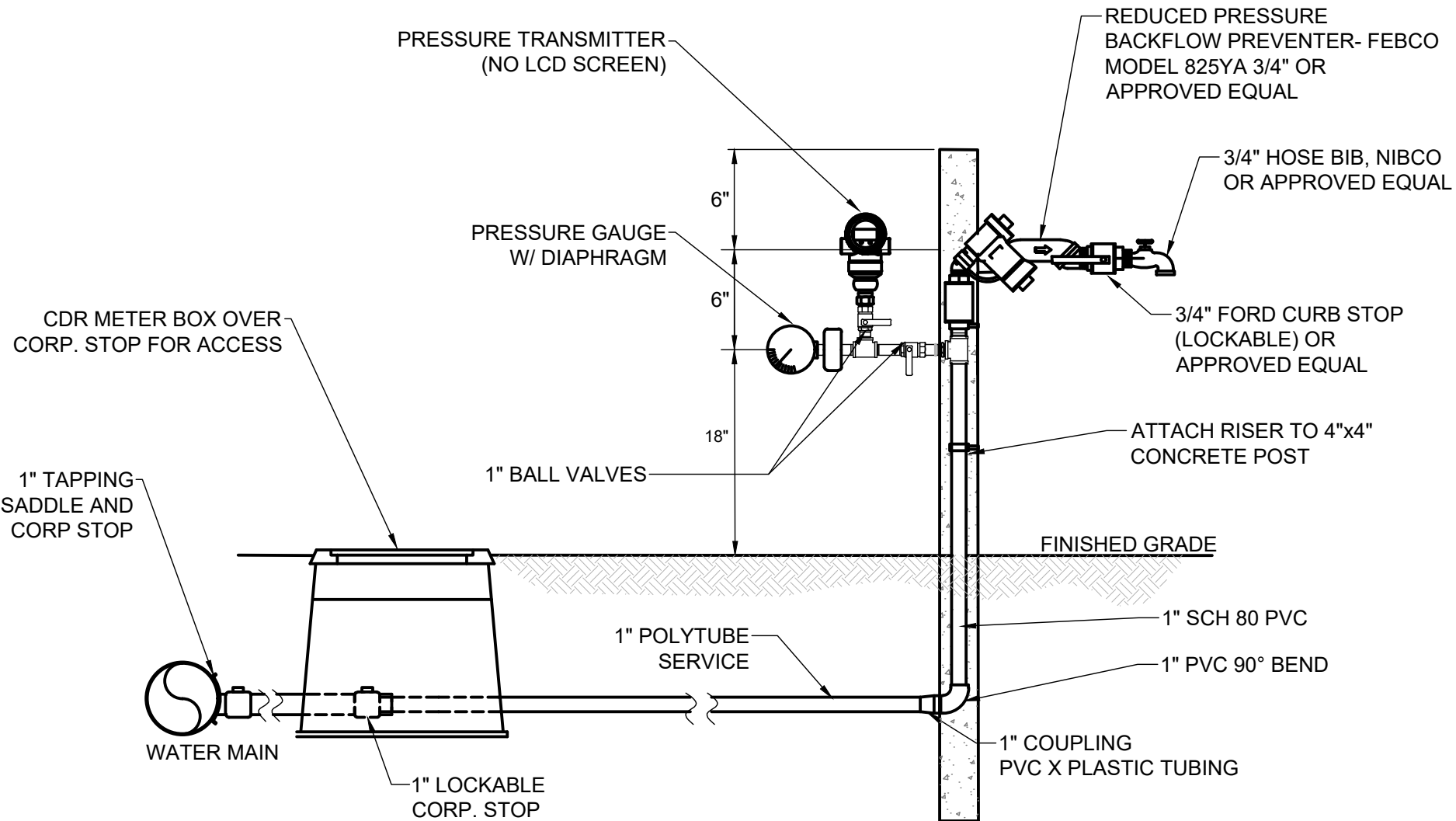
C-502

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.



NOTES:

- ALL BRASS FITTINGS TO BE LEAD FREE NSF 372.
- REDUCED PRESSURE BACKFLOW PREVENTER SHALL BE LOCKABLE.

7 LIFT STATION WATER SERVICE
NTS

6 UTILITY PIPE SEPARATION DETAIL
NTS

RACEWAYS SYMBOLS

 ABOVEGROUND CONDUIT
 UNDERGROUND CONDUIT
 CONCEALED CONDUIT IN CEILING OR WALL
 WIREWAY, SIZE AND TYPE AS INDICATED ON DRAWINGS
 CABLE TRAY, SIZE AND TYPE AS INDICATED ON DRAWINGS
 UNDERFLOOR DUCT
 JUNCTION BOX
 HANDHOLE
 MANHOLE

	DUPLEX RECEPTACLE TEXT INDICATES MOUNTING HEIGHT
	DOUBLE DUPLEX RECEPTACLE
	ABOVE COUNTER DUPLEX RECEPTACLE
	SIMPLEX RECEPTACLE
	SPLIT WIRED DUPLEX RECEPTACLE
	SPECIAL PURPOSE CONNECTION, SEE EQUIPMENT WIRING SCHEDULE
	FLOOR BOX
	POKE THRU
	CEILING MOUNTED DUPLEX RECEPTACLE
	CEILING MOUNTED DOUBLE DUPLEX RECEPTACLE
	SPECIAL PURPOSE RECEPTACLE, NEMA TYPE ON DRAWING
	CORD REEL

A	DENOTES SWITCH LEG FOR SWITCHED OUTLETS
D	DENOTES DEDICATED OUTLETS
EW	DENOTES ELECTRIC WATER COOLER OUTLETS
GFCI	DENOTES GROUND FAULT INTERRUPTER OUTLETS
IG	DENOTES ISOLATED GROUND OUTLETS
H	DENOTES HORIZONTALLY MOUNTED OUTLETS
TR	DENOTES TAMPER RESISTANT SAFETY OUTLETS
USB	DENOTES COMBINATION DUPLEX/USB OUTLETS
WP	DENOTES WEATHER PROOF OUTLETS
X1	DENOTES EXPLOSION PROOF CLASS 1 DIVISION 1 OUTLETS
X2	DENOTES EXPLOSION PROOF CLASS 1 DIVISION 2 OUTLETS

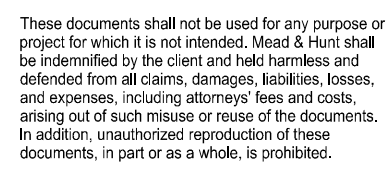
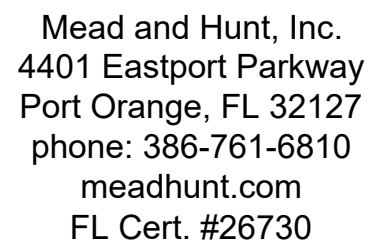
	UTILITY METER SOCKET
	SWITCHBOARD (x REPRESENTS SWITCHBOARD DESIGNATION)
	CUSTOMER METERING
	GENERATOR ANNUNCIATOR PANEL
	EMERGENCY POWER OFF
	POWER FACTOR CORRECTION CAPACITOR
	ACTIVE HARMONIC FILTER
	GROUND ACCESS WELL
	GROUND ROD
	GROUND RECEPTACLE
	LIGHTNING ROD
	GROUNDING CONDUCTOR
	PAD MOUNTED SWITCH
	GENERAL LIGHTING AND POWER TRANSFORMER-DRY TYPE
	WALL MOUNTED LIGHTING AND POWER TRANSFORMER-DRY TYPE
	DISTRIBUTION TRANSFORMER FOR NON-LINEAR LOADS
	PLUG-IN BUS DUCT
	FEEDER BUS DUCT
	NEW PANELBOARD
	EXISTING PANELBOARD

	GROUND MOUNTED LIGHT (ABOVE OR BELOW GRADE)
	ELECTRIC HANDHOLE
	HANDHOLE, GENERIC
	ELECTRIC MANHOLE
	ELECTRIC METER
	ELECTRIC SERVICE PANEL
	ELECTRIC TRANSFORMER
	ELECTRIC PEDESTAL BOX
	FLOOD LIGHT POLE
	ALARM STROBE LIGHT
	DOUBLE LIGHT POLE
	LIGHT POLE
	POWER POLE
	DOUBLE POWER POLE
	POWER POLE WITH LIGHT

	3 PHASE MOTOR CONNECTION
	1 PHASE MOTOR CONNECTION
	EQUIPMENT CONNECTION
	COMBINATION MAGNETIC MOTOR CONTROLLER
	MANUAL MOTOR CONTROLLER (3 PHASE)
	SOLID STATE MOTOR CONTROLLER
	VARIABLE FREQUENCY MOTOR CONTROLLER
	MAGNETIC MOTOR CONTROLLER
	NON-FUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	DOUBLE THROW SWITCH
	FUSED SINGLE POLE SWITCH
	MOTOR RATED STARTER / DISCONNECT SWITCH
	PUSH BUTTON STATION
	MOTOR CONTROL CENTER

ACCU	AIR COOLED CONDENSING UNIT
A/E	ARCHITECT/ENGINEER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
C	CONDUIT
CF	CIRCULATION FAN
CHWP	CHILLED WATER PUMP
CP	CIRCULATION PUMP
CUH	CABINET UNIT HEATER
DH	DUCT HEATER
DO	DOOR OPERATOR
EF	EXHAUST FAN
EL	EMERGENCY LIGHT
EMT	ELECTRICAL METALLIC TUBING
ETR	EXISTING TO REMAIN
EWC	ELECTRICAL WATER COOLER
EWH	ELECTRICAL WATER HEATER
FA	FIRE ALARM
FAF	FORCED AIR FURNACE
GFI	GROUND FAULT INTERRUPTER
GRS	GALVANIZED RIGID STEEL
GEC	GROUNDING ELECTRODE CONDUCTOR
HD	HAND DRYER
HP	HORSEPOWER
HVAC	HEATING, VENTILATION, AIR CONDITIONING
HWB	HOT WATER BOILER
HWP	HOT WATER PUMP
IETHW	INSTANTANEOUS ELECTRIC WATER HEATER
IH	INFRARED HEATER
IMC	INTERMEDIATE METALLIC CONDUIT
IWH	INSTANTANEOUS WATER HEATER
MAU	MAKE-UP AIR UNIT
MM	MULTI-MODE FIBER OPTIC CABLE
MNS	MASS NOTIFICATION SYSTEM
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NL/EL	NIGHT LIGHT AND EMERGENCY LIGHT
NTS	NOT TO SCALE
PVC	POLYVINYL CHLORIDE
RCP	RADIATE CEILING PANEL
REQ'D	REQUIRED
RF	RETURN FAN
SF	SUPPLY FAN
SM	SINGLE-MODE FIBER OPTIC CABLE
SP	SUMP PUMP
SS	STAINLESS STEEL
TBR	TO BE REMOVED
TYP	TYPICAL
UC	UNIT COOLER
UG	UNDERGROUND
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
VER	VEHICLE EXHAUST REEL
WFE	WELDING FUME EXTRACTOR
WL	WET LOCATION LISTED
WP	WEATHERPROOF
3R	NEMA 3R RATING
4X	NEMA 4X RATING

1. THE SYMBOLS AND ABBREVIATIONS LIST ON THIS SHEET IS A COMPREHENSIVE STANDARD GUIDE INTENDED FOR GENERAL USE ON ALL PROJECTS. THEREFORE NOT ALL THE SYMBOLS AND ABBREVIATIONS CONTAINED IN THIS LIST ARE NECESSARILY USED ON THIS PARTICULAR PROJECT AND SHOULD BE USED FOR CLARIFICATION ONLY.
2. THE CONTRACTOR SHALL READ AND UNDERSTAND THE ENTIRE SET OF CONSTRUCTION DOCUMENTS. THIS INCLUDES BUT IS NOT LIMITED TO THE PLANS AND SPECIFICATIONS FOR ALL DISCIPLINES. THIS WILL ENSURE THAT HE UNDERSTANDS THE FULL SCOPE OF WORK AND IS ABLE TO CONVEY THE REQUIRED MATERIALS AND METHODS OF INSTALLATION TO THE HIS ESTIMATORS, SUPPLIERS AND INSTALLERS.
3. THE CONTRACTOR SHALL VISIT PROJECT SITE AND MAKE HIMSELF/HERSELF AWARE OF ALL EXISTING CONDITIONS PRIOR TO SUBMITTING A BID FOR THIS WORK.
4. PROVIDE MEANS TO FURNISH AND INSTALL.
5. COORDINATE ALL AND ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION IN ORDER TO AVOID CONFLICTS DURING CONSTRUCTION.
6. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE. DO NOT SCALE FROM THESE DRAWINGS.
7. WHERE JOB CONDITIONS REQUIRE CHANGES FROM THE CONTRACT DOCUMENTS THAT DO NOT CHANGE THE SCOPE OF INSTALLATION OR NATURE OF THE WORK REQUIRED, THE CONTRACTOR SHALL MAKE SUCH CHANGES WITHOUT ANY ADDITIONAL COST TO THE OWNER. NO OTHER CHANGES MAY BE MADE WITHOUT WRITTEN CONSENT FROM THE ENGINEER AND OWNER.
8. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE ENFORCED EDITION OF THE NATIONAL ELECTRIC CODE, NATIONAL ELECTRIC SAFETY CODE, LIFE SAFETY CODE AND ALL OTHER LOCAL AND STATE CODES AND REGULATIONS. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
9. MOUNTING HEIGHTS INDICATED ARE TO THE CENTER OF THE DEVICE U.N.O.
10. DETAILS SHOWN ON ANY DRAWING APPLY TO ALL EQUIPMENT AND MATERIAL ON THE PROJECT.
11. EQUIPMENT LOCATIONS SHOWN ARE APPROXIMATE. EXTEND CONDUIT & WIRE TO INSTALLED LOCATIONS AT NO ADDITIONAL COST TO THE OWNER.
12. ELECTRICAL SYSTEMS SHALL BE COMPLETE AND OPERABLE AT PROJECT COMPLETION.



**CITY OF PORT ORANGE
HERBERT & NOVA LIFT STATION
IMPROVEMENTS & UPGRADE**

HERBERT AVE. & NOVA ROAD
PORT ORANGE, FL 32127

ISSUED

04/28/2020	60% DESIGN SET
08/01/2020	90% DESIGN SET
10/15/2020	100% DESIGN SET

M&H NO.: 1000715-181687.01
DATE: AUGUST 2020
DESIGNED BY: KSK
DRAWN BY: KSK
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

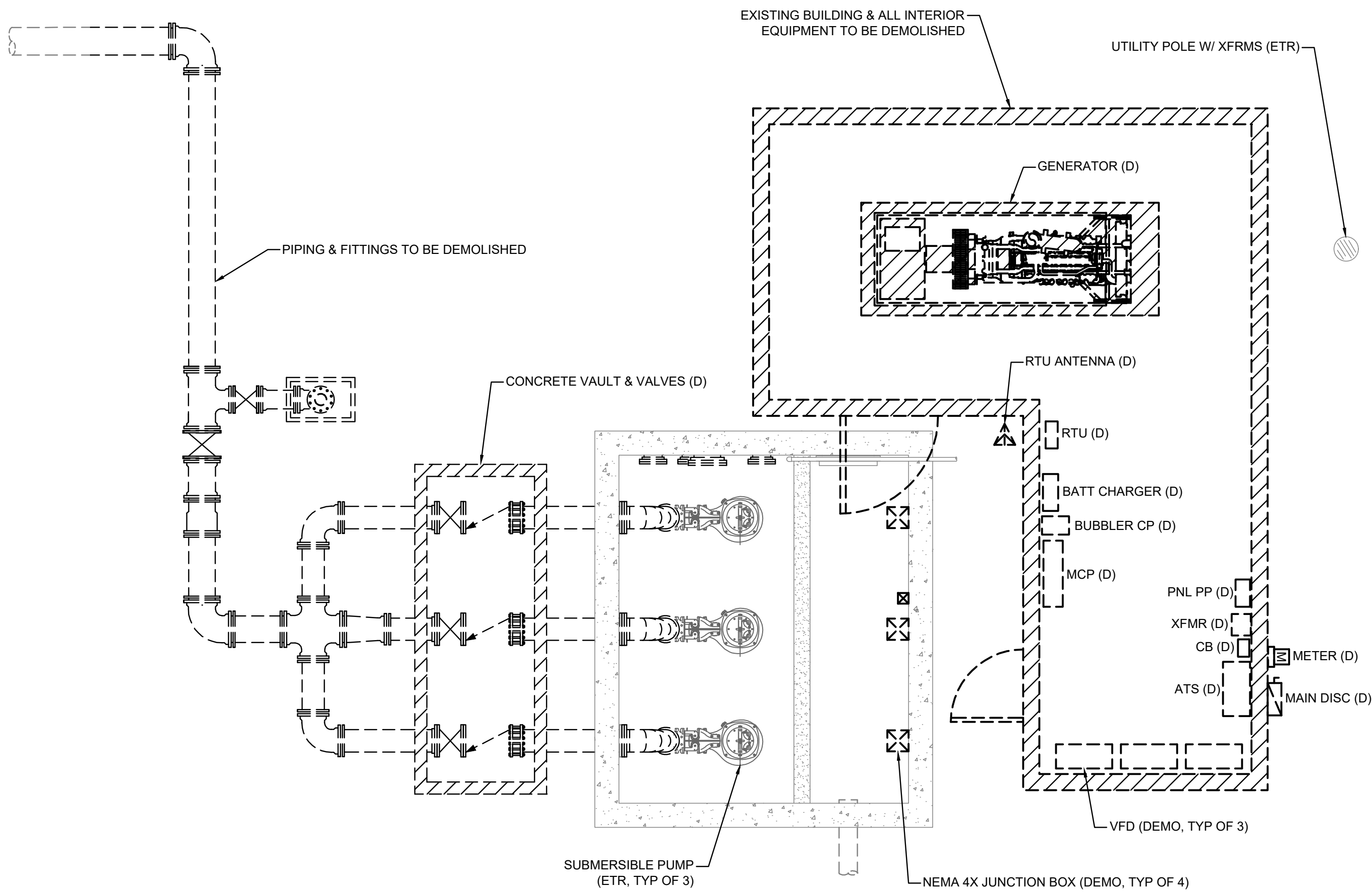
SHEET CONTENTS

LEGEND, ABBREVIATIONS AND NOTES

SHEET NO.

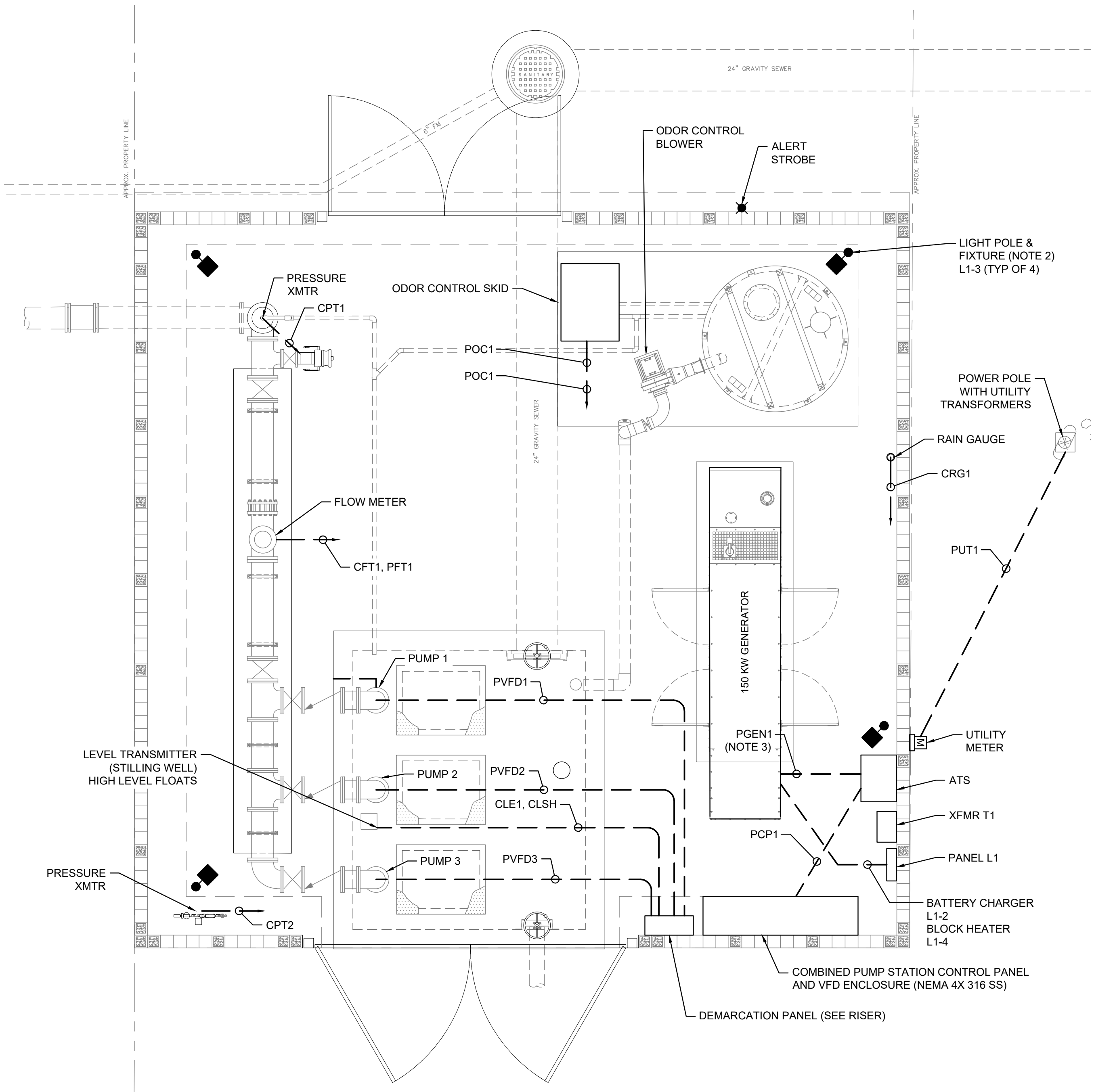
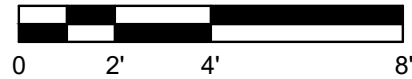
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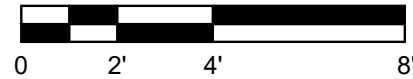
LIFT STATION ELECTRICAL DEMOLITION PLAN

1/4" = 1'-0"



LIFT STATION ELECTRICAL PLAN

1/4" = 1'-0"



NOTES:

- EXISTING STATION PUMPS SHALL REMAIN AND REUSED. ALL EXISTING ELECTRICAL, INSTRUMENTATION AND CONTROLS EQUIPMENT AND DEVICES SHALL BE DEMOLISHED.
- PROVIDE LED AREA LIGHT MOUNTED AT 12'-0" AFG TO DIRECT BURIAL ROUND FIBERGLASS POLE. BASIS OF DESIGN FOR AREA LIGHT SHALL BE LITHONIA #RSX1 LED P1 30K R3 MVOLT SPA PE DBLXD. SUBMIT EQUIVALENT FOR APPROVAL.
- PROVIDE A 1" CONDUIT WITH REQUIRED CONTROLS CABLING BETWEEN THE GENERATOR AND AUTOMATIC TRANSFER SWITCH.

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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SHEET CONTENTS
ELECTRIC PLAN

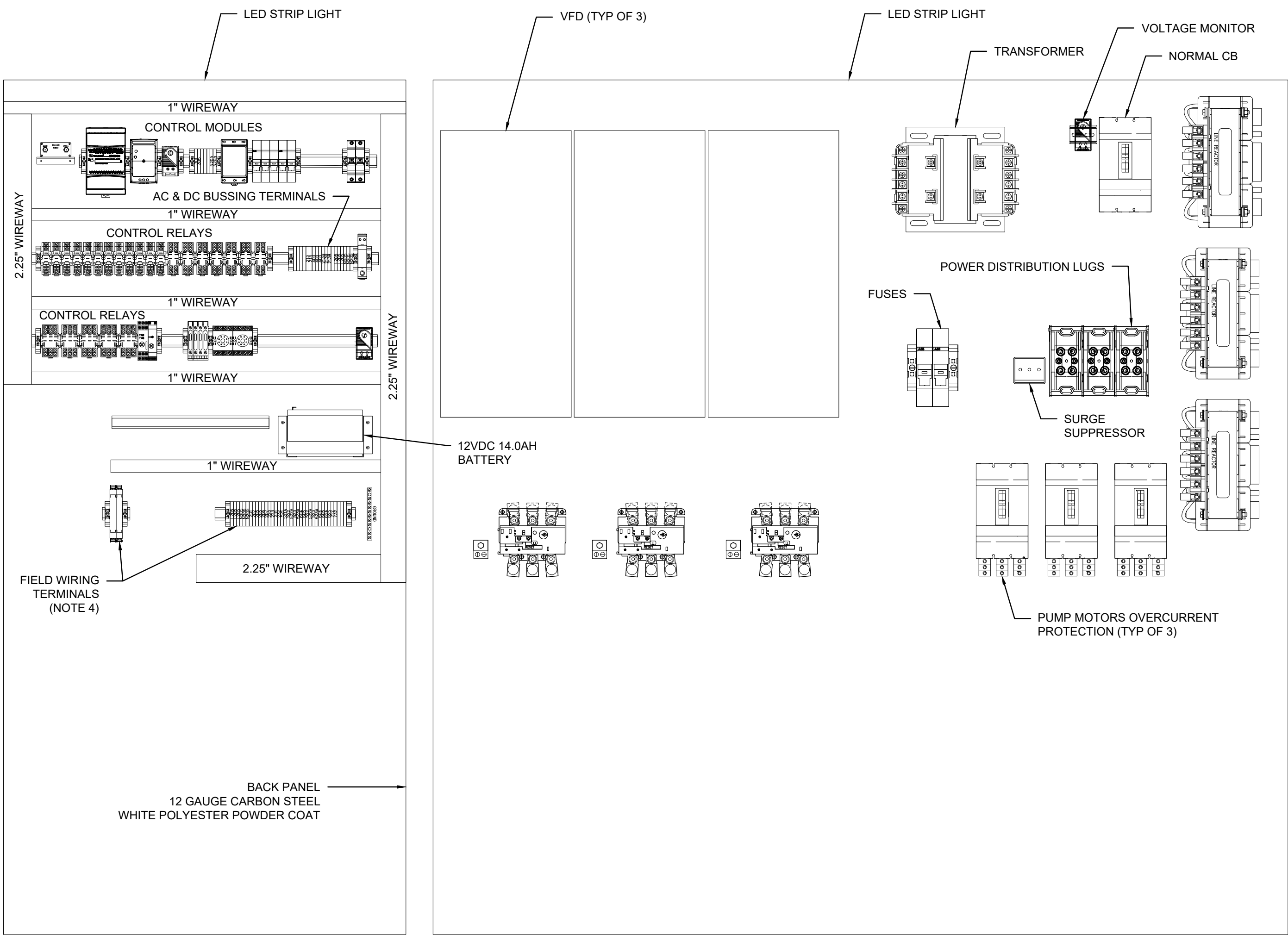
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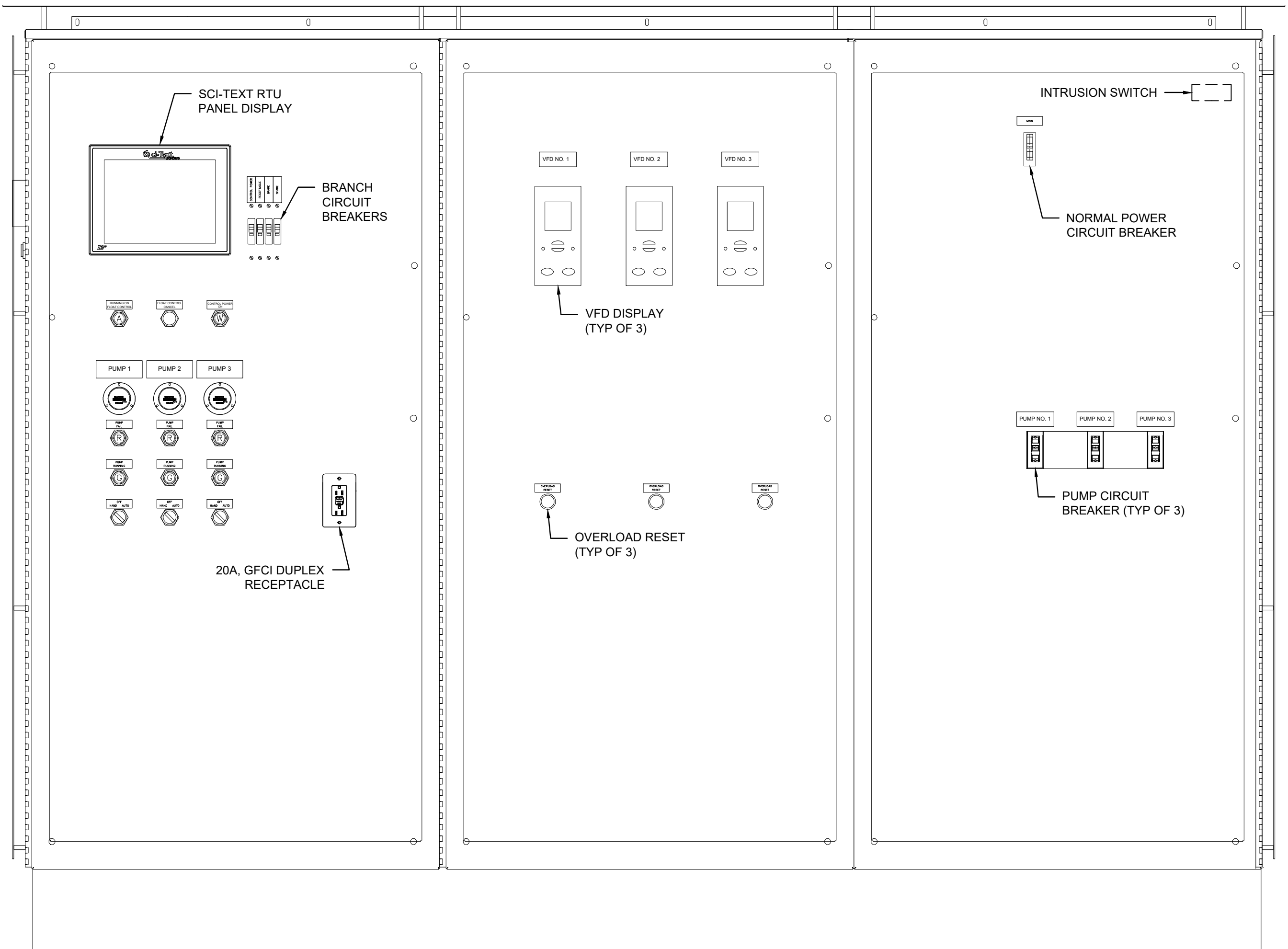
2

CONTROL BACK PANEL LAYOUT



1

CONTROL PANEL FRONT ELEVATION
(OUTER DOOR NOT SHOWN FOR CLARITY)



NOTES:

- PANEL SUPPLIER SHALL PROVIDE LAYOUT AND SCHEMATIC DRAWINGS OF THE CONTROL PANEL FOR REVIEW.
- COORDINATION WITH THE RISER DIAGRAM ON SHEET E-701 FOR SPECIFIC INFORMATION ON OVERCURRENT PROTECTION SIZING AND OTHER REQUIREMENTS.
- ENCLOSURE SHALL BE MINIMUM 72"H X 96"W X 24"D, NEMA 4X RATING, 316 SS, POWDER COATED WHITE, 3-POINT PADLOCK HANDLE AND SUN SHIELD.
- PROVIDE AN INTRINSICALLY SAFE BARRIER FOR ALL FIELD WIRING THAT ROUTES TO THE WET WELL.

Mead & Hunt

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4401 Eastport Parkway
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meadhunt.com
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SHEET CONTENTS
ELECTRICAL DETAILS

SHEET NO.

E-501



1. THE SCHEMATIC SHOWN IS A BASIC REPRESENTATION OF THE VARIOUS CONNECTIONS, FUNCTIONS AND LOGIC REQUIRED FOR THE CONTROL PANEL. IT DOES NOT SHOW THE ENTIRE EXTENT OF ALL WIRING CONNECTIONS, TERMINAL BLOCKS, ETC. NECESSARY FOR A COMPLETE AND OPERATIONAL PANEL.
2. PROVIDE A COMPLETE WIRING SCHEMATIC SUBMITTAL FOR REVIEW BY THE OWNER/ENGINEER.

**CITY OF PORT ORANGE
HERBERT & NOVA LIFT STATION
IMPROVEMENTS & UPGRADE**

HERBERT AVE. & NOVA ROAD
PORT ORANGE, FL 32127

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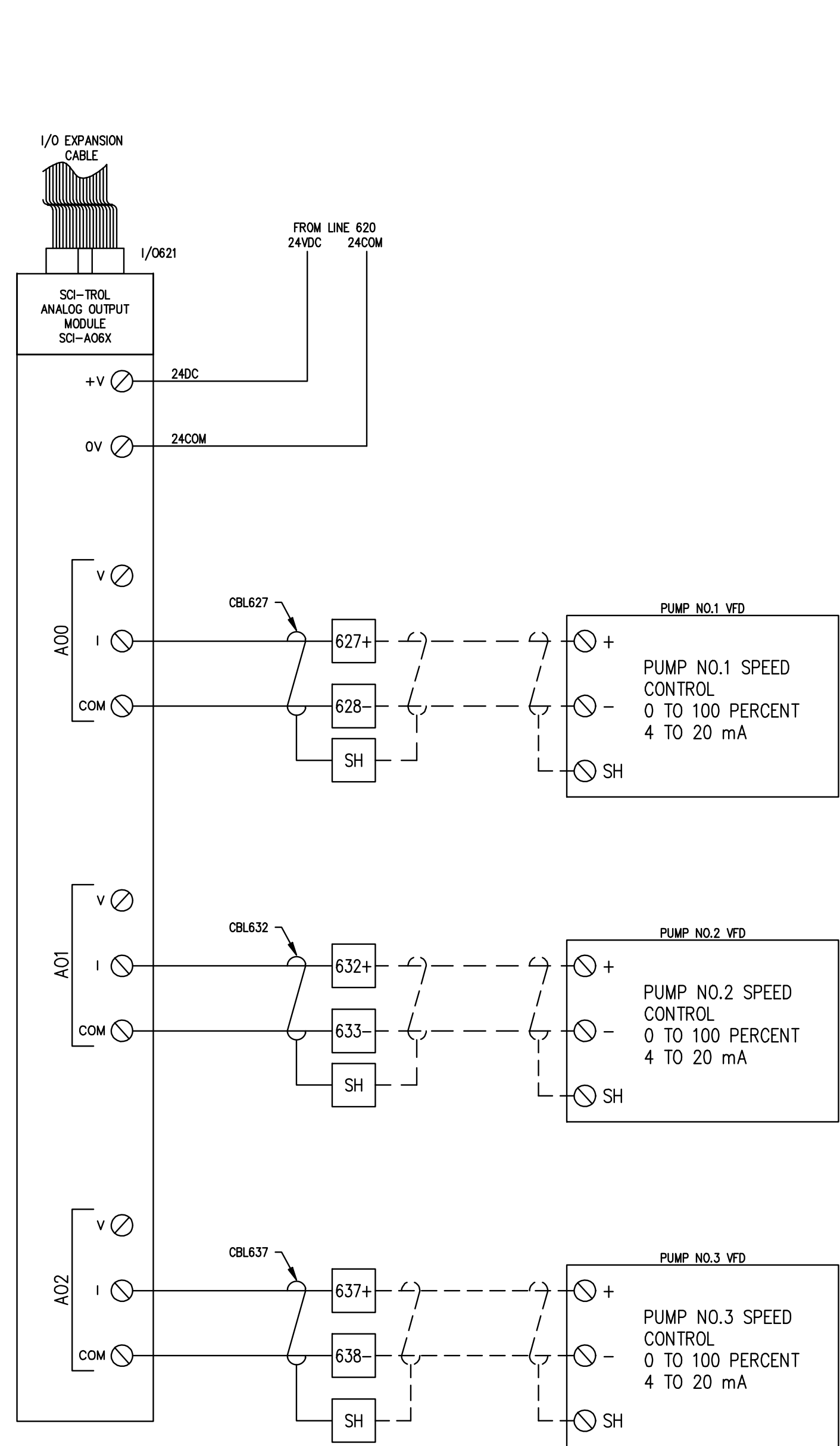
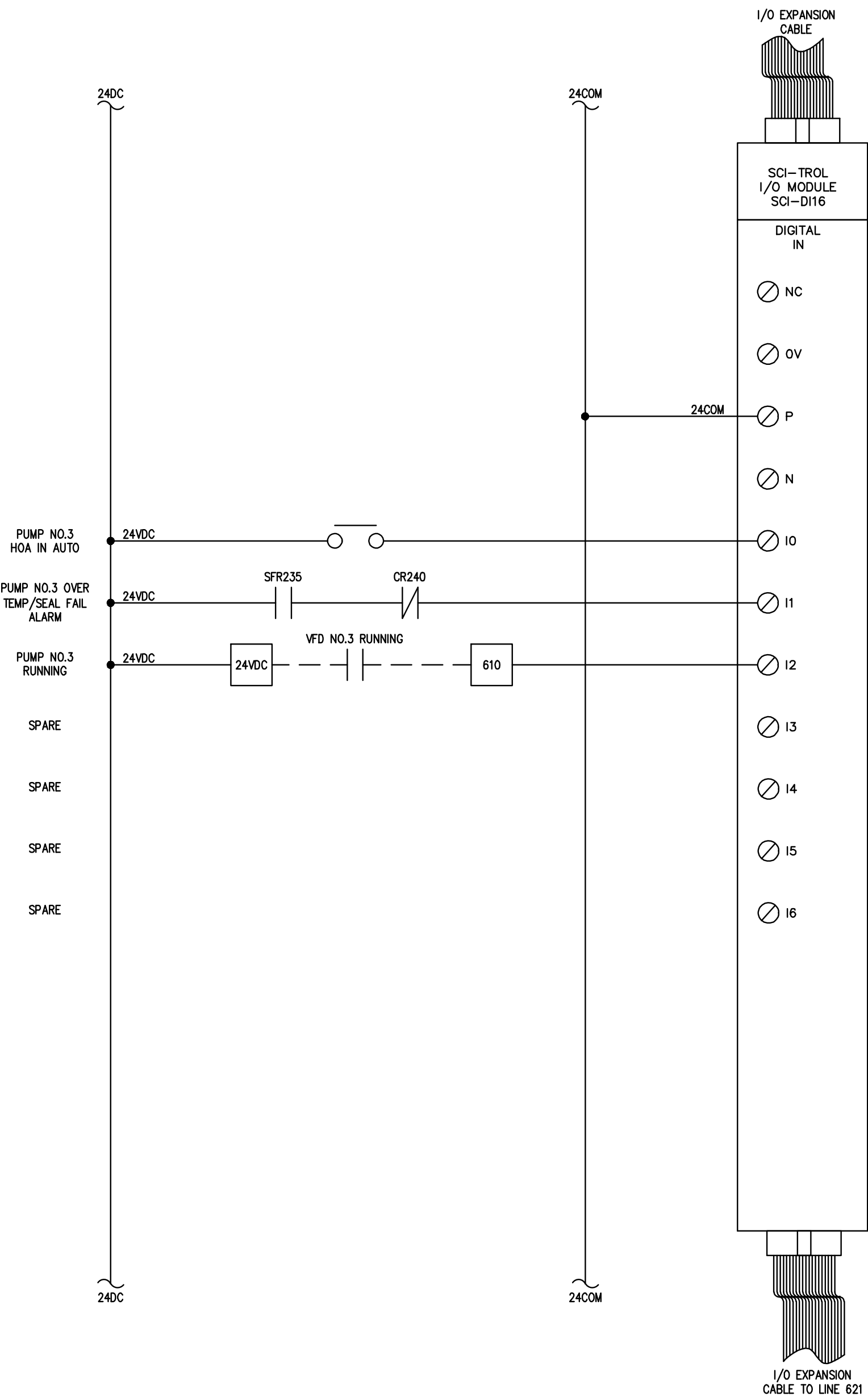
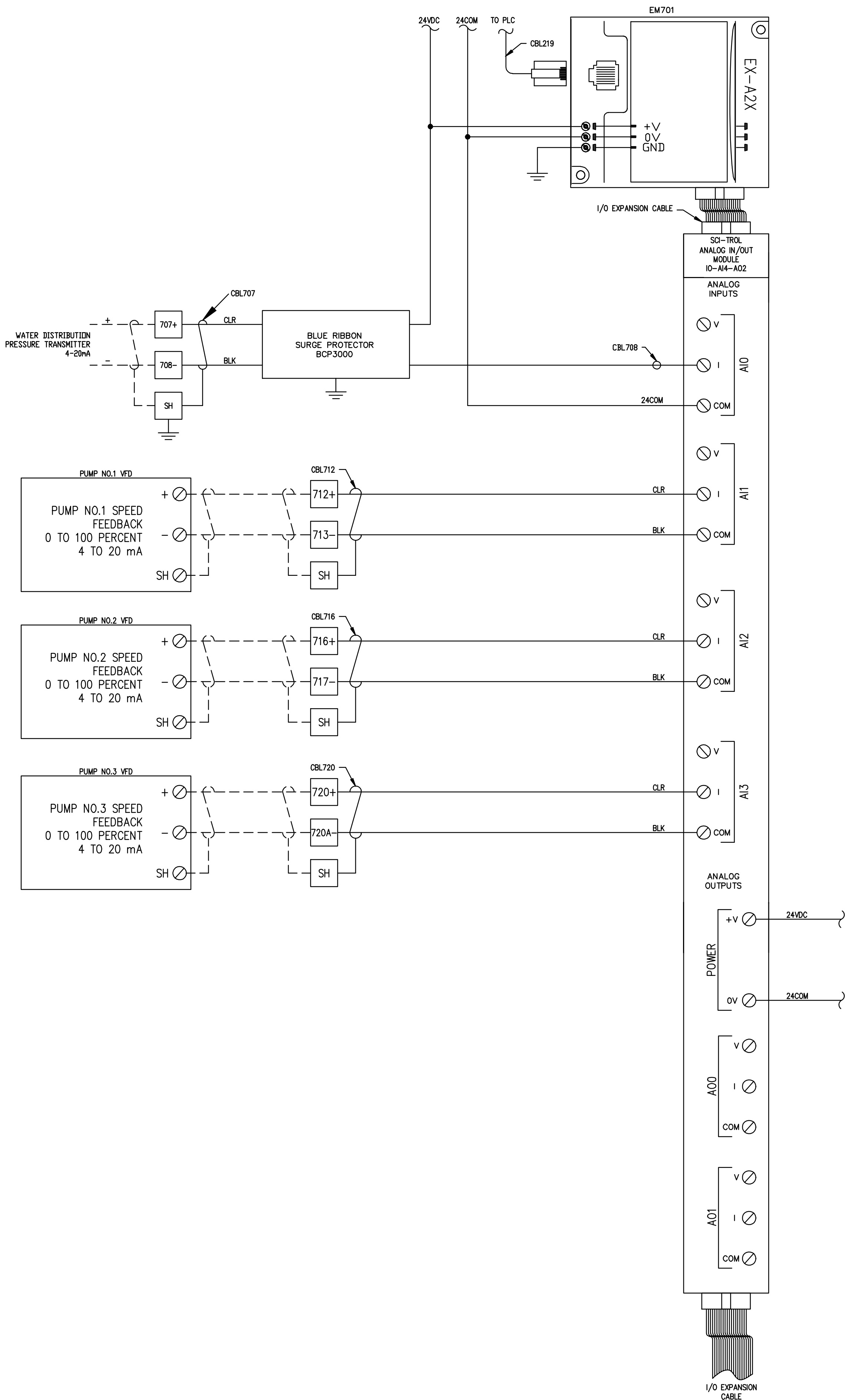
SHEET CONTENTS

ELECTRICAL DETAILS

SHEET NO.

E-502

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1 CONTROL PANEL WIRING DIAGRAM NO SCALE

NOTES

- THE SCHEMATIC SHOWN IS A BASIC REPRESENTATION OF THE VARIOUS CONNECTIONS, FUNCTIONS AND LOGIC REQUIRED FOR THE CONTROL PANEL. IT DOES NOT SHOW THE ENTIRE EXTENT OF ALL WIRING CONNECTIONS, TERMINAL BLOCKS, ETC. NECESSARY FOR A COMPLETE AND OPERATIONAL PANEL.
- PROVIDE A COMPLETE WIRING SCHEMATIC SUBMITTAL FOR REVIEW BY THE OWNER/ENGINEER.

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Mead and Hunt, Inc.
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CITY OF PORT ORANGE HERBERT & NOVA LIFT STATION IMPROVEMENTS & UPGRADE HERBERT AVE. & NOVA ROAD PORT ORANGE, FL 32127

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SHEET CONTENTS
ELECTRICAL DETAILS

SHEET NO.

E-504

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Panelboard:		Panel L1												
Bus Ampacity	100	Volts	208Y/120		Panel Source:	XMFR T1								
Branch Brkr Space	18 Poles	Phase	3		Feed-Thru Lugs	None								
Main Type	MCB	Wires	4		Sub-Feed Lugs	None								
MCB Amps	60	Delta/Wye Mounting	Wye Surface		Sub-Feed Brkr #1	None								
		Enclosure	NEMA 4X		Sub-Feed Brkr #2	None								
		SCCR	10 kA											
		SE Rated	No											
		Pnl MCA	10 A											
Comments:					SPD									
					Iso Grd									



"ATTACHMENT 1" SCHEDULE OF UNIT PRICING

BID FORM

CITY OF PORT ORANGE

ITB # 21-09

HERBERT & NOVA MASTER LIFT STATION IMPROVEMENTS AND UPGRADE

Completed Attachment 1 Bid Proposal form MUST be included with Bid Submission

Instruction to save Attachment from DemandStar website:

Perform "File Save As" and save spreadsheet to your computer. Fill in pricing in highlighted cells, preferably electronically.

Bidders are required to complete all fields shaded in green. All other fields will be automatically calculated.

NAME OF BUSINESS:	
CONTACT PERSON:	
EMAIL ADDRESS:	
AUTHORIZED SIGNATURE:	

PROPOSAL PRICING

ITEM #	DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL COST
A	BASE BID				
1	Pre-Construction Video	LS	1	\$ -	\$ -
2	Demolition of Existing Lift Station	LS	1	\$ -	\$ -
3	Bypass Pumping	LS	1	\$ -	\$ -
4	Complete Lift Station	LS	1	\$ -	\$ -
5	Electrical (Includes Generator)	LS	1	\$ -	\$ -
6	Tie Into Existing Force Main	LS	1	\$ -	\$ -
7	DIP Fittings	TN	0.5	\$ -	\$ -
8	Installation of Decorative Wall	LS	1	\$ -	\$ -
9	Odor Control	LS	1	\$ -	\$ -
10	Permit Allowance	LS	1	\$ -	\$ -
11	As-Built Plans	LS	1	\$ -	\$ -
12	Restoration	LS	1	\$ -	\$ -
				TOTAL BASE BID:	\$ -
1	Confirm the number of calendar days to complete upon receipt of PO:				DAYS
2	Warranty for Labor:				YEARS
3	Warranty for Materials:				YEARS

AWARD: THIS BID WILL BE AWARDED TO THE LOWEST, RESPONSIVE, RESPONSIBLE BIDDER



CITY OF PORT ORANGE

PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5704
purchdiv@port-orange.org

ADDENDUM NO. #1

April 5, 2021

ITB #21-09 Herbert and Nova Master Lift Station Rehabilitation

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 8, 2021 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. CLARIFICATIONS

Per Specification 26 32 13 Engine Generators Section 2.1 the approved manufacturers for the generator in this project are Caterpillar: Engine Div. and MTU/Detroit Diesel.

Per Specification 33 09 00 Instrumentation and Controls for Utilities Section 1.01 E the PICS for this project is Sanders Company Inc.

Per Specification 33 01 30.83 Wetwell Lining Systems Section 3.02 A the lining manufacturer for this project is Raven Lining Systems.

B. CHANGES TO SPECIFICATIONS

Revise the first sentence of Specification 01 22 00 Unit Prices Item 2.07 DIP Fittings (Add or Delete) to state, "Payment shall be made at the contract unit price per ton for all ductile iron/cast iron fittings installed by the CONTRACTOR as directed by the Owner's Representative."

Page 249, Section 2.4, "Fuel Oil Storage", "Day Tank" Items B1 through B7 are now hereby removed from the solicitation.

C. QUESTIONS AND ANSWERS

Question 1: What is the Engineer's estimate for this project?

Answer: The Engineer's estimate is \$890,000.00.

Question 2: Will the City be conducting a site visit?

Answer: The City will not be conducting a site visit for this project. However, we have provided pictures of the project facility which are attached to this addendum.

Question 3: All electrical enclosures on the Riser Diagram #E-701 are specified as NEMA4X but the ATS is specified as NEMA3R per 2.2 K on Page 260. Can the City verify NEMA 3R as the correct ATS enclosure material?

Answer: Provide NEMA 4X.

Question 4: What source will the AcuPanel be monitoring from NOTE #7 on Riser Diagram #E-701?

Answer: The AcuPanel will monitor the utility source.

Question 5: Can battery charger specified be installed and mounted with the generator set?

Answer: This is acceptable.

Question 6: Are automatic dampeners, 2.8 B 2 on Page 253, a must for cold weather protection due as the generator would be fitted with engine heaters and located in coastal Florida?

Answer: This is not necessary due to the location of the project.

Question 7: Are we able to visit the wet well?

Answer: See response to question 2.

Question 8: If we are unable to visit the wet well, what is the inside currently lined with?

Answer: Wet well is lined with Agru HDPE liner.

Question 9: What are the dimensions of the wet well? I see one dimension as 12' but I do not see what it is the other way. Is this a square or rectangle wet well? I know the depth is 25'.

Answer: The dimensions of the wet well are as follows: 12' W x 14.5' L x 25' D.

Question 10: What is the dimension of the top slab of the lift station?

Answer: 14' W x 16.5' L.

Question 11: Is an outside disconnect required by the electric meter and if so, what is the size?

Answer: The automatic transfer switch is service entrance rated so a separated disconnect next to the meter should not be necessary.

Question 12: What does POC, CPT, CFT, PFT, Pressure XMTR, CLE, CLSH, PUT, and CRG, stand for on the blueprints (electric)?

Answer: POC, CPT, CFT PFT, CLE, CLSH, PUT and CRG are cabling naming conventions to help coordinate the riser diagrams with the plan views.

Question 13: Are the enclosures for the electric equipment required to be stainless steel or not? If so, 304 or 316?

Answer: Enclosures shall be white powder coated 316SS.

Question 14: Can the City provide a specification or list of acceptable manufactures/model for the sluice gates?

Answer: See revised Table of Contents and specification 40 05 59 Hydraulic Gates which is included as part of this addendum.

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HERBERT & NOVA ROAD LIFT STATION IMPROVEMENTS AND UPGRADES BID NO. 21-09**

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----------------	--------------

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01 32 16	Construction Progress Schedules
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DIVISION 4 - MASONRY

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04 20 00 Unit Masonry
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26 05 53 Identification for Electrical Systems
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26 32 13 Engine Generators
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DIVISION 31 – EARTHWORK

31 22 00 Site Grading
31 23 00 Excavation and Fill

31 23 19 Dewatering

DIVISION 32 – EXTERIOR IMPROVEMENTS

32 10 00 Paving

32 31 13 Chain Link Fences and Gates

32 92 00 Grassing, Mulching, and Sodding

32 92 23 Sodding

DIVISION 33 – UTILITIES

33 00 00 Utilities

33 01 00 Operation and Maintenance of Utilities

33 01 30.83 Wetwell Lining Systems

33 05 05.31 Hydrostatic Testing

33 09 00 Instrumentation and Controls for Utilities

33 31 00 Sewer Bypass Pumping

33 32 20 Collection System Submersible Pumps

DIVISION 40 – PROCESS INTERCONNECTIONS

40 05 23 Stainless Steel Process Pipe and Tubing

40 05 59 Hydraulic Gates

40 61 13 Process Instrumentation and Controls System General Provisions

44 31 31

DIVISION 44 – POLLUTION AND WASTE CONTROL EQUIPMENT

Odor Control Biotrickling Filter Equipment

END OF TABLE OF CONTENTS

REVISED SECTION 40 05 59
HYDRAULIC GATES

PART 1 - GENERAL

1.01 SCOPE OF WORK:

The work to be performed under this Section shall include furnishing all labor, materials, tools and equipment necessary to install and test all sluice gates, consisting of, but not limited to frames, discs, seals, stems, operators, floor stands, stem guides, anchorage, and all other appurtenances, in place and complete, as manufactured by Alfa Laval Ashbrook Simon-Hartley, Houston, Texas, or approved equal.

1.02 SUBMITTALS:

A. Materials and Shop Drawings:

1. Copies of all materials required to establish compliance with the specifications shall be submitted to the Engineer. Submittals shall include the following:
 - a. Certified shop and erection drawings and data regarding sluice gates.
 - b. Literature on drawings describing the equipment and showing all important details of construction and dimensions.

B. Operating Instructions: Operating and maintenance instructions for each type of sluice gate shall be furnished to the Engineer.

C. Installation: The manufacturer shall provide installation instructions. The installation and adjustment of gates, operators and all accessories shall be in full accordance with these instructions. The sluice gates shall be installed by the best practices and methods.

1.03 PRODUCT DELIVERY, STORAGE, AND HANDLING:

- A. All equipment shall be delivered in suitable packaging, cases, or crates and stored or placed in the appropriate manner. Each package shall have an identifying mark and a complete list showing contents.

1.04 APPLICABLE PUBLICATIONS:

The following publications listed below form a part of this Specification to the extent referenced. The publications are referred to in the text by basic designation only.

- A. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) PUBLICATIONS.
D635-81 Test Method for Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position D648-82 Test Method for Deflection Temperature of Plastics Under Flexural Load NASA CR-1457, "Manual for Structural Stability Analysis of Sandwiched Plates and Shells" et al.
- B. AMERICAN WATER WORKS ASSOCIATION (AWWA) C563 Standard for Composite Sluice Gates.

1.05 WARRANTY AND GUARANTEE:

The Manufacturer shall guarantee the sluice gates, when installed and operated as recommended by the Manufacturer with a documented maintenance program, trouble-free operation for a period of ten (10) years. If the Owner or Engineer is not completely satisfied with the performance of the product, the Manufacturer shall remedy the problem at no cost or refund the materials and installation cost upon the return of the equipment The Manufacturer shall guarantee the following:

- A. Leakage shall be no more than that allowed by the AWWA C563 Standard during the guarantee period.
- B. Door (disc) shall be free of sticking or binding as judged by the Engineer (move freely via operator provided) with no exercising required. Gate operators are to be warranted by the operator manufacturer.

1.06 OTHER:

- A. All gates shall be fully assembled in their frames except for operators, guides, stem-extension, and stem covers or concrete-mounted pedestals. Where shipping constraints require it, frame may be partially assembled such that the top may be easily mounted to the bottom containing the disc.
- B. Where square-to-circular or bell-lip conversion is required the Contractor shall provide a bell-end pipe insert of suitable diameter and water stop.

- C. P-Bulb or J-Bulb type seals attached to the Disc / mounted to the frame, or any seal that needs replacement in less than 20 years shall not be acceptable. No part of the seal shall protrude into the clear opening.
- D. All sluice gates shall be supplied by the same manufacturer, who shall be fully experienced, reputable and qualified in the manufacturing of the equipment furnished and who has been building said equipment for a minimum period of ten (10) years.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS:

Sluice gates shall be designed for the seating and unseating heads as listed in the gate schedule. Sluice gates shall exceed the standard of AWWA C563. Exceeding the conformance to AWWA C563 applies to discs and frames with a safety factor of five (5) with regard to tensile, compressive and shear strength and with the requirement that all gates will yield no more leakage than shown in Section 6.8 (AWWA) Field Leakage Test. Materials of construction shall be suitable for the environment in which the sluice gates shall be installed and operated.

- A. Frames – 316LSS with a 5/16" minimum metal thickness for all items. Frames are wall mounted against a 1" nominal grout base; no thimbles or flanges are needed or included. Gate shall be supplied in accordance with Table #11295.
- B. Slide (Disc): Shall be constructed with a reinforced rigid composite skin, having a minimum thickness of 1/8-inch on the outside. Slide (disc) shall have an internal matrix of carbon steel of suitable strength for the specified service. The total minimum slide thickness should not be less than 2". The slide (disc) outer surface skins shall be a homogeneous plastic material having extremely high tensile and impact strength, be nontoxic and shall be stabilized against ultraviolet light. The plastic material shall be an Aramid fiber from the KEVLAR family of fibers and shall have the following minimum properties and shall be designed to limit the deflection to a maximum of 1/1000 of the span under design head conditions based upon horizontal support members only. Manufacturer shall submit drawings and comprehensive design criteria to substantiate that the required deflection figure for each door has been achieved. Safety factors shall be calculated for the disc under maximum head, and shear at the disc/seal interface. No substitute of fiber type will be acceptable.

FRP, GRP, plastic coated steel or externally reinforced slide (disc) shall not be acceptable. All welds on the slide shall be continuously welded and no stitch welding to be allowed.

PROPERTIES TABLE

Tensile Strength	15,400
Young's Modulus	1,756,000 psi
Flexural Strength	28,000 psi
Flexural Modulus	1,497,000 psi
Compressive Strength	30,200 psi
Impact Strength	9.65 ft-lb/in
Water Absorption	0.09 %
Specific Gravity	1.72
Coefficient of Thermal Expansion	1.6×10^{-5} per C
Heat Distortion Point	80 degrees C ASTM D648
Low Temperature Impact Strength	93% @ -20 C
Notch Sensitivity	Not notch sensitive
Weathering Properties	Excellent
Fire Resistance	Class 1 Spread of Flame, Rating BS476: Part 1: 1953 self-extinguishing, ASTM D635 - 56R Organics, Alkaline, Ozone (2 to 3 PPM)
Chemical Resistance	

Rigid Polyurethane foam shall be used as filler between the steel grid reinforcing system and shall be a min. of 7 LB density/cu.ft.

- C. Seals: The sealing arrangement for the reinforced plastic sluice gates shall comprise of sealing faces and side guides constructed of ultra high molecular weight polyolefin having an extremely low coefficient of friction and a backing constructed of highly resilient expanded neoprene. Guides and seating of the gate shall be easily adjustable (min. 5/8-inch). All moving contact surfaces shall be compatible to each other there by minimizing sticking / jamming and making the operation easy. Leakage rates shall be one-half (½) that allowed by AWWA C563.

2.03 FASTENERS:

- A. Shall be 316 stainless steel. All anchor bolts, assembly bolts, screws, nuts, etc. shall be of ample section to safely withstand the forces created by operation of the gate while subjected to the heads specified.

2.04 STEMS:

- A. All stems shall be the rising types. The entire stem, including extension stem, shall be Type 316 Stainless Steel solid bar. The sections of extension stems shall be joined

together by solid couplings, threaded and keyed to the stems. All couplings of the same size shall be interchangeable. Stems shall be furnished with adjustable, stem guides, spaced as necessary to maintain a slenderness ratio L/R of less than 200. Stems shall be of ample cross section to prevent distortion and shall have stub acme threads. Stems shall be designed to withstand tensile and compressive loads that occur under maximum operating conditions. Design for compressive loading shall meet AISC code where $K=1$ with a minimum safety Factor of 2 to 1. These requirements exceed AWWA standards. Stems shall be cold rolled or cut with a double start stub acme thread and a finish of 32 microns or less.

- B. Stems shall be fixed to the disc by a threaded and keyed assembly into a lifting nut attached to the disc in a lifting bracket, which is bolted to the disc. The bolts securing the bracket shall be in tension and not shear. Bolts in shear will not be acceptable as they will bind against the outer material causing stress.

PART 3 – EXECUTION

3.01 INSTALLATION

Installation of all gates and guides shall be done by the Contractor in a manner acceptable to the Manufacturer and Owner. It shall be the responsibility of the Contractor to handle, store, and install the equipment specified in this Section in strict accordance with the Manufacturer's drawings and recommendations. Frames and guides shall be installed in a true vertical plane with 90-degree corners.

3.02 INSPECTION AND TESTING

- A. Furnish the services of a factory representative for one (1) day who has complete knowledge of proper operation and maintenance to inspect the final installation and supervise a test run of the equipment.
- B. Maximum gate leakage shall be as defined in the General Design Criteria of this Specification, herein. If gates, operators, and appurtenances do not meet specified requirements, corrective measures shall be taken by the Contractor, or the equipment shall be removed and replaced with equipment that satisfies the conditions specified.

TABLE #40 05 59-1

SLUICE GATE SCHEDULE							
I.D.	Description	Width (In.)	Height (In.)	Max Head (Ft.)	Mounting / Opening	Frame Material/Gate Material	Operator Type/Stand
SG-1	WET WELL	24" (Existing 24" Diameter Pipe)	24" (Existing 24" Diameter Pipe)	20'	Channel/ upward	316 S.S./ 316 S.S. & Formulated Composite	14" Handwheel
SG-2	WET WELL	8" (Existing 8" Diameter Pipe)	8" (Existing 8" Diameter Pipe)	20'	Channel/ upward	316 S.S./ 316 S.S. & Formulated Composite	14" Handwheel

END OF SECTION

Question 15: What is the intent of the materials to be used for the two, double swing gates? Plan sheet C-101 calls for double swing entry gate and the specification 32-31-13 calls for chain link fence gates. However, the elevation shown on C-103 indicates these gates to be HD 12" aluminum frame swing gates with louvered panels per spec. Please clarify the materials and specification of these gates to be included in the bid.

Answer: Gates shall be Heavy Duty Aluminum Frame swing gates with louvered panels. Gates shall be manufactured by Ideal Aluminum or engineer approved equal and have the following:

- 2" x 3" x .125" Gate Frame
- 2 ¼" x 1.40" Louver Top & Bot Member
- 2" x 0.375" Louver Blades
- 2" x 3" x .125" Uprights
- Double Drive Gate Latch
- 2 ¼" x 1 ¼" Louver Side Frame
- 316SS 180° Hinge
- 2" x 3" x .125" Bottom Member

Question 16: What are all materials the City will provide along with the submersible pumps? Will the base elbows, guiderails, hatches and other accessories that are often included with a Flygt submersible pump package be provided by the owner, or is the contractor to purchase and install these materials?

Answer: City will provide the pump only. Contractor to purchase and install all other necessary accessories.

Question 17: What is the wall thickness of the lift station?

Answer: The wet well wall thickness is 1'.

Question 18: What are the specs of the 20" high tie beam?

Answer: The precast top slab with perimeter beams shall be nominally 8" thick. Contractor shall provide signed and sealed shop drawings for the top slab and perimeter beam. Engineered drawings shall be signed and sealed by a Florida registered professional engineer.

Question 19: What is the placement of the rebar in the wet well top slab?

Answer: See response to question 18.

Question 20: Can you please provide clarification on the service tie in?

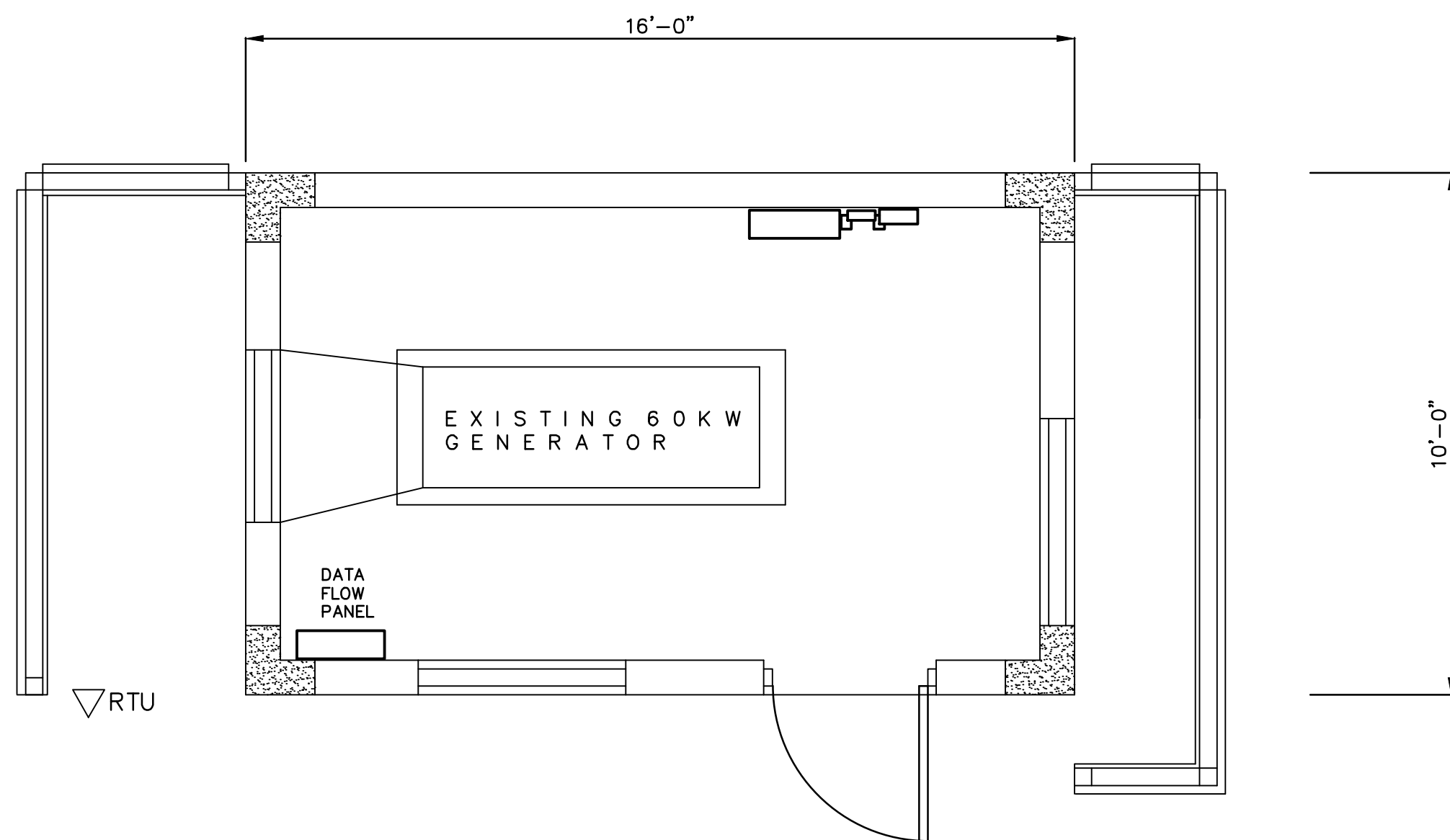
Answer: See Detail 7 Sheet C-502.

Question 21: Do you have as-builts for existing building to be demolished?

Answer: See architectural record drawing included with this addendum.

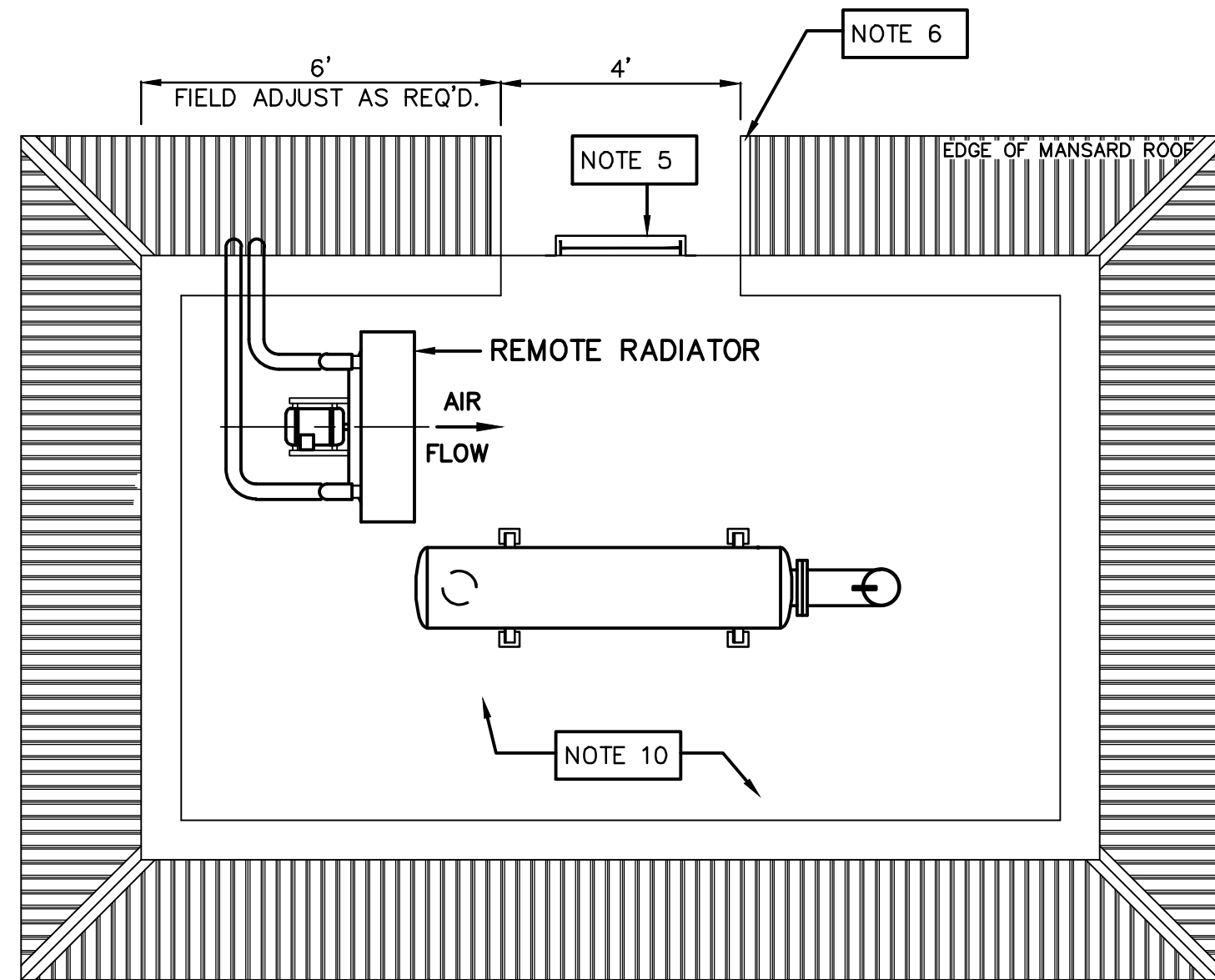
Question 22: Are there as-builts on the existing generating and generator pad to be removed?

Answer: See response to question 21.

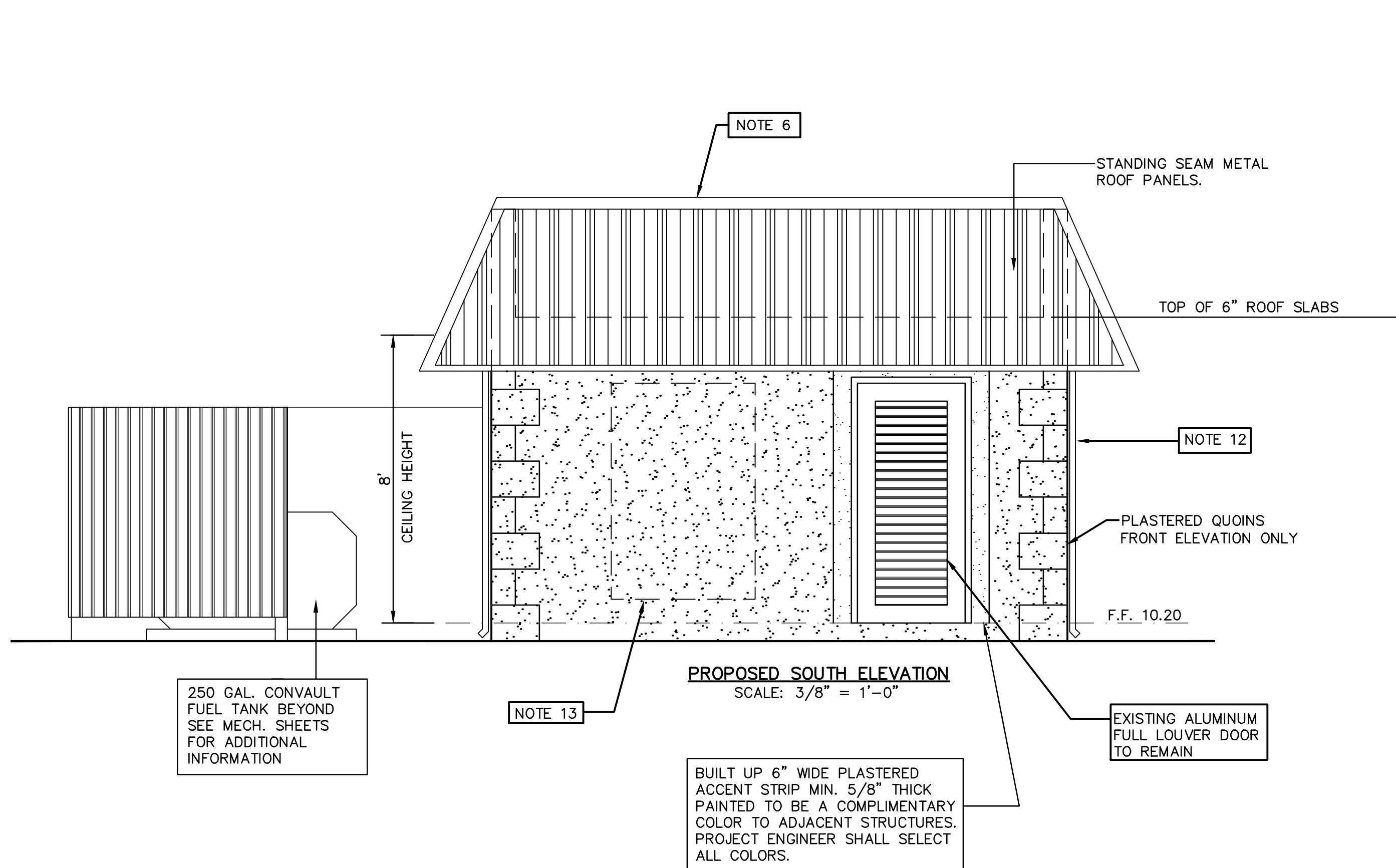


EXISTING FLOOR PLAN
SCALE: 3/8" = 1'-0"

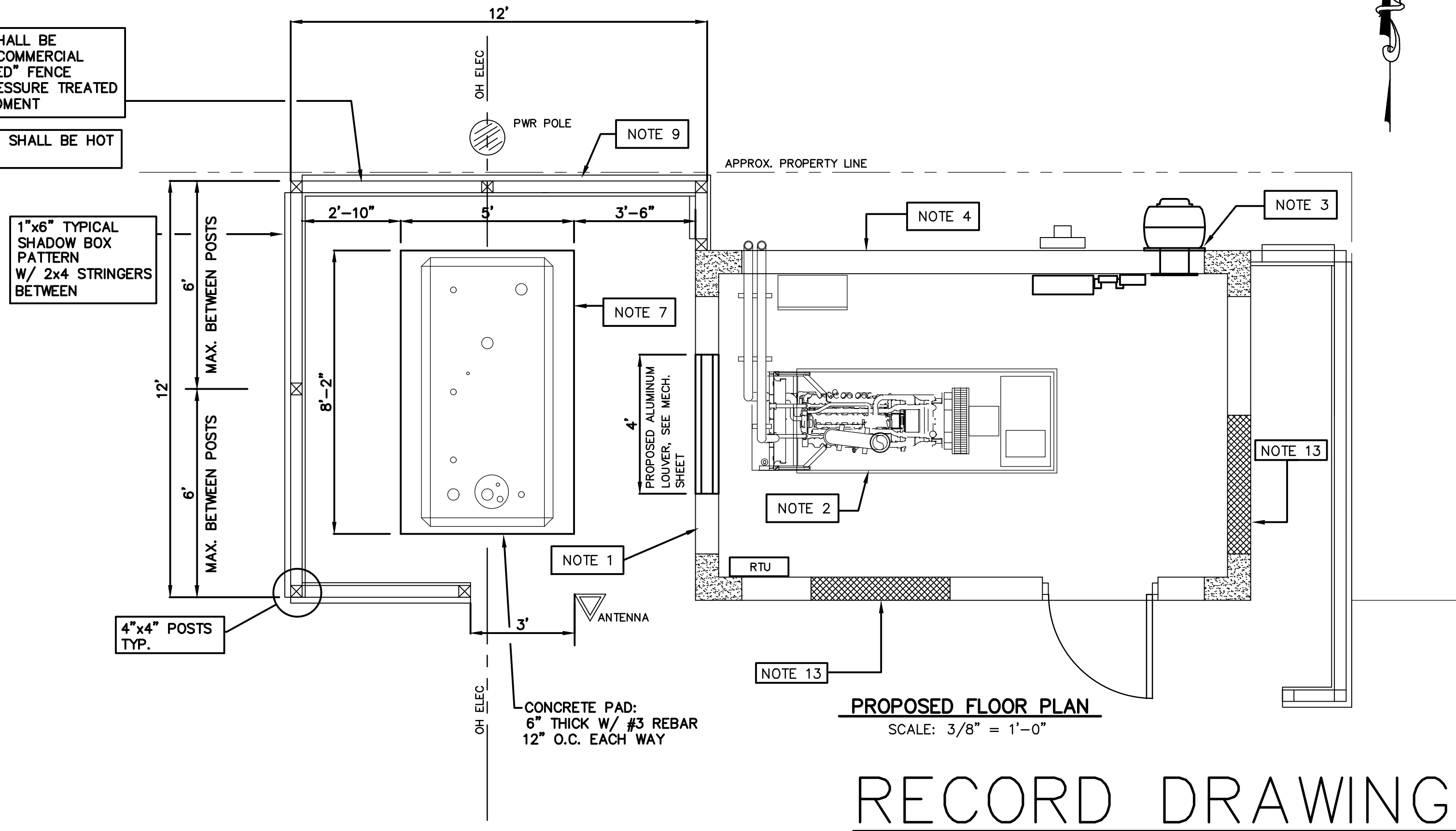
- GENERAL PROJECT NOTES:**
1. REMOVE EXISTING 8" CMU WALL AS REQUIRED TO PROVIDE ACCESS FOR PROPOSED EMERGENCY GENERATOR SWITCH OUT AND GENERATOR PAD MODIFICATIONS. RECONSTRUCT WALL AS REQUIRED FOR THE INSTALLATION OF A NEW 4'-0"x6'-0" ALUMINUM LOUVER.
 2. RECONSTRUCT CONCRETE GENERATOR PAD AS REQUIRED. SEE MECHANICAL SHEETS FOR GENERATOR DIMENSIONAL INFORMATION.
 3. PROVIDE "CUT-IN" OF NEW OPENING FOR INSTALLATION OF PROPOSED EXHAUST FAN. PROVIDE ROUGH OPENING AS PER MANUFACTURERS RECOMMENDATIONS.
 4. ALL EXISTING EXTERIOR WALL SURFACES TO RECEIVE EXPANDED METAL LATH AND (2) COATS PORTLAND CEMENT STUCCO. TEXTURE SHALL BE SMOOTH SAND FINISH. PAINT IN ACCORD WITH PROJECT SPECIFICATIONS. PROVIDE ADEQUATE PROTECTION TO EXISTING DOORS, LOUVERS, ETC. FROM SPLATTER, OVERSPRAY, ETC.
 5. FURNISH AND INSTALL ALUMINUM ACCESS LADDER SIMILAR TO OKEEFE'S, INC. NUMBER 501 HEAVY DUTY WITH SECURITY DOOR AND SAFETY POST. OKEEFE'S, INC. 1-800-227-3305.
 6. EXISTING MANSARD ROOF SHALL BE MODIFIED TO PROVIDE ACCESS TO ROOF TOP AS INDICATED. CONTRACTOR SHALL STRIP EXISTING SHINGLES TO EXPOSE DECKING. CAREFULLY REMOVE (1) ROOF TRUSS AND BRACE EXISTING TRUSSES AS REQUIRED. REFRAME AND INSTALL DECKING, FLASH AND COUNTERFLASH TO PROVIDE WEATHERPROOF AND WATERTIGHT CONSTRUCTION. DRY IN ENTIRELY WITH (2) LAYERS 15# FELT AND INSTALL NEW ALUMINUM STANDING SEAM ROOF PANELS. COLOR SHALL BE BLUE AS SELECTED FROM MANUFACTURER'S STANDARD COLOR CHART. ALL EXPOSED FLASHING, TRIM, FASCIA, ETC. TO MATCH. INSTALL NEW VENTED ALUMINUM SOFFIT MATERIAL, COLOR TO BE WHITE.
 7. CONTRACTOR SHALL CONSTRUCT REINFORCED CONCRETE PAD FOR CONCRETE FUEL TANK. SEE MECHANICAL PLAN FOR SPECIFICATIONS.
 8. EXISTING FULL LOUVER ALUMINUM DOOR TO REMAIN. INSPECT ALL HARDWARE FOR WORN OR DAMAGED PARTS, REPLACE OR REPAIR AS REQUIRED. CLEAN AND LUBRICATE ALL HINGES AND LOCK SETS UPON COMPLETION OF JOB.
 9. CONSTRUCT APPROX. 36 LIN. FT. OF P.T. SHADOW BOX FENCE. HEIGHT TO MATCH EXISTING. CONSTRUCT AS PER NOTES BELOW.
 10. SPUD BACK EXISTING B.U.R. AS REQUIRED FOR INSTALLATION OF NEW ROOFTOP MOUNTED EQUIPMENT AND ACCESSORIES. CONTRACTOR SHALL REPLACE ANY DAMAGED FLASHING, ETC. AND REROOF WITH NEW HOT-MOPPED B.U.R. SYSTEM.
 11. FURNISH AND INSTALL REMOTE GENERATOR RADIATOR AND SILENCER AS PER MECHANICAL PLANS. ALL ROOF PENETRATIONS SHALL BE FLASHED AND SLEEVED. ALL ROOF MOUNTED EQUIPMENT SHALL BE MOUNTED ON PREFABRICATED EQUIPMENT MOUNTING RAILS 18 GA. GALVANIZED STEEL SIMILAR TO MODEL NO. ER-2A AS MANUFACTURED BY ROOF PRODUCTS AND SYSTEMS CORPORATION. 484 N. THOMAS DRIVE, BENSVILLE, IL. 60106. PH. 1-800-624-8642.
 12. REMOVE AND REPLACE ALL DOWNSPOUTS AND THRU-ROOF DRAINAGE COMPONENTS.
 13. REMOVE EXISTING LOUVER. FILL IN OPENING WITH 8" CMU's AND STUCCO PER NOTE 4. INTERIOR BLOCK JOINTS SHALL BE STRUCK TO MATCH EXISTING AND ENTIRE BUILDING INTERIOR SHALL BE PAINTED.



PROPOSED ROOF PLAN
SCALE: 3/8" = 1'-0"



PROPOSED SOUTH ELEVATION
SCALE: 3/8" = 1'-0"



PROPOSED FLOOR PLAN
SCALE: 3/8" = 1'-0"

RECORD DRAWINGS

DATED FEBRUARY 06,2002

NOTE: THIS SHEET SUPERSEDED BY THE DEVELOPMENT OF SHEET 8A. THIS SHEET EFFECTIVELY DOES THE FOLLOWING: RELOCATES GENERATOR TO THE EXTERIOR OF THE BUILDING INTO A WEATHERPROOF ENCLOSURE. REFER TO SHEET 8A FOR ADDITIONAL INFORMATION

QUENTIN L. HAMPTON ASSOCIATES, INC.
CONSULTING ENGINEERS

CITY OF
PORT ORANGE
VOLUSIA COUNTY, FLORIDA

HERBERT & NOVA PUMP STATION
MODIFICATIONS

PUMP STATION
ARCHITECTURAL
MODIFICATIONS

DESIGNED	RWF	DATE		SCALE	SHEET NO.
DRAWN	DLB	DATE	9/99	AS SHOWN	8
CHECKED		DATE		JOB NO.	OF 10
APPROVED		DATE			

P.O. DRAWER 290247 PORT ORANGE, FLORIDA 32129-0247 904 761-6810

NO	BY	REVISIONS	DATE

Question 23: Please confirm the discharge header from the flow meter, downstream, is to be DIP? If the FLxPE header pipe is SS most manufacturers (EBAA) will not warrant a mega flange connection to SS pipe or SS to a MJ connection underground.

Answer:

Refer to solicitation page 547 (Drawing C101) and page 548 (Drawing C-102)

1. Legend Item 'T' shall be epoxy coated DIP in lieu of 316SS.
2. Legend Item 'F' shall be replaced with Items 'F', 'F-1' and 'F-2', further described as follows:
 - a. Item 'F' shall be a 12" FL x FL 316 SS spool piece.
 - b. Items F-1 & F-2 shall be a 12" FL x PE spool pieces with a 316 SS dresser coupling joining both. 316 SS all-thread shall provide restraint from F-1 back to the flow meter.

In all other respects, except as specifically stated herein, the subject ITB #21-09 Herbertand Nova Master Lift Station Rehabilitation remains unchanged.

END OF ADDENDUM NO. #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 NO. # 2

April 8, 2021

ITB #21-09 Herbert and Nova Master Lift Station Rehabilitation

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 8, 2021 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. New Bid Opening Date: Bids will now be accepted in the City Clerk's Office, Port Orange City Hall, 1000 City Center Circle, Port Orange, Florida 32129 until **2:30 P.M. on April 15, 2021.**

B. CLARIFICATIONS:

1. Specification Section 33 01 30.83 Wetwell Lining Systems.

1.02 SCOPE OF WORK

A. The major elements of the proposed project work are summarized as follows: furnish all labor, materials, and equipment necessary to rehabilitate the interior surface areas of an existing sewer lift station structure using a structural composite liner system. The composite liner system shall consist of both a high strength structural cementitious build-up layer and a corrosion resistant 100 percent (100%) solids epoxy coating system. The work includes mobilization, bypass pumping (as Additional Pricing), **removal of any existing deteriorated coating**, preparation of lift station structure to be lined, furnishing, and applying the specified cementitious and epoxy coating materials to the interior surface areas of the lift station, applicable QA/QC testing, clean-up, and demobilization.

C. CHANGES TO SPECIFICATIONS:

None

D. QUESTIONS AND ANSWERS:

Question 1: Will you be accepting bids from Integrators other than Sanders?

Answer: No, Saunders is the single pre-qualified system integrator for this project per Section 33 09 00 Instrumentation and Controls for Utilities.

Question 2: Regarding Addendum No.1, Question & Answer 13:

"Are the enclosures for the electric equipment required to be stainless steel or not? If so, 304 or 316?"

Answer: Enclosures shall be white powder coated 316SS".

Does this ATS and AccuPanel need to be powder coated white?

Answer: Yes, the ATS & AccuPanel need to be powder coated white also.

[Remainder of page left intentionally blank]

In all other respects, except as specifically stated herein, the subject **ITB #21-09 Herbert and Nova Master Lift Station Rehabilitation** remains unchanged.

END OF ADDENDUM NO. #2

Joseph Castro

Buyer

jcastro@port-orange.org



CITY OF PORT ORANGE

PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5704
purchdiv@port-orange.org

ADDENDUM NO. #3

April 13, 2021

ITB #21-09 Herbert and Nova Master Lift Station Rehabilitation

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 8, 2021 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. NEW BID OPENING DATE

Bids will now be accepted in the City Clerk's Office, Port Orange City Hall, 1000 City Center Circle, Port Orange, Florida 32129 until **2:30 P.M. on April 29, 2021.**

B. CLARIFICATIONS

A fourth addendum will be posted at a date to be determined for additional information relating to the wetwell lining.

C. CHANGES TO SPECIFICATIONS

N/A

D. QUESTIONS AND ANSWERS

N/A

Michael Hall
Purchasing Agent
mhall@port-orange.org

In all other respects, except as specifically stated herein, the subject ITB #21-09 Herbert and Nova Master Lift Station Rehabilitation remains unchanged.

END OF ADDENDUM NO. #3



CITY OF PORT ORANGE

PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5704
purchdiv@port-orange.org

ADDENDUM NO. #4

April 15, 2021

ITB #21-09 Herbert and Nova Master Lift Station Rehabilitation

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 8, 2021 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. CLARIFICATIONS

Sheet C-102 Revisions:

1. Existing Note 4 shall be revised as follows, *“Repair existing Agruliner at existing 8” influent pipe on east wall and (3) 2” conduit penetrations on west wall. Repair shall be performed with the existing liner manufacturer’s recommendations.”*
2. Existing Note 4 shall retain the requirement to line the upstream manhole with a Raven lining system.
3. The existing top slab shall be replaced, per the existing plan and notes. The top slab shall have an integral Agruliner constructed with the top slab by the pre-cast manufacturer. The seam between the new top slab and existing wall liner shall be welded and sealed in accordance with the manufacturer’s recommendations.

B. CHANGES TO SPECIFICATIONS

N/A

C. QUESTIONS AND ANSWERS

N/A

Michael Hall
Purchasing Agent
mhall@port-orange.org

In all other respects, except as specifically stated herein, the subject ITB #21-09 Herbert and Nova Master Lift Station Rehabilitation remains unchanged.

END OF ADDENDUM NO. #4

RESOLUTION NO. 21-7

*Council
Approved
2/14/2021*

A RESOLUTION OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA, APPROPRIATING OPERATING FUNDS FOR THE FISCAL YEAR 2021 BUDGET; TO DESIGNATE FUND BALANCE IN THE AMOUNT \$300,000 IN THE WATER AND SEWER FUND (401) AND APPROPRIATE TO CAPITAL OUTLAY – WASTEWATER TREATMENT PROGRAM PROJECT SLS004 AND; SETTING FORTH REVENUES AND EXPENDITURES; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, The City Council desires to designate and appropriate fund balance in the amount of \$300,000 in the Water and Sewer Fund (401), to Capital Outlay, Wastewater Treatment Program, to provide additional funding for Herbert and Nova Master Lift Station Improvements and Upgrade Project SLS004;

and

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA:

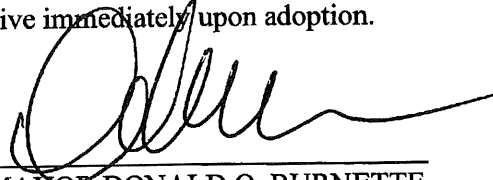
Section 1. The funds for the City operating items are hereby appropriated as set forth in Composite Exhibit A, attached hereto, which reflects revenues and corresponding expenditures for the designated expenditures.

Section 2. The Budget item adopted in the preceding section shall govern the expenditures relating to such operations for the City during the current fiscal year effective October 1, 2020 through September 30, 2021.

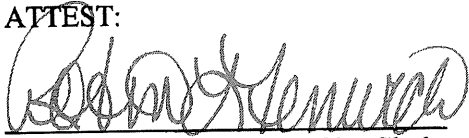
Section 3. Supplemental appropriations, reductions of appropriations, emergency appropriations, and interdepartmental transfers of appropriations may be effected by the City Council and the City Manager as deemed necessary in strict

compliance with the procedures specified in Chapter 2, Article VI, Division 3, Code of Ordinances, City of Port Orange, Florida.

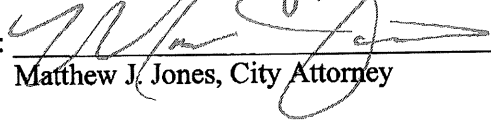
Section 4. This resolution shall become effective immediately upon adoption.

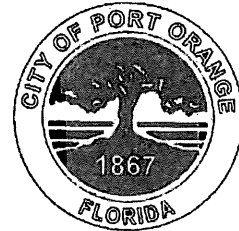

MAYOR DONALD O. BURNETTE

ATTEST:


Robin L. Fenwick, MMC City Clerk

Adopted on the 11th day of February, 2021.

Reviewed and Approved: 
Matthew J. Jones, City Attorney



Composite Exhibit A

Resolution No. 21-7

FY2021 Water and Sewer Fund 401
Prepared: February 2, 2021
Finance: Finance Staff

Budget Increase /
(Decrease)

Revenues:

Appropriated Equity

300,000

Total Revenues: \$ 300,000

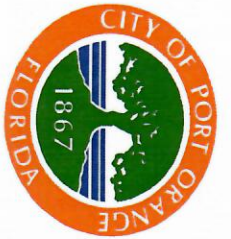
Expenditures:

Capital Outlay - Project SLS004

300,000

Total Expenditures: \$ 300,000

To budget for additional funding to cover ITB 21-9) for Project SLS004 - Herbert and Nova Master Lift Station



Public Works & Utilities Department
Budget Transfer Request Form

BT-000709

Requester: Julia Wiggins, Public Works & Utilities Business Manager
Date: May 11, 2021

From:

Ledger / Name	Fund & Name	Cost Center	Program	Spend Category	Project	Amount
600000 – Capital Outlay	403 – W/S R&R	Water and Sewer	Wastewater Treatment	Sewage – Capital	SLS004 – Herbert & Nova Lift Station	\$200,000

To:

Ledger / Name	Fund & Name	Cost Center	Program	Spend Category	Project	Amount
600000 – Capital Outlay	403 – W/S R&R	Water and Sewer	Wastewater Treatment	Lift Station	SLS004 – Lift Station R&R	\$200,000

Reason: FY21 – Required to correct the spend category for Project SLS004 – Herbert & Nova Master Lift Station

CC: Lynn Stevens, Director
Steve Parnell, Deputy Director of Public Utilities
Junos Reed, Construction & Engineering Manager



City of Port Orange Public Works & Utilities Department

TO: Wayne Clark, City Manager
Linda Truitt, Assistant Finance Director

THRU: Lynn Stevens, Public Works & Utilities Director
Steve Parnell, Deputy Director of Public Utilities
Junos Reed, Construction and Engineering Manager

FROM: Julia Wiggins, Public Works & Utilities Business Manager

DATE: May 11, 2021

SUBJECT: Request to Correct Spend Category for Project SLS004 – Herbert & Nova Master Lift Station Rehab (ITB21-09)

REQUEST:

The Public Works & Utilities Department is requesting the City Manager to approve Budget Amendment Number BT-000769. This amendment is necessary to correct Project SLS004 – Herbert and Nova Master Lift Station Rehab. The budget amendment will move \$200,000 from 403 Fund- Sewage-Capital Spend Category to the 403 fund - Lift Station Spend Category.

PURPOSE:

The purpose of this request is to properly fund expenses for the Herbert and Nova Master Lift Station - Project SLS004.

CONSIDERATION:

Upon reviewing Project SLS004 – Herbert and Nova Master Lift Station Rehab funding, it was discovered that the \$200,000 of the 403 budget was placed under the incorrect spend category. Funds will need to be moved from the Sewage-Capital spend category and into the Lift Station spend Category.

All funds remain in the 403 fund, Water and Sewer R&R, under the Wastewater Treatment program. This request is only to change the spend categories.

According to the email from the Finance Director on April 8, 2021, the City Manager or his/her designee has the authority to approve our request; per City of Port Orange Code of Ordinance Sec 2-299.

BUDGET AMENDMENT:

MOVE FROM:

Fund: 403
Name: Water and Sewer R&R
Cost Center: Water and Sewer
Program: Wastewater Treatment
Spend Category: Sewage - Capital
Additional Work tag: SLS004
Amount: \$200,000

MOVE TO:

Fund: 403
Name: Water and Sewer R&R
Cost Center: Water and Sewer
Program: Wastewater Treatment
Spend Category: Lift Station
Additional Work tag: SLS004
Amount: \$200,000

RECOMMENDATION:

The Public Works & Utilities Department recommending the City Manager to approve Budget Amendment Number BT-000769. This amendment is necessary to correct Project SLS004 – Herbert and Nova Master Lift Station Rehab. The budget amendment will move \$200,000 from 403 Fund- Sewage-Capital Spend Category to the 403 fund - Lift Station Spend Category.

ANTICIPATED SCHEDULE:

a.) Prior to May 31, 2021

ATTACHMENTS:

- a.) Workday reports for SLS004
- b.) Business Manager Project Recon for SLS004

Balance as of May 12, 2021
Summary Project Balances - SIS004 Herbert and Nova Master Lift Station

OBLIGATIONS

FY21 ACTIVITY

FUND	SPEND CATEGORY	UNENCUMBERED BALANCE	ENCUMBRANCES	FY20 CARRYFORWARD		SPEND CATEGORY	BUDGET	YTD ACTUALS	COMMITMENTS	OBLIGATIONS
401	Sewage - Capital	\$ 542,965.00	\$ -	\$ 542,965.00	\$ -	Sewage - Capital	\$ -	\$ -	\$ -	\$ -
	Water - Capital	\$ -	\$ -	\$ -	\$ -	Water - Capital	\$ -	\$ -	\$ -	\$ -
	Capitalized Software	\$ -	\$ -	\$ -	\$ -	Capitalized Software	\$ -	\$ -	\$ -	\$ -
	Equipment - Capital	\$ -	\$ 2,055,941.42	\$ 2,055,941.42	\$ -	Equipment - Capital	\$ -	\$ -	\$ -	\$ -
	Lift Stations	\$ (85,723.00)	\$ -	\$ (85,723.00)	\$ -	Lift Stations	\$ 757,243.00	\$ 5,016.00	\$ -	\$ 22,634.00
	TOTAL FUND	\$ 457,242.00	\$ 2,055,941.42	\$ 2,513,183.42	\$ -	TOTAL FUND	\$ 757,243.00	\$ 5,016.00	\$ -	\$ 22,634.00
403	Sewage - Capital	\$ 200,000.00	\$ -	\$ 200,000.00	\$ -	Sewage - Capital	\$ 200,000.00	\$ -	\$ -	\$ -
	Water - Capital	\$ -	\$ -	\$ -	\$ -	Water - Capital	\$ -	\$ -	\$ -	\$ -
	Capitalized Software	\$ -	\$ -	\$ -	\$ -	Capitalized Software	\$ -	\$ -	\$ -	\$ -
	Equipment - Capital	\$ -	\$ -	\$ -	\$ -	Equipment - Capital	\$ -	\$ -	\$ -	\$ -
	Lift Stations	\$ -	\$ -	\$ -	\$ -	Lift Stations	\$ -	\$ -	\$ -	\$ -
	TOTAL FUND	\$ 200,000.00	\$ -	\$ 200,000.00	\$ -	TOTAL FUND	\$ 200,000.00	\$ -	\$ -	\$ -
TOTAL PROJECT		\$ 657,242.00	\$ 2,055,941.42	\$ 2,713,183.42	\$ -	TOTAL PROJECT	\$ 957,243.00	\$ 5,016.00	\$ -	\$ 22,634.00

Detail of Open Obligations / Encumbrances - As of 5/11/2021

PO#	Vendor Name	Remaining Balance	Spend Category	Spend Category	Spend Category		
PO-253	Mead and Hunt	\$ 30,434.71	Sewage - Capital	-	\$ 30,434.71	-	
	US Water Services	\$ 997,536.00	-	-	\$ 997,536.00	-	
	Pending	\$ -	-	-	\$ -	-	
		\$ -	-	-	\$ -	-	
		\$ -	-	-	\$ -	-	
		\$ -	-	-	\$ -	-	
		\$ -	-	-	\$ -	-	
		\$ -	-	-	\$ -	-	
		\$ -	-	-	\$ -	-	
		\$ -	-	-	\$ -	-	
		\$ 1,027,970.71	\$	-	\$ 1,027,970.71	\$	2,055,941.42

5/13/2021 - Project is in balance with

ITB 21-09 has a budget of \$929,593. T

\$67,943.00 Short.

1.) bt-000775 has been processed to n

2.) Pending BT to move \$125,000 out

the funding requirement. This will als

Note:
5/11/2021 - Project is in balance with
ITB 21-09 has a budget of \$929,593. TI
\$67,943.00 Short.
1.) bt-000775 has been processed to m
2.) Pending BT to move \$125,000 out o
the funding requirement. This will als



Public Works & Utilities Department
Budget Transfer Request Form

BT-000776

Requester: Julia Wiggins, Public Works & Utilities Business Manager
Date: May 12, 2021

From:

Ledger / Name	Fund & Name	Cost Center	Program	Spend Category	Project	Amount
600000 – Capital Outlay	403 – W/S R&R	Water and Sewer	Wastewater Treatment	Lift Station	SLS002 – Lift Station R&R	\$125,000

To:

Ledger / Name	Fund & Name	Cost Center	Program	Spend Category	Project	Amount
600000 – Capital Outlay	403 – W/S R&R	Water and Sewer	Wastewater Treatment	Lift Station	SLS004 – Lift Station R&R	\$125,000

Reason: FY21 – Required to provide additional funding for ITB 21-09 Herbert and Nova Master Lift Station, see attached justification memo.

CC: Lynn Stevens, Director
Steve Parnell, Deputy Director of Public Utilities
Junos Reed, Construction & Engineering Manager



City of Port Orange Public Works & Utilities Department

TO: Wayne Clark, City Manager
Linda Truitt, Assistant Finance Director

THRU: Lynn Stevens, Public Works & Utilities Director
Steve Parnell, Deputy Director of Public Utilities
Junos Reed, Construction and Engineering Manager

FROM: Julia Wiggins, Public Works & Utilities Business Manager

DATE: May 11, 2021

SUBJECT: Request to Provide Additional Funding for Project SLS004 – Herbert and Nova Master Lift Station (ITB 21-09)

REQUEST:

The Public Works & Utilities Department is requesting the City Manager to approve moving \$125,000 from Project SLS002 – Lift Station R&R to Project SLS004 - Herbert & Nova Master Lift Station to complete the funding requirement of ITB 21 -09 that is set to be approved by Council on June 15, 2021.

PURPOSE:

The purpose of this request properly fund the Herbert and Nova Master Lift Station Proj SLS004.

CONSIDERATION:

On April 29, 2021, the Purchasing Division received six (6) bids for ITB 21-09 Herbert and Nova Master Lift Station Rehabilitation. It was determined to award the contract to US Water Services Corporation, in the amount of \$997,536. On June 15, 2021, Council will be asked to approve the Intent to Award.

According to the Bid Tab, this project came in over budget by \$67,943. The Director is requesting to move funds out of Project SLS002 – Lift Station Rehab to SLS004 – Herbert & Nova Master Lift Station Reb. The amount of this request is \$125,000. This will cover the shortage and provide \$50,000 to be allocated for unforeseen change orders. Any unused funds will be moved to fund balance once the project has been completed and all invoices have been processed.

According to the email from the Finance Director on April 8, 2021, the City Manager or his/her designee has the authority to approve our request; per City of Port Orange Code of Ordinance Sec 2-299.

BUDGET AMENDMENT:

MOVE \$125,000 OUT OF:

Fund: 403
Name: Water and Sewer R&R
Cost Center: Water and Sewer
Program: Wastewater Treatment
Spend Category: Lift Station
Additional Work tag: SLS002
Amount: \$125,000

MOVE \$125,000 TO:

Fund: 403
Name: Water and Sewer R&R
Cost Center: Water and Sewer
Program: Wastewater Treatment
Spend Category: Lift Station
Additional Work tag: SLS004
Amount: \$125,000

RECOMMENDATION:

The Public Works & Utilities Department recommending the City Manager to approve moving \$125,000 from Project SLS002 – Lift Station R&R to Project SLS004 - Herbert & Nova Master Lift Station to complete the funding requirement of ITB 21 -09 that is set to be approved by Council on June 15, 2021.

ANTICIPATED SCHEDULE:

- a.) Prior to the June 15, 2021 Council Meeting

ATTACHMENTS:

- a.) Intent to Award Letter
- b.) ITB 21-05 Bid Tab
- c.) Workday reports for SLS004
- d.) Business Manager Project Recon for SLS004

Summary Project Balances - SLS002 Lift Station R&R
Bal as of May 11, 2021

Bal as of May 11, 2021					FY21 ACTIVITY										PROJECT BUDGET	
FUND	SPEND CATEGORY	UNENCUMBERED BALANCE	OBLIGATIONS			SPEND CATEGORY	BUDGET	Pending Budget Amentments	YTD ACTUALS	COMMITMENTS	TOTAL ACTUALS &				REMAINING	
			ENCUMBRANCES	FY20 CARRYFORWARD							OBLIGATIONS	OBLIGATIONS	WD BALANCE			
403	Sewage - Capital	\$ -	\$ -	\$ -		Sewage - Capital	\$ -		\$ -	\$ -	\$ -	-	-	-	\$ -	
	Water - Capital	\$ -	\$ -	\$ -		Water - Capital	\$ -		\$ -	\$ -	\$ -	-	-	-	\$ -	
	Capitalized Software	\$ -	\$ -	\$ -		Capitalized Software	\$ -		\$ -	\$ -	\$ -	-	-	-	\$ -	
	Equipment - Capital	\$ -	\$ -	\$ -		Equipment - Capital	\$ -		\$ -	\$ -	\$ -	-	-	-	\$ -	
	Lift Stations	\$ -	\$ 35,739.65	\$ 35,739.65		Lift Stations	\$ 1,050,397.00	\$ (125,000.00)	\$ 41,703.00	\$ 1,800.00	\$ 98,337.00	141,840.00	783,557.00	\$ 783,557.00		
	TOTAL FUND	\$ -	\$ 35,739.65	\$ 35,739.65		TOTAL FUND	\$ 1,050,397.00	\$ (125,000.00)	41,703.00	1,800.00	98,337.00	141,840.00	783,557.00	\$ 783,557.00		
TOTAL PROJECT		\$ -	\$ 35,739.65	\$ 35,739.65		TOTAL PROJECT	\$ 1,050,397.00	\$ (125,000.00)	\$ 41,703.00	\$ 1,800.00	\$ 98,337.00	\$ 141,840.00	\$ 783,557.00	\$ 783,557.00		

Detail of Open Obligations / Encumbrances - included in Carryforward
As of 5/11/2021

PO#	Vendor Name	Remaining Balance	Spend Category			Spend Category	
			Sewage - Capital	Water - Capital		Equipment - Capital	Lift Stations
PO-580	Kimley-Horn	\$ 13,908.39	\$ -	\$ -		\$ 13,908.39	
PO-1250	APM Construction	\$ 104,300.00	\$ -	\$ -		\$ 104,300.00	
		\$ -	\$ -	\$ -		\$ -	
		\$ -	\$ -	\$ -		\$ -	
		\$ -	\$ -	\$ -		\$ -	
		\$ -	\$ -	\$ -		\$ -	
		\$ -	\$ -	\$ -		\$ -	
		\$ -	\$ -	\$ -		\$ -	
		\$ -	\$ -	\$ -		\$ -	
		\$ 118,208.39	\$ -	\$ -		\$ 118,208.39	

NOTES:
5/11/2021 - Project is in balance with Workday

5/11/2021 - Pending Budget Amend to move an additional \$125,000 to project SLS004 to provide additional funding for the Herbert and Nove Lift Station ITB

OBLIGATIONS						FY21 ACTIVITY					TOTAL ACTUALS &				PROJECT BUDGET
FUND	SPEND CATEGORY	UNENCUMBERED BALANCE	ENCUMBRANCES	FY20 CARRYFORWARD	SPEND CATEGORY	BUDGET	Pending Budget Amentments	YTD ACTUALS	COMMITMENTS	OBLIGATIONS	OBLIGATIONS	WD BALANCE	REMAINING		
401	Sewage - Capital	\$ 542,965.00	\$ -	\$ 542,965.00	Sewage - Capital	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	-		
	Water - Capital	\$ -	\$ -	\$ -	Water - Capital	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	-		
	Capitalized Software	\$ -	\$ -	\$ -	Capitalized Software	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	-		
	Equipment - Capital	\$ -	\$ -	\$ -	Equipment - Capital	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	-		
	Lift Stations	\$ (85,723.00)	\$ -	\$ (85,723.00)	Lift Stations	\$ 757,243.00	\$ -	\$ 5,016.00	\$ 729,593.00	\$ 22,634.00	757,243.00	-	\$ -		
	TOTAL FUND	\$ 457,242.00	\$ -	\$ 457,242.00	TOTAL FUND	\$ 757,243.00	\$ -	5,016.00	729,593.00	22,634.00	757,243.00	-	\$ -		
403	Sewage - Capital	\$ 200,000.00	\$ -	\$ 200,000.00	Sewage - Capital	\$ 200,000.00	\$ (200,000.00)	\$ -	\$ -	\$ -	-	\$ -	-		
	Water - Capital	\$ -	\$ -	\$ -	Water - Capital	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	-		
	Capitalized Software	\$ -	\$ -	\$ -	Capitalized Software	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	-		
	Equipment - Capital	\$ -	\$ -	\$ -	Equipment - Capital	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	-		
	Lift Stations	\$ -	\$ -	\$ -	Lift Stations	\$ -	\$ 325,000.00	\$ -	\$ 267,943.00	\$ -	267,943.00	57,057.00	\$ 57,057.00		
	TOTAL FUND	\$ 200,000.00	\$ -	\$ 200,000.00	TOTAL FUND	\$ 200,000.00	\$ 125,000.00	-	267,943.00	-	267,943.00	57,057.00	\$ 57,057.00		
TOTAL PROJECT		\$ 657,242.00	\$ -	\$ 657,242.00	TOTAL PROJECT	\$ 957,243.00	\$ 125,000.00	\$ 5,016.00	\$ 997,536.00	\$ 22,634.00	\$ 1,025,186.00	\$ 57,057.00	\$ 57,057.00		
ITB 21-09															

Detail of Open Obligations / Encumbrances - As of 5/11/2021

PO#	Vendor Name	Remaining Balance	Spend Category	Spend Category	Spend Category
			Sewage - Capital	Water - Capital	Lift Stations
PO-253	Mead and Hunt	\$ 30,434.71	\$ -	\$ -	\$ 30,434.71
Pending	US Water Services	\$ 997,536.00	\$ -	\$ -	\$ 997,536.00
		\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ -
		\$ 1,027,970.71	\$ -	\$ -	\$ 1,027,970.71

Note:

5/11/2021 - Project is in balance with workday.

ITB 21-09 has a budget of \$929,593. The actual bid award is for \$997,536. We are currently \$67,943.00 Short.

1.) bt-000775 has been processed to move 403 funds out of Sewage-capital to Lift Stations = \$200,000

2.) bt-000776 has been processed to move \$125,000 out of SLS002 Lift Station Rehab to SLS004 to complete the funding requirement. This will also include \$50,000 for unforeseen request

3.) HOLD REMAINING FUNDS (\$57,057) FOR UNFORSEEN CONDITIONS



CITY COUNCIL AGENDA ITEM

REQUESTED COUNCIL MEETING DATE 6/15/2021

Consent item: Yes

SUBJECT: (C8d) Approval of Change Order 3 to Collaborative Lean-On Services Agreement

DEPARTMENT: Finance

GOAL: 5 - Fiscal Sustainability

RECOMMENDED MOTION: Move to approve Change Order #3 to Collaborative Solutions Lean-On consulting agreement.

SUMMARY: The Lean-On agreement is Collaborative Solutions' ongoing consulting service. Collaborative is the company that assisted the City in the implementation of our Workday ERP. The current agreement ended on May 31, 2021.

Staff occasionally identifies situations where we do not have the in-house expertise to efficiently address an issue with ongoing Workday utilization. To ensure that we can address these issues in a timely manner, the City has contracted with Collaborative Solutions for this support. Change Order #3 will extend the term of the current contract and Statement of Work to September 30, 2021. Staff has budgeted for this service and there are no additional funds required for this extension.

Project No.: ZMIXXX Funding Account No.: General Fund, Other Professional Services

Presenter: Scott Neils

ATTACHMENTS:

1.	Change Order No. 3 to Collaborative Lean-on Service Agreement	City of Port Orange P1 to CVS Lean On CO3.pdf
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Scott Neils
Scott Neils
Matthew Jones
Wayne Clark
Robin Fenwick

Created/Initiated - 5/28/2021
Approved - 6/1/2021
Approved - 6/1/2021
Approved - 6/3/2021
Final Approval - 6/4/2021

Project Change Order

This change order form is used for requesting, documenting, and approving changes to the Workday deployment including but not limited to changes to project scope; changes for a major configuration element; project timeline/schedule changes; integration specifications changes; addition of resources; or any other deliverable change from the originally planned Workday deployment.

Summary

Customer:	City of Port Orange
SOW/Project Name:	PROJ_48008 / City of Port Orange HR Fins - Phase 1 to CVS Lean-On Services
Change Order #:	C03/ SOW 2
Project Manager (Customer):	Jamie Miller
Project Sponsor (Customer):	Jamie Miller
Engagement Manager (CS):	Ashley DeChandt, Collaborative Solutions
Effective Date:	5/31/2021
Change Type:	Contract Extension (no additional hours added)
Impact Assessed by:	Jamie Miller, Russell Parker, Bethanie Weber, and Ashley DeChandt
Priority:	High
Billing	Bill under current project
Contract Line Type	Time & Materials
Is new PO# required?	No new PO# needed

Request Description

This Change Order is needed to extend the project end date from May 31, 2021 to September 30, 2021. They have \$66,311.25 left in their budget which is enough to support them through this contract extension.

Business Purpose / Reason for Change

This Change Order is needed so that the renewal contract will align with City of Port Orange's fiscal year.

Impact Assessment

Project Activities Affected:	None
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Deliverables Affected:	None
Project Schedule Impact:	The original project end date was May 31, 2021. The new project end date is now September 30, 2021.
Estimated Effort and Costs:	None

Assumptions

- Any disputes on an invoice from the City of Port Orange, the disputed amount will be moved to the next billing cycle until the issue is resolved. The remainder of the bill will be paid by the City of Port Orange in a timely manner.
- All other Assumptions from the Agreement, Statement of Work NO. 2, dated February 5, 2020, and all change orders thereto, apply to this Change Order. All other terms and conditions of the Agreement, Statement of Work NO. 2, and all change orders thereto, remain in full force and effect.

Authorization

City of Port Orange Authorization Signature		Collaborative Solutions, LLC Authorization Signature	
Name		Name	
Title		President	
Date		Date	



CITY COUNCIL AGENDA ITEM

REQUESTED COUNCIL MEETING DATE 6/15/2021

Consent item: Yes

SUBJECT: (C8e) Approval of Change Order No 1 to the Agreement with SanPik, Inc. for ITB 19-17 Virginia Monroe Drainage Improvement Project for time extension only.

DEPARTMENT: Public Utilities

GOAL: 2 - Infrastructure

RECOMMENDED MOTION: Move to approve Change Order No. 1 to the Agreement with SanPik Inc. for an additional ninety days (90) to complete work under ITB 19-17, Virginia Monroe Drainage Improvements; subject to City Attorney and City Manager review and approval of final contract documents; and authorizing the Mayor and City Clerk to execute all contract documents.

SUMMARY: On April 6, 2020, SanPik Inc. was issued a written Notice to Proceed on ITB 19-17, Virginia Monroe Storm Water System Improvements project. In general, the project consists of the construction of two storm water pump stations with force mains, two storm water ponds and additional conveyance enhancements such as inlets and storm water pipes. The substantial completion date was February 20, 2021 with a final completion date of May 21, 2021. The project is substantially complete with the exception of the start up and testing on the two new pump stations.

The contractor is requesting an additional ninety (90) days due to unforeseen delays in getting power connected to the two pump stations. Florida Power & Light (FP&L) has all necessary agreements and easements needed to install the new lines and transformers. The delay is beyond the control of the contractor and staff supports the request for an additional 90 days which will allow time to troubleshoot and address any issues that arise once power is provided. There is no change in cost requested.

If approved, the revised final completion date will be August 19, 2021 .

Project No.: No changes

Funding Account No.: No changes

Presenter: Lynn Stevens

ATTACHMENTS:

1.	Change Order No. 1	Change Order No. 1.pdf
2.	Justification Memo to Council CO No 1 Sanpik Virginia Monroe Project addl	Justification Memo to Council CO No 1 Sanpik Virginia Monroe Project addl time

	time request	request.docx
3.	Letter from SanPik_Request for Contract Extension Virginia Monroe Project CO No 1 to CA6896 EJCDC	Letter from SanPik_Request for Contract Extension Virginia Monroe Project CO No 1 to CA6896 EJCDC.pdf
4.	Notice to Proceed to SanPik ITB 19 17 Virginia Monroe Storm Water System Improvements	Notice to Proceed to SanPik ITB 19 17 Virginia Monroe Storm Water System Improvements.pdf
5.	EXECUTED Sanpik Inc. EJCDC Agreement (002) Virginia Monroe	EXECUTED Sanpik Inc. EJCDC Agreement (002) Virginia Monroe.pdf
6.	RECORDED P and P BOND SanPik VIRGINIA MONROE	RECORDED P and P BOND SanPik VIRGINIA MONROE.pdf

Julia Wiggins	Created/Initiated - 5/17/2021
Julia Wiggins	Approved - 5/17/2021
Junos Reed	Approved - 5/17/2021
Steve Parnell	Approved - 5/17/2021
Lynn Stevens	Approved - 5/20/2021
Lupe Reyna-Coffin	Approved - 5/21/2021
Scott Neils	Approved - 5/25/2021
Matthew Jones	Approved - 6/4/2021
Wayne Clark	Approved - 6/4/2021
Robin Fenwick	Final Approval - 6/4/2021

CHANGE ORDER NO. 1
To Construction Contract dated February 21, 2020
SANPIK, INC., Contractor

Project: ITB 19-17 Virginia Monroe Stormwater System

The following changes are hereby made to the Contract Documents:

CHANGE IN CONTRACT PRICE:	CHANGE IN CONTRACT TIMES:
Original Contract Price: \$3,374,035.00	Original Contract Times Substantial Completion: 320 days Final Completion + 90 days
Net changes from previous Change Order: N/A	Changes in contract time from previous Change Orders: N/A
Contract Price prior to this Change Order: \$3,374,035.00	Contract Completion Date prior to this Change Order: Substantial Completion: February 20, 2021 Final Completion: May 21, 2021
Net Increase (decrease) of this Change Order No. 1: \$0	Changes in contract time requested this Change Order No. 1: (Requires Council Approval) 90 days
Contract Price with all approved Change Orders: \$3,374,035.00	Contract Times with all approved Change Orders: Final Completion: August 19, 2021

CHANGES ORDERED:

- I. GENERAL: This Change Order is necessary to cover changes in the contract time for the Construction Contract entered into by and between the parties on February 21, 2020.
- II. REQUIRED CHANGES: Notwithstanding the date of execution, this Change Order No. 1 shall provide for an additional ninety (90) days from May 21, 2021 for final completion. No goods shall be delivered nor services commenced hereunder until this Change Order has been fully executed by all parties.
- III. JUSTIFICATION: The project is substantially complete with the exception of the startup and testing of the two new pump stations. The contractor is requesting an additional ninety (90) days due to unforeseen delays in getting power connected to the two pump stations. There is no change in cost requested.
Changes in scope require Council approval. Is this a scope change? No.
- IV. PAYMENT: There is no change in cost requested. All payments shall be governed by the Local Government Prompt Payment Act as set forth in Florida Statutes Section 218.70 through 218.79, as amended.
- V. This Change Order 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 Change Order shall be deemed valid as if an original signature was delivered. No contract shall be formed between the Contractor and the City until the City signs this Change Order.

Acknowledgments:

The aforementioned change, and work affected thereby, is subject to all provisions of the original contract not specifically changed by this Change Order;

It is expressly understood and agreed that the approval of the Change Order shall have no effect on the original contract other than matters expressly provided herein;

The prices quoted are fair and reasonable and in proper ratio to the cost of the original work contracted for under competitive bidding; and,

The change in price and/or delivery date described is considered to be fair and reasonable and has been mutually agreed upon in full agreement and final settlement of all claims arising out of this modification including all claims for delays and disruptions resulting from, caused by, or incident to such modifications and change orders.

RECOMMENDED BY:

Department Project Manager

ACCEPTED BY:

SANPIK, INC.
Contractor

By: _____
Printed Name: _____
Title: _____

Date Signed: _____

By: _____
Printed Name: _____
Title: _____

Date Signed: _____

RECOMMENDED BY:

City's Representative

RECOMMENDED BY:

Engineer of Record

By: _____
Printed Name: _____
Title: _____

Date Signed: _____

By: _____
Printed Name: _____
Title: _____

Date Signed: _____

APPROVED BY:
CITY OF PORT ORANGE
Department Head

By: _____
Printed Name: _____
Title: _____

Date Signed: _____

City Manager

By: _____
Wayne Clark, City Manager

Date Signed: _____

If Council approval is required:

Affirmed:

By: _____
Donald O. Burnette, Mayor

Robin L. Fenwick, MMC, City Clerk

Date Signed: _____

Date Signed: _____



City of Port Orange Public Works and Utilities Department

TO: Wayne Clark, City Manager

THRU: Lynn Stevens, Public Works & Utilities Director
Junos Reed, P.E., Public Works & Utilities Engineering and Construction Manager

FROM: Julia Wiggins, Public Works & Utilities Budget Analyst

DATE: May 7, 2021

SUBJECT: Change Order 1 ITB 19-17 - Virginia Monroe Drainage Improvements

REQUEST:

The Public Works & Utilities Department is requesting City Council approval of Change Order 1 for an additional 90 days of contract time to SanPik Incorporated for the Virginia Monroe Drainage Improvements project.

PURPOSE:

The storm water system improvement project involves the construction of a retrofit stormwater system, two stormwater ponds with pumping stations to help mitigate flooding and increase stormwater quality treatment.

CONSIDERATION:

The Virginia Monroe Drainage Improvement project is substantially complete. The only part of the project outstanding is the start-up and operational testing of the two stormwater pumping stations. This start-up and testing cannot be performed until the stations have been provided with power. Florida Power & Light (FPL) has received all necessary agreements and easements to install the new lines and transformers to the stations.

This request is for an additional 90 days in order for Florida Power & Light to complete the installation of commercial power to the two pump stations.

FUNDING:

No additional funds are required.

RECOMMENDATION:

The Public Works & Utilities Department recommends City Council approval of Change Order 1 for an additional 90 days of contract time to SanPik Incorporated for the Virginia Monroe Drainage Improvements project.

ANTICIPATED SCHEDULE:

- a) Council Approval – June 15, 2021
- b) Executed Change Order – June 30, 2021

ATTACHMENTS:

- a.) Letter from Vendor
- b.) NTP
- c.) Executed Contract



SanPik Incorporated
3551 W. Lake Mary Blvd., Ste 210
Lake Mary, Florida 32746

Friday, May 14, 2021

City of Port Orange Public Works & Utilities
407 Virginia Ave,
Port Orange, FL 32127
Attn: Junos Reed, P.E.
Engineering & Construction Manager

Reference: Virginia Monroe Stormwater System

Dear Mr. Reed,

I am writing to request approval for an extension on the Virginia Monroe Stormwater System project due to delays beyond are control with getting the necessary power from Florida Power and Light.

SanPik, Inc. is requested an additional 90 days be added to the contract to allow for the necessary time for FPL to install the power to the Lift Station.

Thank you for your consideration.

Respectfully,

Matthew Sands
President



CITY OF PORT ORANGE

1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE (386) 506-5500
FAX (386) 756-5699

Notice to Proceed

March 17, 2020

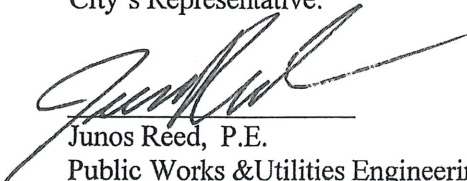
Matthew Sands
SanPik, Inc
3551 W. Lake Mary Blvd
Lake Mary, FL 32746

Notice to proceed on: ITB 19-17 Virginia Monroe Stormwater System Improvements Project

You are hereby notified that the Contract Time under the above contract will commence to run on April 6, 2020. On this date, you are to start performing the work and your other obligations under SanPik, Inc. EJCDC Agreement – Virginia Monroe Stormwater System Improvements project. Based on the Contract Time stated in the Agreement, the substantial completion date is February 20, 2021 and the final completion date is May 21, 2021

Please acknowledge receipt of this notice by signing below, scanning and returning a copy via email. If there are any questions, please contact me.

City's Representative:

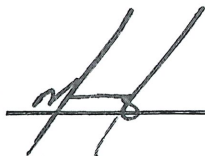

Junos Reed, P.E.
Public Works & Utilities Engineering and Construction Manager

Acknowledgement

Receipt of the above "NOTICE TO PROCEED" is hereby acknowledge by

SanPik, Inc.
(Firm's Name)

Sign & Date:



3/19/20

Title:

President

www.port-orange.org

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

City of Port Orange
1000 City Center Circle
Port Orange, Florida 32129

THIS AGREEMENT is by and between _____ (“Owner”) and
SanPik, Inc.
3551 West Lake Mary Boulevard, Suite 210
Lake Mary, Florida 32746 _____ (“Contractor”).

The Effective Date of this Agreement shall be February 21, 2020 (If no date is specified then the Effective Date shall be the date on which the Agreement is signed by the last of the two parties.)

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:

Construction on two (2) storm water pump stations with force mains, two (2) storm water ponds and additional conveyance enhancements such as inlets and storm water pipes.

ARTICLE 2 – THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

ITB 19-17 Virginia Monroe Stormwater System

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by the Engineer as specified. The Engineer shall serve as Owner’s agent for purposes of approving Contractor’s payment requests and as otherwise provided in the Contract documents.

A. The part of the Project that pertains to the Work has been designed by Andrew Giannini, P.E. of **MEAD AND HUNT, INC.** (“Engineer”), a Wisconsin corporation.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

A. All time limits for Substantial Completion and Final Completion as stated in the Contract Documents, particularly Paragraph 4.02 below, are of the essence of the Contract.

- B. All time limits for Milestone dates set forth in the Contract Documents are of the essence of the Contract.

4.02 *Days to Achieve Substantial Completion and Final Completion*

- A. Unless as otherwise modified in a Notice to Proceed issued after the Effective Date of the Agreement or an allowable extension of time in accordance with Paragraph 12.02 of the General Conditions, the Work shall be substantially completed within 320 days after the Effective Date of the Agreement.
- B. Unless as otherwise modified in a Notice to Proceed issued after the Effective Date of the Agreement or an allowable extension of time in accordance with Paragraph 12.02 of the General Conditions, the Work shall be finally completed in accordance with Paragraph 14.06 of the General Conditions within 90 days after the Effective Date of the Agreement.
- C. If a Notice to Proceed is issued more than 60 days from the Effective Date of this Agreement, then the dates for Substantial Completion and the Final Completion shall be extended by the same number of days. (For example, if the Notice to Proceed is issued 63 days after the Effective Date of the Agreement, then the Substantial Completion and Final Completion dates shall be extended by 3 days.)

4.03 *Liquidated Damages*

- A. Contractor and Owner agree and recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial loss that is not readily ascertainable as of the Effective Date of this Agreement if the Work is delayed and not Substantially Completed within the time period specified in Paragraph 4.02 above, plus any allowable extension of time in accordance with Paragraph 12.02 of the General Conditions. Contractor agrees and recognizes that any delay to Substantial Completion shall constitute a material breach. Accordingly, Owner and Contractor agree that as liquidated damages for delay, Contractor shall pay Owner \$500 for each day that expires after the date the Work is required to be Substantially Completed until the Contractor achieves Substantial Completion with the Work. Contractor and Owner agree and recognize that the liquidated damages set forth herein shall not be treated as a penalty and are just damages that are proportionate to any damages that might reasonably be expected to follow from a delay to Substantial Completion.
- B. Owner may withhold Contractor's final payment in order offset the liquidated damages that Contractor owes Owner. Owner may also withhold progress payments if Owner reasonably believes that Contractor's final payment will not sufficiency cover the liquidated damages that Contractor owes Owner.

ARTICLE 5 – CONTRACT PRICE

- 5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraphs 5.01.A, 5.01.B, and 5.01.C below:

- A. For all Work other than Unit Price Work, a lump sum of: \$_____

Any allowances specifically identified and called for in the Contract Documents are included in the above price in accordance with Paragraph 11.02 of the General Conditions.

- B. For all Unit Price Work in accordance with Paragraph 11.03 of the General Conditions, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the actual quantity of that item:

<u>UNIT PRICE WORK</u>					
<u>Item No.</u>	<u>Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Bid Unit Price</u>	<u>Bid Price</u>

See Attachments

Total of all Bid Prices (Unit Price Work) \$3,374,035.00

The Bid Unit Prices set forth above are guaranteed prices. Although the Estimated Quantities are estimates and may increase or decrease based on determinations of Engineer, Contractor agrees and understands that the Bid Unit Prices shall remain the same irrespective of the quantities. Contractor understands that in agreeing to any Bid Unit Price it is agreeing to bear the risk associated with any material price increase or escalation. Owner agrees and understands that in agreeing to any Bid Unit Price it is agreeing to bear the risk associated with any material price decrease or reduction.

- C. 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 Progress Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions.

6.02 *Progress Payments; Retainage*

- A. Progress payments shall be made on account of the Contract Price on the basis of Contractor's Applications for Payment during performance of the Work in accordance with Paragraph 14.02 of the General Conditions. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed). Progress payments will be made in an amount equal to the percentage of the Work completed in accordance with the Schedule of Values, less the aggregate of payments previously made, less the retainage, and less such amounts as Engineer may determine Owner may withhold, including, but not limited to, liquidated damages.
- B. Owner shall withhold 10 percent of each progress payment as retainage until 50 percent completion. After 50 percent completion, Owner shall reduce retainage to 5 percent of each progress payment. Fifty (50%) percent completion is the point at which Owner has expended 50 percent of the Contract Price, together with all increases in the Contract Price through allowable change orders. However, if Contractor elects to withhold more than 5 percent

retainage from a subcontractor(s), it may not request the release of such retained funds from Owner.

6.03 *Final Payment*

- A. Final Payment inclusive of retainage shall be made to Contractor in accordance with Paragraph 14.07 of the General Conditions.

ARTICLE 7 – INTEREST

- 7.01 All monies not paid in strict accordance with Florida Statute §218.735 shall bear interest as provided for therein.

ARTICLE 8 – CONTRACTOR’S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Agreement and in determining the Contract Price, Contractor makes the following representations:
 - A. Contractor has carefully examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
 - B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - C. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.
 - D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), if any, that have been identified in Paragraph SC-4.02 of the Supplementary Conditions as containing reliable "technical data," and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in Paragraph SC-4.06 of the Supplementary Conditions as containing reliable "technical data." Contractor's receipt and study of such reports shall not relieve it of visiting the Site and becoming familiar with and satisfied with the Site conditions that may affect cost, progress, and performance of the Work.
 - E. Contractor has considered the information known to Contractor; 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 Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (3) Contractor's safety precautions and programs.

- F. Based on the information and observations referred to in Paragraph 8.01.E above, Contractor does not consider that 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 Documents.
- G. 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.
- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

- A. The Contract Documents consist of the following:
 - 1. This Agreement (pages 1 to 10, inclusive).
 - 2. Combination Payment and Performance Bond (pages 1 to 4, inclusive).
 - 3. Other bonds (N/A).
 - 4. General Conditions (pages 1 to 69, inclusive).
 - 5. Supplementary Conditions (pages 1 to 6, inclusive).
 - 6. Composite Technical Specifications and Bid Set as listed in ITB 19-17 Virginia Monroe Stormwater System identified as “Attachment A” (pages 1 to 365 not attached, on file with Junos Reed, P.E., City Engineering and Construction Manager).
 - 7. Addendum No. 1 (pages 1 to 3, inclusive).
 - 8. Addendum No. 2 (page 1, inclusive).
 - 9. Addendum No. 3 (page 1, inclusive).
 - 10. Addendum No. 4 (pages 1 to 6, inclusive).
 - 11. Exhibits to this Agreement (enumerated as follows):
 - a. Exhibit No. 1 Contractor’s Bid Schedule of Unit Prices (pages 1 to 3, inclusive).
 - b. Documentation submitted by Contractor prior to Notice of Award (N/A).

1. Affidavit Regarding Workers' Compensation (page 1, inclusive).
 2. Certificate for Workers' Compensation (pages 1 to 2, inclusive).
 - c. Exhibit No. 2 Contractor's Proposal (pages 1 to 45, inclusive).
 - d. Composite Exhibit No. 3 City's Invitation to Bid Request No. 19-17 (pages 1 to 158 not attached, on file with City Clerk's Office).
 - e. Exhibit No. 4 State of Florida Division of Emergency Management ("FEMA") Hazard Mitigation Grant Program ("HMGP") Contract 4283-86-R dated October 29, 2018 (pages 1 to 57, inclusive).
 - f. Exhibit No. 5 State of Florida Department of Environmental Protection ("FDEP") Agreement No. LP64042 dated January 4, 2018 (pages 1 to 32, inclusive).
 - g. Exhibit No. 6 Amendment No. 1 to Agreement No. LP64042 between Florida Department of Environmental Protection ("FDEP") and City of Port Orange dated October 24, 2018 (pages 1 to 17, inclusive).
 - h. Exhibit No. 7 U.S. Department of Housing and Urban Development ("HUD") CDBG 18 Funding Approval Agreement dated November 7, 2018 (pages 1 to 3, inclusive).
 - i. Exhibit No. 8 General Decision Number FL20200137 Davis-Bacon Wage Determination (pages 1 to 5, inclusive).
12. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
- a. Notice to Proceed (pages _____ to _____, inclusive).
 - b. Work Change Directives.
 - c. Change Orders.

B. The documents listed in Paragraph 9.01.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 9.

D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

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

10.02 *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.

10.03 *Successors and Assigns*

- A. 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.

10.04 *Severability*

- A. Any provision 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.

10.05 *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 10.05:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing 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.

- B. Contractor certifies that in the event a Lien is recorded on the Project by any person or entity providing labor, services, or materials with respect to any portion of the Work, it will immediately transfer such lien to its payment bond or take other appropriate action to immediately remove the encumbrance.

10.06 *No-Damage-for-Delay*

- A. 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 considered this no-damage-for-delay provision and understands that it is not entitled to any damages whatsoever for a delay to its Work.

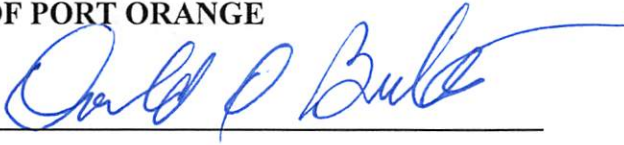
10.07 *No Intended Third-Party Beneficiaries*

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

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement. Counterparts have been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or have been identified by Owner and Contractor or on their behalf.

CITY OF PORT ORANGE

Owner



By: Donald O. Burnette

Title: Mayor

Date: 2/21/2020



Attest: Robin L. Fenwick, MMC

Title: City Clerk

Address for giving notices:

1000 City Center Circle

Port Orange, Florida 32129



SanPik, Inc.
Contractor

By:  Matthew Sands

Title: President

Date: 2/13/2020

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

Attest:



Title:

Admin Assistant

Address for giving notices:

3551 West Lake Mary Boulevard, Suite 210

Lake Mary, Florida 32746

Telephone: (407) 988-1033 E-Mail: m.sands@sanpikinc.com

License No.: CUC1225224

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. 107172339

PRINCIPAL:

Developer or Contractor: SanPik, Inc.
 Principal Business Address: 3551 West Lake Mary Boulevard
 Suite 210
 Lake Mary, Florida 32746
 Contact Person: Matthew Sands, President
 Phone Number: (407) 988-1033

SURETY:

Address: Travelers Casualty and Surety Company of America
 One Tower Square
 Hartford, CT 06183
 Contact Person: Duc Nuygen
 Phone Number: (800) 238-6225

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: \$3,424,035.00 **City Project Number: ITB 19-17 Virginia Monroe Stormwater System**

Description of Work: Virginia Monroe Stormwater System

Project Location: Portions of Section 3, Township 16 South, Range 33 East, Port Orange, Volusia County, Florida

Legal Description: Portions of Section 3, Township 16 South, Range 33 East, as further described in Location Map, Port Orange, Volusia County, Florida for all public works identified in ITB 19-17.
See Exhibit "A"

Front Page

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

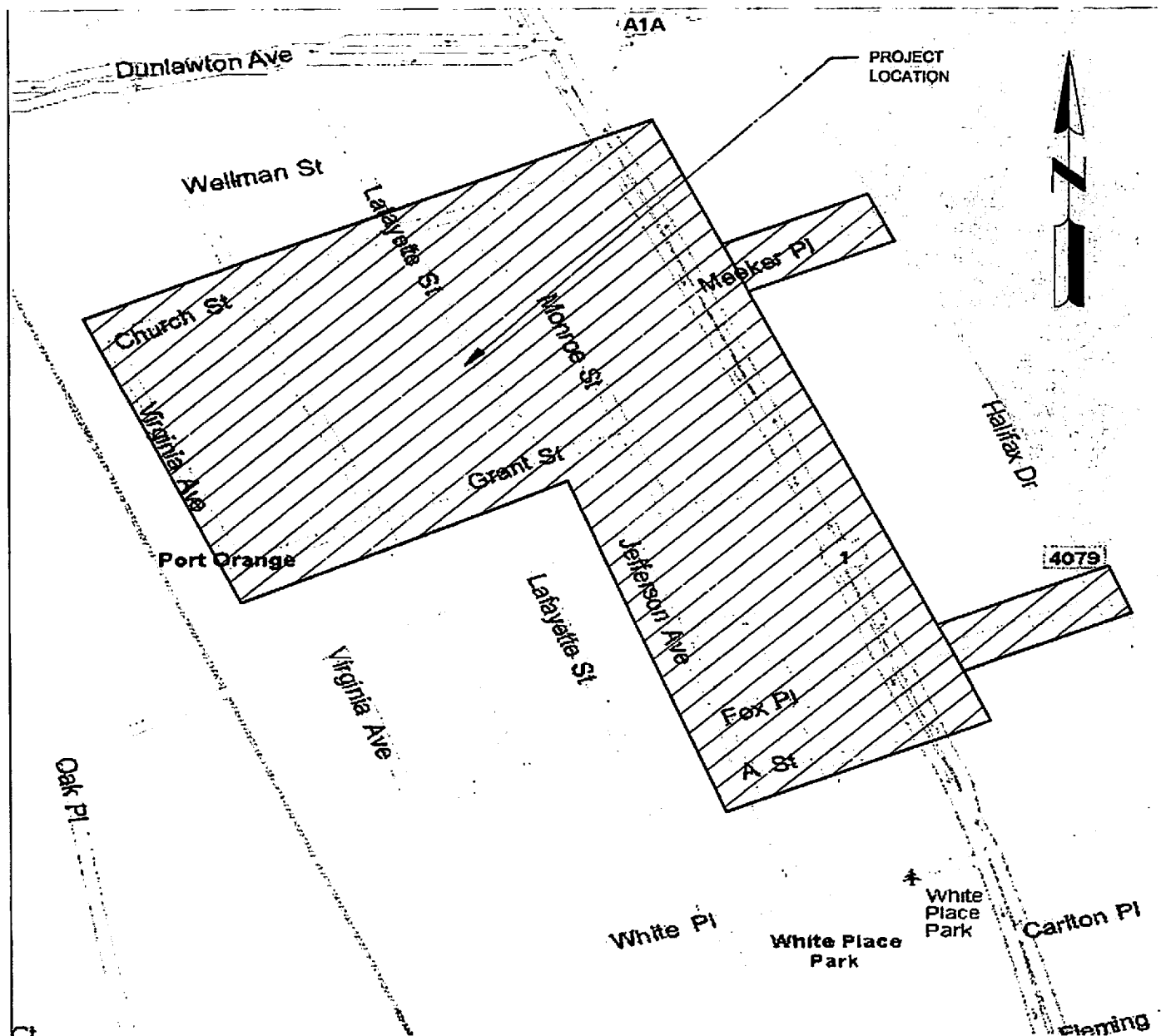
Exhibit "A"

Legal Description and Location Map

ITB 19-17 Virginia Monroe Stormwater System

Portions of Section 3, Township 16 South, Range 33 East, Port Orange, Volusia County, Florida.

Location Map:



SanPik, Inc.

ITB 19-17 Virginia Monroe Stormwater System

Bond No. 107172339

**COMBINATION PAYMENT AND PERFORMANCE BOND
FOR
PUBLIC CONSTRUCTION**

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

Travelers Casualty and

BY THIS BOND, We, SanPik, Inc., as Principal, and Surety Company of America, 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 **THREE MILLION FOUR HUNDRED TWENTY-FOUR THOUSAND THIRTY-FIVE AND 00/100 DOLLARS (\$3,424,035.00)**, 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. February 21, 2020 Performs the terms of that certain EJCDC Contract, having an effective date of February 21, 2020, entered into by and between the Principal and the City, for Virginia Monroe Stormwater System, 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 21st day of February, 2020.

Attest:

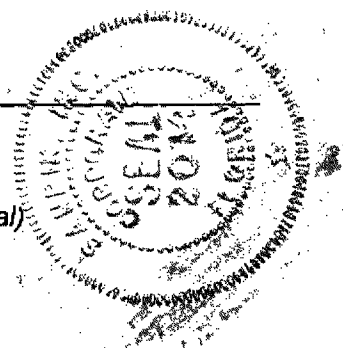
SANPIK, INC.
(Principal)

[Signature]
(As to Corporate Principal) Secretary

By: [Signature]
Matthew Sands, President

[Signature]
(Witness to Principal)

(Corporate Seal)

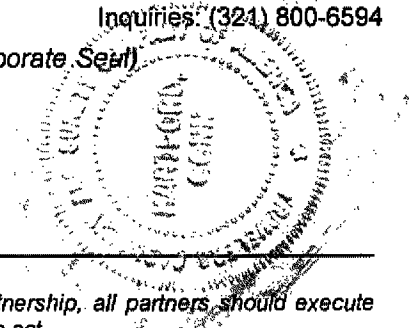


Travelers Casualty and Surety Company of America
(Surety)

[Signature]
Courtney R. Anderson (Witness to Surety)

By: [Signature]
Name: Jorge L. Bracamonte, Attorney-in-Fact & Florida Licensed
(Attorney-in-Fact) Resident Agent

Inquiries: (321) 800-6594
(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.

TRAVELERS
Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company
POWER OF ATTORNEY

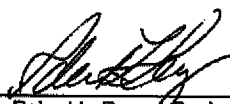
KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **JORGE BRACAMONTE** of **ORLANDO Florida**, their true and lawful Attorney-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this 17th day of January, 2019.



State of Connecticut

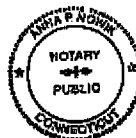
City of Hartford ss.

 By: 
 Robert L. Raney, Senior Vice President

On this the 17th day of January, 2019, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of said Companies by himself as a duly authorized officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission expires the 30th day of June, 2021



 Anna P. Nowik, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

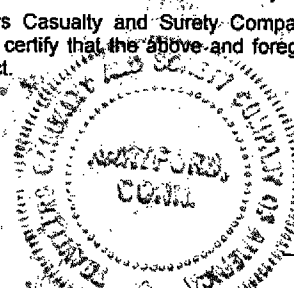
FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this 21st day of February 2020.



 Kevin E. Hughes, Assistant Secretary

To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney-in-Fact and the details of the bond to which this Power of Attorney is attached.



CITY COUNCIL AGENDA ITEM

REQUESTED COUNCIL MEETING DATE 6/15/2021

Consent item: Yes

SUBJECT: (C8f) Approval of Task Authorization No. 9 to Traffic Engineering Data Solutions, Inc. (TEDS) for the design of the SUNTrail St. Johns River-to-Sea Loop trail

DEPARTMENT: Community Development

GOAL: 2 - Infrastructure, 3 - Quality of Life

RECOMMENDED MOTION: Move to approve Task Authorization No. 9 to Traffic Engineering Data Solutions, Inc. (TEDS) for design of the SUNTrail St. Johns River-to-Sea Loop trail.

SUMMARY: Community Development is requesting approval of Task Authorization #9 with Traffic Engineering Data Solutions, Inc. (TEDS), for the services to prepare design plans and permitting for two unbuilt portions of the SUNTrail St. Johns River-to-Sea Loop trail in Port Orange. In 2020, the Florida Department of Transportation (FDOT) completed a Project Development and Environment (PD&E) Study that identified a route to fill a gap in the SUNTrail St. Johns River-to-Sea Loop within South Daytona, Port Orange, Volusia County, and New Smyrna Beach. Based on direction provided by the City Council at their May 28, 2019, Workshop, the PD&E Study concluded the location of the trail through Port Orange would be along McDonald Road, Spruce Creek Road, and Nova Road and for the most part consist of existing sidewalks. According to the approved FDOT PD&E Study, the two trail segment gaps that need to be designed are:

- Extend the trail along the east side of Spruce Creek Road from the current terminus (intersection of Selin Circle and Spruce Creek Road) to Oak Street. However, if acquisition of right-of-way or easement is unsuccessful, then the trail will have a mid-block crossing near Selin Circle and extend along the west side of Spruce Creek Road to Oak Street and then cross back over Spruce Creek Road and continue along the east side of Spruce Creek Road to Dunlawton Avenue.
- Extend the trail along the east side of Spruce Creek Road and a City owned vacant parcel between Dunlawton Avenue and Herbert Street, connecting to the existing trail segment at 6th Street.

At their May 18, 2021 meeting, the Council approved the participation in a State Funded Grant Agreement (SFGA) for the Port Orange portion of the SUNTrail St. John's River to Sea Loop project with FDOT. FDOT has slated this project for design in their FY21 and construction in FY23; in order to meet this schedule, the City must authorize commencement of design in June 2021 and the complete the design and construction bid package for FDOT's review by June 2022.

Budget Resolution 21-20, approved by City Council at their June, 1, 2021 meeting, appropriated \$200,000 for the design of the Port Orange section of the SUNTrail St. Johns River-to-Sea Loop trail. FDOT will reimburse up to \$200,000, which covers the full amount of the \$190,317.08 design fee.

Project No.: XSG200

Funding Account No.: Capital

Presenter: Margaret Tomlinson

ATTACHMENTS:

1.	Task Authorization No 9 - SUNTrail	Task Authorization No 9 - SUNTrail.pdf
2.	CA5671 TEDS Master Contract	CA5671 TEDS Master Contract.pdf
3.	CA5671 2020-2022 TEDS Renewal	CA5671 2020-2022 TEDS Renewal.pdf
4.	TEDS COI expires 1 31 2022	TEDS COI expires 1 31 2022.pdf
5.	2021-05-19 TEDS Proposal Scope of Services TA#09	2021-05-19 TEDS Proposal Scope of Services TA#09.pdf
6.	Location Map	Location Map.docx
7.	Suntrail SJR2C Loop Trail Concept Plan	Suntrail SJR2C Loop Trail Concept Plan.pdf

Lisa Epstein

Created/Initiated - 5/13/2021

Tim Burman

Approved - 5/27/2021

Amanda Lasecki

Approved - 6/1/2021

Alison Sylvester

Approved - 6/1/2021

Lupe Reyna-Coffin

Approved - 6/1/2021

Scott Neils

Approved - 6/1/2021

Matthew Jones

Approved - 6/4/2021

Wayne Clark

Approved - 6/4/2021

Robin Fenwick

Final Approval - 6/4/2021

TASK AUTHORIZATION NO. 9
Master Contract for Engineering Services dated February 14, 2017
Between the City of Port Orange, Florida and Traffic Engineering Data Solutions, 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 **TRAFFIC ENGINEERING DATA SOLUTIONS, INC.**, a Florida corporation with its principal place of business at 80 Spring Vista Drive, DeBary Florida 32713-1821 ("Contractor"), and hereinafter collectively referred to as the "Parties," and is to that certain Master Contract for Engineering Services dated February 14, 2017, 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. The Engineering Specialist, Lisa Epstein, shall perform contract administration for this Task Authorization No. 9 and can be reached at (386) 506-5667.
3. In addition to all other terms and conditions contained in the Contract, Contractor shall provide services relating to preparing design plans and permitting for two unbuilt portions of the SUNTrail St. Johns River-to-Sea Loop in Port Orange - SJR2C Loop Trail (Spruce Creek Rd) from South of Selin Circle to Herbert St. (FPN 439865-3-34-01), as more particularly described in the Scope of Services attached hereto and incorporated herein as Task Authorization Exhibit "A."
4. Upon written Notice to Proceed from the City to the Contractor, the Contractor shall complete Task 1 through Task 10 as described in the attached Exhibit "A," no later than June 30, 2022. Upon written Notice to Proceed from the City to the Contractor, the Contractor shall complete Task 11 and Task 12 as described in the attached Exhibit "A," no later than September 30, 2023.
5. In return for the services identified above, the City agrees to compensate Contractor at the prices set forth in Exhibit "A" attached hereto and made a part hereof for all purposes, subject to a limit not to exceed \$190,317.08. 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.
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 Contractor 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:

TRAFFIC ENGINEERING DATA SOLUTIONS, INC.

By: _____

Deanna F. Ferrell, 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.

Printed Name: _____

Date: _____

Printed Name: _____

Witnesses:

CITY OF PORT ORANGE

Printed Name: _____ By: _____
Donald O. Burnette, City Mayor

Printed Name: _____ Date: _____

Witnesses: **ATTEST:**

Printed Name: _____ By: _____
Robin L. Fenwick, MMC, City Clerk

Printed Name: _____ Date: _____



EXHIBIT A

SCOPE OF SERVICES

Contract: Master Contract for Engineering Services dated February 14, 2017

Task Authorization No.: 09

Project Name: SJR2C Loop Trail (Spruce Creek Rd) from South of Selin Circle to Herbert St (FPN 439865-3-34-01)

TEDS Project Number: 10962

Date: April 26, 2021
Revised May 19, 2021

Traffic Engineering Data Solutions, Inc. (TEDS) is pleased to offer this scope of services to the City of Port Orange (CITY) for providing professional engineering services for the above referenced project.

PROJECT UNDERSTANDING

- The CITY furnished a copy of the Scope & Schedule for this trail project being completed through the Shared Use Nonmotorized (SUN) Trail Program, with state funding allocated under FPID 439865-3-34-01 to be administered by the Florida Department of Transportation (FDOT). Federal funding requirements do not apply.
- The CITY also furnished a copy of the Preliminary Engineering Report (PER) for FPID 439865-1-22-01, as prepared by FDOT's consultant in conducting the preceding Project Development & Environment (PD&E) study. The PER was finalized as of April 6, 2020.
- While the PER addresses a much longer corridor spanning through other cities, this proposal is being provided for design and permitting of a shared use path over a ± 0.65 miles corridor alongside the Halifax Canal / Spruce Creek Road, extending from Selin Circle north to Herbert Street, within the City of Port Orange, Volusia County, Florida.
- The Spruce Creek Road Right-of-Way (R/W) is maintained by the CITY, though the Halifax Canal is maintained by Volusia County Public Works. There are no formal easement(s) or agreement(s) in place between the CITY and County related to maintenance of the canal. A R/W Use Permit will be required for the County's review and approval of the proposed trail improvements.
- As shown on the Concept Plans within the PER, several portions of the design segment corridor already contain existing trails (< 12' in width) that will remain in place, and no new trail facilities are required within these areas.
- FDOT is the maintenance authority for SR 421 (Dunlawton Avenue). Upgrades to the existing curb ramps may be necessary if determined to be non-compliant with current accessibility criteria, or if FDOT requires the existing shared curb ramps to be separated, thereby warranting relocation of existing crosswalks. Traffic signalization design is required for modification of the existing pedestrian signalization system. The CITY will provide copies of the plans to FDOT for review of proposed improvements, and it is anticipated that Driveway / Drainage Connection permits will not be required.
- The CITY provided copies of the Utility and Access Easement (ORB 5920, pgs 2088-2091) previously obtained over parcel Volusia County 631019000170 (presently owned by BLEDSOE & COLEMAN GENERAL) that provides the right to construct additional pedestrian facilities and perpetual use on the property. In addition, the CITY would like to explore the dedication of proposed R/W and/or easement(s) on the adjacent parcel 630901010080 (presently owned by JENZANO GROUP LLC), such that the trail could be maintained entirely on the east side of the Halifax Canal, in which case the proposed crossing of Spruce Creek Road just south of Selin Circle could be eliminated. The City will conduct all negotiations with existing private property owners required for dedication of proposed R/W and/or easements required to host the new trail, and the R/W support services included within this proposal are limited to basic surveying services intended to support the CITY's negotiations. A separate proposal will be provided for any additional R/W support services that may later be

determined to be desired, such as records research, abstracting, title opinions, legal, noticing, certified mailings, valuations, certified appraisals, assistance with negotiations, eminent domain, expert witness testimony, etc.

- FEMA FIRM Map 12127C0388J (effective September 29, 2017) indicates that that majority of the proposed trail corridor is located entirely within the Special Flood Hazard Area (SFHA) with a Base Flood Elevation (BFE) determined to be at elevation 5.00' NAVD 88 on the south of Dunlawton Ave. (SR 421), and at elevation 6.00' NAVD 88 on the north side of this roadway. Design will be based on constructing the proposed trail at or below existing grade in order to minimize impacts to existing flood plain, though compensating storage calculations will likely be required in areas where minimal amounts of fill is required.
- The proposed trail is routed across parcels 63040600008A and 630406000091, which are controlled by the CITY. The preferred alternative from the PD&E prescribes approximately 300' of boardwalk on these parcels in order to minimize impacts to existing wetlands located on these parcels. For maintenance reasons, the CITY desires the use of wood decking on boardwalks.
- Based on preliminary review, it is anticipated that the subject wetland would be non-jurisdictional under Section 404 of the Clean Water Act, such that required permitting includes only submitting a No Permit Required Verification Request to the Florida Department of Environmental Protection (FDEP). In the event the wetlands are deemed jurisdictional under this regulation, and federal authorization is necessary, a separate proposal will be provided for any such services required.
- Multi-use recreational paths less than 14' in width typically qualify for exemption from Environmental Resource Permit from the St. Johns River Water Management District (SJRWMD), unless there is work in, on, or over wetlands or other surface waters other than drainage ditches constructed in uplands, or unless they are located with previously permitted area(s). The PER did not contain any discussion of historical ERP's affected by the proposed trail construction, but under ERP Series 29869, it appears an original ERP and five (5) subsequent modifications were issued to the CITY for roadway drainage projects located within close proximity to the project, such that at least one (1) ERP modification will be required. There are numerous documents of record on file with SJRWMD which have not been fully reviewed at the time of preparation of this proposal, so the full extent of modification that may be required to the previous permit(s) is not presently known. However, given that the trail is to be constructed at existing grade in all locations other than boardwalk, it is presently anticipated that no drainage analysis will be required for this project, including but not limited to pollutant loading, treatment, attenuation, HGL analysis, spread calculations, etc.
- Based on the PER, protected species impacts are not anticipated. A review of the proposed trail corridor will be conducted with preliminary mapping of encountered protected species or habitats, but surveying, agency coordination, and/or permitting of protected species is not included in this proposal, as those services are not anticipated to be required.
- The two (2) parcels controlled by the CITY contain numerous existing trees. Tree survey information is necessary in these areas to ensure the proposed trail alignment minimizes impacts to existing trees, while at same time adhering to required design criteria as set forth in the PER. The CITY will be responsible for confirming tree species surveyed and evaluating the quality and/or health of trees as it relates to their removal or preservation.
- Given the shallow nature of excavation required for proposed trail construction, only minor adjustment of existing utilities is anticipated to be required. Obtaining Utility Work Schedule (UWS) information from the UAO's is not anticipated to be required. Subsurface Utility Engineering (SUE) including utility locates is not included in this proposal as it is not expected to be required, and the CITY will provide any such services that may later be determined to be required.
- Geotechnical and structural engineering services included in this agreement are limited to that required for the proposed trail and boardwalk. However, no other geotechnical or structural engineering design services are expected to be required for other project elements, such as retaining walls or box culverts, and therefore those services are not included in this agreement at this time.
- Pursuant to the CITY's prior coordination with FDOT, cultural resources assessment and contamination screening services are not included in this agreement, as they are not expected to be required.
- Landscape architecture, hardscape design, and irrigation design are not required in this project.

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- The PER vaguely indicated that lighting along the trails should be given consideration, and lighting improvements were also referenced in the Scope & Schedule. However, lighting design services are not included in this proposal at this time.

SCOPE OF SERVICES

Task 1 – Project Management & Administration

TEDS will complete administrative procedures intended to aid in the successful management of the project, including the following services:

- Schedule, prepare for and attend a kickoff meeting with the CITY, FDOT and the County present, with preparation of meeting minutes
- Preparation of project schedule, as well as update(s) thereto
- General coordination with the CITY to discuss project issues or provide status updates on current progress
- Administration of the design contract through completion of the project, including monthly invoicing
- Initial setup of sub-consultant contracts and administration, including monthly invoicing
- Prepare for and attend a City Council meeting to address questions regarding the project design

Task 2 – Surveying

TEDS will retain PEC Surveying and Mapping, LLC (PEC) to provide the surveying services as described in their letter proposal No. PS16805r-TEDS dated April 26, 2021, a copy of which has been attached to this proposal.

Task 3 – Environmental Resources & Permitting

TEDS will retain Terracon Consultants, Inc. (Terracon) to provide the environmental services described in their letter proposal No. PEQ217222 dated May 6, 2021, a copy of which has been attached to this proposal. More specifically, this includes the work described in the following sections of the proposal:

- 2.0 ENVIRONMENTAL RESOURCES REPORT
- 3.0 ENVIRONMENTAL PERMITTING

Task 4 – Geotechnical Engineering

TEDS will retain Terracon Consultants, Inc. (Terracon) to provide the geotechnical engineering services described in their letter proposal No. PEQ217222 dated April 16, 2021, a copy of which has been attached to this proposal. More specifically, this includes the work described in the following section of the proposal:

- 4.0 GEOTECHNICAL SERVICES

Task 5 – Design Development

TEDS will provide the following services to address the critical roadway design elements for the proposed trail improvements:

- Obtain and review record plan information that may be on file with the CITY, Volusia County, or SJRWMD, and reference to project CAD files for analyses relevant to project design
- Process aerial photographs or other supporting base map files or imagery, such as GIS data, quad maps, FEMA maps, etc., such that it can be referenced to project CAD files for analyses relevant to project design
- Conduct field review of project corridor and obtain photographs of existing conditions
- Review the completed survey
- Develop an alignment for the proposed trail improvements and typical section(s) based on avoidance and/or minimization of impacts to existing elements, such as trees, utilities, etc.

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- Assess profile along centerline of trail to ensure accessible slopes (*not to be presented in plans*)
- Assess existing drainage basinology and proposed grading needed to maintain existing drainage patterns
- Assess minor adjustments to existing drainage structures that may be required
- Calculate and report earthwork by section using average end area method (*in addition to 3-D earthwork completed via grading models*)
- Assess relocation and/or modification of existing signage and pavement markings within the right of way, as well as any proposed signage / pavement markings that may be necessary

Task 6 – Roadway Plans - Approximately 0.65 mile corridor

TEDS will prepare the following roadway construction plans for the project:

- Key Sheet (1 sheet)
- Summary of Pay Items (1 sheet)
- Signature Sheet (1 sheet)
- Drainage Map (1"=200' scale) (1 sheet)
- General Notes (1 sheet)
- Project Layout (1 sheet)
- Project Control (1 sheet) – based on information provided by surveyor
- Typical Section (2 sheets)
- Roadway Plan (1"=40' scale) (6 sheets) – minor utility adjustments to be shown on these sheets
- Bridge Plan & Profile (1"=40' scale) (1 sheet)
- Cross-Sections (10 sheets) – 100' intervals with roadway borings depicted (assume 20 cross-sections)
- Construction Details (1 sheet)
- Traffic Control Plans (2 sheets) – FDOT Standard Plans only
- Stormwater Pollution Prevention Plan (SWPPP) Notes (1 sheet) – with notes to describe erosion control measures necessary for the CITY's contractor to maintain compliance with the National Pollutant Discharge Elimination System (NPDES) program during construction
- Erosion Control Plans (1"=40' scale) (3 sheets) – double plan windows
- Signing & Pavement Marking Plans (1"=40' scale) (3 sheets) – double plan windows

Design provided by TEDS will be based on the standard practices and publications utilized by the FDOT, including the FDOT Design Manual (FDM), the Florida Greenbook, Standard Plans, Standard Specifications, the Utility Accommodation Manual (UAM), etc. Preliminary roadway plans will be prepared and provided to the CITY for their initial negotiation(s) of proposed R/W and/or easements with private property owners, as necessary to maintain the trail east of the Halifax Canal. The roadway plans will be updated based on the outcome of those negotiations and will be formally prepared for progress review by the CITY and FDOT at 60%, and 90% levels of completion, along with an Engineer's Opinion of Probable Costs (EOPC).

Task 7 – Traffic Signal Design

TEDS shall prepare a signed and sealed set of traffic signal plans for the modification of the traffic signal at the intersection of SR 421 (Dunlawton Avenue) and Spruce Creek Road suitable for permitting, bidding and construction. The plans shall be prepared to Volusia County/FDOT standards. The tasks involved in this process include design of the traffic signal modifications, submission of the preliminary design for review and finalization of design plans including the incorporation of appropriate design review comments. Final plans will be prepared at a scale of 1" = 40'. It is understood that the plans will be a component set of the overall roadway plans for the trail project. The design tasks are detailed on the following page:

Task 7.1 – Data Collection

TEDS shall obtain a surveyed base plan, signed and sealed by a surveyor duly registered in the State of Florida, depicting existing and proposed conditions, including above ground and below ground utilities, suitable for preparing

Traffic Engineering Data Solutions, Inc.

the traffic signal design. Survey coverage shall include the turn lanes and tapers for the intersecting roadways but shall not be less than 150 feet along each leg of the intersection. The base plan shall be transmitted to TEDS in both hard copy and electronic format at a scale of 1" = 40'. The base plan shall indicate the edge of pavement, lane utilization including pavement markings, any medians or sidewalks within the intersection, drainage appurtenances (inlets, ditches, storm drain pipes showing size and direction of run), manholes and the presence of any known above or below ground utilities.

Task 7.2 – Initial Plan Preparation

TEDS shall prepare a traffic signalization base plan from this data. TEDS' design shall include sufficient vehicular detection modifications as required for semi-actuated control as well as pedestrian feature modifications. TEDS will also conduct one (1) field review to review existing field conditions and discuss preliminary modifications to the signal with the County.

TEDS shall provide the traffic signal plan package to include the following:

- Key Sheet (1 sheet) identifying the project name and location, Engineer of Record, the date of the design plan preparation, appropriate standards and specifications identification, revision block and plan sheet table of contents;
- General Notes Sheet (1 sheet) containing traffic signal design and installation notes standard to The COUNTY;
- Tabulation of Quantities Sheet (1 sheet) identifying the pay item descriptions and quantities of the traffic signal components, identifying appropriate general design notes pertaining to the traffic signal design;
- Traffic Signal Plans (1 sheet) presenting the intersection layout at the intersection in plan view, appropriate traffic signal design components including FDOT Pay Item Numbers, and notes pertaining to the operation of the new traffic signal and removal of the existing traffic signal items;
- Signal Details Sheet (1 sheet) presenting zoomed in view of the details in the quadrants of the intersection.

TEDS shall provide a digital copy of the submittal to the CITY/Volusia County/FDOT for review and comment.

Task 7.3 – Final Design Plan Preparation

Upon receipt of agency comments, TEDS shall address each comment in writing and shall discuss the appropriate revisions to the plans with the agency staff. Once the comments have been addressed, TEDS shall submit a revised draft traffic signal plan package for final review and comment. Once these comments are received, TEDS shall address same and shall provide to the CITY one (1) electronic plan set and five (5) signed and sealed plan sets. TEDS shall repeat the review and response to comments until final resolution with the agencies to obtain final signal plan approval.

Task 8 – Structural Engineering

TEDS will retain Florida Bridge and Transportation, Inc. (FBT) to provide the structural engineering services related to the proposed boardwalk as described in their letter proposal for FBT Project No. 21-31.01 dated April 22, 2021, a copy of which has been attached to this proposal.

Task 9 – Utility Coordination

TEDS will coordinate a Sunshine 811 design ticket for the project in an attempt to identify any Utility Agency Owner's (UAO's) that may currently be using the right of way and reach out to them to confirm the appropriate representatives. Upon completion of 60% plans, TEDS will transmit courtesy copies to the utility companies for their review and comment on the accuracy of utilities shown in the plan, conflicts that may exist between existing utilities and proposed construction, and minor relocation(s) that may be required. Minor adjustments to be designed and constructed by the UAO's will be graphically depicted on the plan sheets.

Traffic Engineering Data Solutions, Inc.

Task 10 – Agency Permitting

At 60% and 90% levels of completion, TEDS will submit copies of the plans and other pertinent documents to the CITY for review. Once comments have been received from the CITY and FDOT, TEDS will revise the plans and respond to comments. In addition, TEDS will prepare the following permit application packages for submittal to the agencies listed below:

- A. SJRWMD – Modification for ERP Series 29869
- B. Volusia County – R/W Use Permit

Task 11 – Bid Phase Services

As Engineer of Record for the project, TEDS will provide support to the CITY during the bid phase, including the following services:

- Review of draft bid documents prepared by the CITY's Purchasing Division
- Prepare technical specifications for the project, with support from the sub-consultants as may be necessary, and provide copies for insertion into the CITY's bid documents (through FDOT Specs on the Web)
- Prepare a project description narrative
- Prepare a bid sheet
- Revise documents per comments received from the CITY and/or FDOT
- Prepare for and attend a pre-bid meeting
- Answer questions during the bid process
- Prepare bid tabulation and assist with selection of a contractor

Task 12 – Limited Post-Design Services

As Engineer of Record for the project, TEDS will provide support to the CITY in administering the construction contract through completion of the project construction, including the following limited post-design services:

- Attendance at a pre-construction meeting
- Provide review of civil-related shop drawing submittals for approval
(to be received from the contractor in one (1) single package)
- Attend up to five (5) meetings at the CITY or the project site for general coordination or to complete limited construction observation
- Review and respond to up to five (5) Requests for Information (RFI's) during construction
- Provide up to 20 hours of general construction administration assistance, such as review of change order(s)
- Review As-Built surveys provided by contractor with overlay of CAD files on design
- Prepare certification package for submittal to Volusia County for R/W Use Permit close-out
- Prepare a *MSSW/Stormwater As-Built Certification By A Registered Professional Engineer* for submittal to the SJRWMD for permit closure
- Prepare Engineer's Certification of Completion
(to serve as Exhibit C to State Funded Grant Agreement with FDOT)

Deliverables: Plans for this project will be developed in English units and formatted for printing on 11"x17" sheets at the scales noted in the individual tasks above. TEDS will provide PDF's of the plans throughout progress completion, and up to (10) sets of deliverables once they have been finalized, for bidding or construction.

Traffic Engineering Data Solutions, Inc.

FEES

TEDS shall conduct the work in the tasks described above for the lump sum fees indicated below:

<i>Description</i>	<i>Fee</i>
Task 1 – Project Management & Administration	\$9,135.00
Task 2 – Surveying	\$51,200.00
<i>Task 2.1 – Right-of-Way Surveys</i>	<i>\$7,900.00</i>
<i>Task 2.2 – Baseline Survey</i>	<i>\$3,000.00</i>
<i>Task 2.3 – Bench Levels</i>	<i>\$4,000.00</i>
<i>Task 2.4 – Intersection Survey</i>	<i>\$4,500.00</i>
<i>Task 2.5 – Cross-Sections</i>	<i>\$10,300.00</i>
<i>Task 2.6 – City Parcels - Boundary Topographic and Tree Location Surveys</i>	<i>\$9,250.00</i>
<i>Task 2.7 – Jenzano Corridor Topographic Survey</i>	<i>\$4,000.00</i>
<i>Task 2.8 – Sketch of Legal Description of Jenzano Trail Easement</i>	<i>\$750.00</i>
<i>Task 2.9 – Jenzano Parent Parcel Eminent Domain Survey</i>	<i>\$7,500.00</i>
Task 3 – Environmental Resources & Permitting	\$12,000.00
Task 4 – Geotechnical Engineering	\$14,000.00
Task 5 – Design Development	\$14,460.00
Task 6 – Roadway Plans	\$22,480.00
Task 7 – Traffic Signal Design	\$10,460.00
Task 8 – Structural Engineering	\$19,500.00
Task 9 – Utility Coordination	\$4,725.00
Task 10 – Agency Permitting	\$14,625.00
Task 11 – Bid Phase Services	\$4,575.00
Task 12 – Limited Post-Design Services	\$11,285.00
Direct Expenses	\$1,872.08
Total	\$190,317.08

An estimate of man-hours and expenses is provided on the following pages.

Traffic Engineering Data Solutions, Inc.

**CITY OF PORT ORANGE
MAN-HOUR ESTIMATE**



May 19, 2021

TEDS PROJECT No.: 10962
CONTRACT DESCRIPTION: Master Contract for Engineering Services
(February 14, 2017)

TASK AUTHORIZATION No.: 09
PROJECT DESCRIPTION: SJR2C Loop Trail (Spruce Creek Rd) from South of Selin Circle to Herbert St
(FPN 439865-3-34-01)

PRIME CONSULTANT: Traffic Engineering Data Solutions, Inc.

ESTIMATE PREPARED BY: Mikal R. Hale, P.E.

ACTIVITY	Chief Engineer / Vice President		Engineer		Engineer Intern		Sr. Designer		Senior Technician		Admin. Assistant		TOTAL		
	Rate/Hr:	\$180.00	Rate/Hr:	\$115.00	Rate/Hr:	\$85.00	Rate/Hr:	\$100.00	Rate/Hr:	\$60.00	Rate/Hr:	\$65.00	Man-hours By Activity	Activity Cost	Avg. Hourly Rate
	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act			
Task 1 – Project Management & Administration	40.0	7,200.00	0.0	0.00	9.0	765.00	0.0	0.00	0.0	0.00	18.0	1,170.00	67.0	9,135.00	136.34
Prepare for / attend kickoff meeting / minutes	4.0				4.0								8.0		
Prepare project schedule / updates	5.0				2.0								7.0		
General coordination / progress status updates	5.0				3.0								8.0		
Administration of design contract / monthly invoicing	12.0										6.0		18.0		
Initial setup & admin of sub-contracts / monthly invoicing	10.0										12.0		22.0		
Prepare for / attend City Council meeting	4.0												4.0		
Task 5 – Design Development	14.0	2,520.00	41.0	4,715.00	85.0	7,225.00	0.0	0.00	0.0	0.00	0.0	0.00	140.0	14,460.00	103.29
Obtain and review record plans / trace for insertion	2.0		10.0		15.0								27.0		
Process GIS data (aerials, FEMA, LIDAR, parcels, etc.)			5.0		10.0								15.0		
Conduct field review / site photos	3.0				3.0								6.0		
Review completed survey	1.0		1.0		3.0								5.0		
Develop alignment & typical sections	2.0		10.0		20.0								32.0		
Assess trail profile	2.0		5.0		10.0								17.0		
Assess drainage basinology & minor drainage structure mods	2.0		5.0		10.0								17.0		
Earthwork / average end area calcs	1.0		2.0		8.0								11.0		
Assess S&PM modifications	1.0		3.0		6.0								10.0		
Task 6 – Roadway Plans	36.0	6,480.00	50.0	5,750.00	110.0	9,350.00	9.0	900.00	0.0	0.00	0.0	0.00	205.0	22,480.00	109.66
Key Sheet (1 sheet)	1.0				3.0								4.0		
Summary of Pay Items (1 sheet)	1.0				5.0		2.0						8.0		
Signature Sheet (1 sheet)	1.0				1.0								2.0		
Drainage Map (1"=200' scale) (1 sheet)	2.0		2.0		10.0		2.0						16.0		
General Notes (1 sheet)	2.0		2.0										4.0		
Project Layout (1 sheet)					3.0								3.0		
Project Control (1 sheet)	1.0				3.0								4.0		
Typical Section (2 sheets)	2.0		2.0		2.0								6.0		
Roadway Plan (1"=40' scale) (6 sheets)	5.0		20.0		25.0								50.0		
Bridge Plan & Profile (1"=40' scale) (1 sheet)	5.0		5.0		8.0								18.0		
Cross-Sections (10 sheets)	2.0		15.0		10.0								27.0		
Construction Details (1 sheet)	1.0		1.0		2.0								4.0		
Traffic Control Plans (2 sheets) – FDOT Standard Plans			1.0		2.0								3.0		
SWPPP Notes (1 sheet)	1.0		1.0		3.0								5.0		
Erosion Control Plans (1"=40' scale) (3 sheets)			1.0		5.0								6.0		
S&PM Plans (1"=40' scale) (3 sheets)	3.0				10.0		5.0						18.0		
Engineer's Opinion of Probable Costs (60%, 90%, & Final)	3.0				18.0								21.0		
QA/QC (60%, 90%, & Final)	6.0												6.0		
													0.0		
Task 7 – Traffic Signal Design	16.0	2,880.00	12.0	1,380.00	0.0	0.00	62.0	6,200.00	0.0	0.00	0.0	0.00	90.0	10,460.00	116.22
Initial Plans Package	8.0		8.0				50.0						66.0		
Field Meeting	4.0						4.0						8.0		
Final Plans Package	4.0		4.0				8.0						16.0		

**CITY OF PORT ORANGE
MAN-HOUR ESTIMATE**



May 19, 2021

TEDS PROJECT No.: 10962
CONTRACT DESCRIPTION: Master Contract for Engineering Services
(February 14, 2017)

TASK AUTHORIZATION No.: 09
PROJECT DESCRIPTION: SJR2C Loop Trail (Spruce Creek Rd) from South of Selin Circle to Herbert St
(FPN 439865-3-34-01)

PRIME CONSULTANT: Traffic Engineering Data Solutions, Inc.

ESTIMATE PREPARED BY: Mikal R. Hale, P.E.

ACTIVITY	Chief Engineer / Vice President		Engineer		Engineer Intern		Sr. Designer		Senior Technician		Admin. Assistant		TOTAL		
	Rate/Hr:	\$180.00	Rate/Hr:	\$115.00	Rate/Hr:	\$85.00	Rate/Hr:	\$100.00	Rate/Hr:	\$60.00	Rate/Hr:	\$65.00	Man-hours By Activity	Activity Cost	Avg. Hourly Rate
	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act			
Task 9 – Utility Coordination	4.0	720.00	6.0	690.00	39.0	3,315.00	0.0	0.00	0.0	0.00	0.0	0.00	49.0	4,725.00	96.43
811 Design Ticket					1.0								1.0		
Confirm representatives					5.0								5.0		
Prepare & send notification e-mails with plans	1.0				8.0								9.0		
Adjust location of existing utilities per UAO markups	2.0		3.0		20.0								25.0		
Depict relocations by UAO's per conflicts (if applicable)	1.0		3.0		5.0								9.0		
Task 10 – Agency Permitting	16.0	2,880.00	43.0	4,945.00	80.0	6,800.00	0.0	0.00	0.0	0.00	0.0	0.00	139.0	14,625.00	105.22
Submit 60% plans to City & FDOT	1.0		2.0		2.0								5.0		
Review comments and revise plans	3.0		15.0		25.0								43.0		
Submit 90% plans to City & FDOT	1.0		2.0		2.0								5.0		
Review comments and revise plans	3.0		10.0		20.0								33.0		
Submit FINAL plans to City & FDOT	1.0		2.0		2.0								5.0		
Prepare & submit SJRWMD ERP Modification	3.0		5.0		10.0								18.0		
Review comments and revise plans	2.0		3.0		15.0								20.0		
Prepare & submit County R/W Use Permit	1.0		2.0		2.0								5.0		
Review comments and revise plans	1.0		2.0		2.0								5.0		
Task 11 – Bid Phase Services	12.0	2,160.00	21.0	2,415.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	33.0	4,575.00	138.64
Review draft bid docs (by City)	3.0		3.0										6.0		
Prepare Technical Specifications	1.0		3.0										4.0		
Prepare project description & bid sheet	1.0		2.0										3.0		
Revisions per City & FDOT	1.0		5.0										6.0		
Attend pre-bid meeting	3.0												3.0		
Answer bid questions	1.0		3.0										4.0		
Prepare bid tabulation	2.0		5.0										7.0		

**CITY OF PORT ORANGE
MAN-HOUR ESTIMATE**



May 19, 2021

TEDS PROJECT No.: 10962
CONTRACT DESCRIPTION: Master Contract for Engineering Services
 (February 14, 2017)
PRIME CONSULTANT: Traffic Engineering Data Solutions, Inc.

TASK AUTHORIZATION No.: 09
PROJECT DESCRIPTION: SJR2C Loop Trail (Spruce Creek Rd) from South of Selin Circle to Herbert St
 (FPN 439865-3-34-01)
ESTIMATE PREPARED BY: Mikal R. Hale, P.E.

ACTIVITY	Chief Engineer / Vice President		Engineer		Engineer Intern		Sr. Designer		Senior Technician		Admin. Assistant		TOTAL		
	Rate/Hr:	\$180.00	Rate/Hr:	\$115.00	Rate/Hr:	\$85.00	Rate/Hr:	\$100.00	Rate/Hr:	\$60.00	Rate/Hr:	\$65.00	Man-hours By Activity	Activity Cost	Avg. Hourly Rate
	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act			
Task 12 – Limited Post-Design Services	31.0	5,580.00	40.0	4,600.00	13.0	1,105.00	0.0	0.00	0.0	0.00	0.0	0.00	84.0	11,285.00	134.35
Attend pre-con meeting	3.0												3.0		
Shop drawing review	2.0		8.0										10.0		
Attend (5) meetings at City	10.0		5.0										15.0		
Review and respond to (5) RAI's	2.0		3.0		5.0								10.0		
General construction administration	10.0		20.0										30.0		
Review As-Builts / overlay CAD files on design	1.0		1.0		2.0								4.0		
Certification package for Volusia County R/W Use	1.0		1.0		2.0								4.0		
Certification package for SJRWMD ERP Mod	1.0		1.0		2.0								4.0		
Engineer's Certification of Completion for FDOT	1.0		1.0		2.0								4.0		
TOTALS	169.0	30,420.00	213.0	24,495.00	336.0	28,560.00	71.0	7,100.00	0.0	0.00	18.0	1,170.00	586.0	91,745.00	156.56

TEDS LABOR **\$91,745.00**

EXPENSES *(Refer to backup provided on the following page)*

Sub-Consultant Fees

I. SUB-CONSULTANT FEES **\$96,700.00**

Direct Expenses

II. REPRODUCTION **\$52.80**

III. MILEAGE / TRAVEL **\$629.28**

IV. PERMIT REVIEW FEES **\$1,190.00**

V. SHIPPING / POSTAGE **\$0.00**

Sub-Total Direct Expenses **\$1,872.08**

SUB-TOTAL EXPENSES **\$98,572.08**

TOTAL LUMP SUM CONTRACT AMOUNT **\$190,317.08**

CITY OF PORT ORANGE
EXPENSES
May 19, 2021



TEDS PROJECT No.: 10962 CONTRACT DESCRIPTION: Master Contract for Engineering Services (February 14, 2017)		TASK AUTHORIZATION No.: 09 PROJECT DESCRIPTION: SJR2C Loop Trail (Spruce Creek Rd) from South of Selin Circle to Herbert St (FPN 439865-3-34-01)	
PRIME CONSULTANT: Traffic Engineering Data Solutions, Inc.		ESTIMATE PREPARED BY: Mikal R. Hale, P.E.	

I. SUB-CONSULTANT FEES			
Sub-Consultant	Description of Services		Fee
a) PEC Surveying and Mapping, LLC	Task 2.1 – Right-of-Way Surveys		\$7,900.00
b) PEC Surveying and Mapping, LLC	Task 2.2 – Baseline Survey		\$3,000.00
c) PEC Surveying and Mapping, LLC	Task 2.3 – Bench Levels		\$4,000.00
d) PEC Surveying and Mapping, LLC	Task 2.4 – Intersection Survey		\$4,500.00
e) PEC Surveying and Mapping, LLC	Task 2.5 – Cross-Sections		\$10,300.00
f) PEC Surveying and Mapping, LLC	Task 2.6 – City Parcels - Boundary Topographic and Tree Location Surveys		\$9,250.00
g) PEC Surveying and Mapping, LLC	Task 2.7 – Jenzano Corridor Topographic Survey		\$4,000.00
h) PEC Surveying and Mapping, LLC	Task 2.8 – Sketch of Legal Description of Jenzano Trail Easement		\$750.00
i) PEC Surveying and Mapping, LLC	Task 2.9 – Jenzano Parent Parcel Eminent Domain Survey		\$7,500.00
j) Terracon Consulting, Inc.	Task 3 – Environmental Resources & Permitting		\$12,000.00
k) Terracon Consulting, Inc.	Task 4 – Geotechnical Engineering		\$14,000.00
l) Florida Bridge and Transportation, Inc.	Task 8 – Structural Engineering		\$19,500.00
Totals			\$96,700.00

II. REPRODUCTION							
Contract Rate	<u>Black / White:</u>	8.5" x 11"	\$0.10 / sheet	<u>Color:</u>	8.5" x 11"	\$1.20 / sheet	
		11" x 17"	\$0.20 / sheet		11" x 17"	\$2.00 / sheet	
		24" x 36"	\$3.00 / sheet		24" x 36"	\$20.00 / sheet	

Job Estimate	Number of Sheets						Number of Sets	Cost
	Black / White			Color				
Document Description	8.5" x 11"	11" x 17"	24" x 36"	8.5" x 11"	11" x 17"	24" x 36"		
a) Construction Plans - FINAL Submittal		56			1		4	\$52.80
Total Reproduction Costs								\$52.80

III. MILEAGE / TRAVEL			
Contract Rate	0.57 / mile (Current Federal Rate)		

Reason for Trip / Destination	Distance / Mileage (round trip)	Number of Trips	Cost
a) Kickoff meeting / City Hall	64	1	\$36.48
b) City Council / City Hall	64	1	\$36.48
c) Coordination meetings / City Hall	64	3	\$109.44
d) Field review / project site	66	1	\$75.24
e) Pre-bid meeting / City Hall	64	1	\$72.96
f) Pre-con meeting / City Hall	64	1	\$72.96
g) Construction observation / project site	66	2	\$150.48
h) Final walk-through / project site	66	1	\$75.24
Total Mileage / Travel Costs			\$629.28

IV. PERMIT REVIEW FEES	
Contract Rate	Cost

Description	Estimated Cost
a) SJRWMD Major Mod to ERP	\$1,190.00
b) Volusia County R/W Use Permit	\$0.00
<i>application fees to be waived by County</i>	
Total Permit Review Fees	\$1,190.00

V. SHIPPING / POSTAGE	
Contract Rate	Cost

Description	Estimated Cost	
a) N/A		
b)		
Total Shipping / Postage Costs		\$0.00



Surveying and Mapping

May 13, 2021

Transportation Engineering Data Solutions
Mr. Mikal Hale P.E., Vice President
80 Spring Vista Drive
DeBary, Florida 32713

PS16805r-TED

**Re: Port Orange Sea Loop Trail - Surveying and Mapping Services
City of Port Orange, Florida**

Dear Mr. Hale:

PEC-Surveying and Mapping (PEC) is pleased to submit our proposal for surveying and mapping services in connection with the above-referenced Project.

DESIGN SURVEY: We propose to perform a Design Survey to support the Engineering of the City of Port Orange Sea Loop Trail Segment. The Project Corridor is depicted on the attached portions of the Preliminary Engineering Report (PER) of the Florida Department of Transportation St Johns River to Sea (SJR2C) Loop Project Development and Environmental (PD&E) Study Dated April of 2020.

The Project Limits are that portion of the Corridor being the entire right-of-way width of Spruce Creek Road together with the Halifax Canal, lying east of the Road Spruce Creek Road, from Station 164 to Station 171; the Spruce Creek Road – Dunlawton Avenue Intersection, north, along Spruce Creek Road through the City Owned Parcels, to 50 feet north of the Herbert Street 6th Street Intersection, as shown in the PD&E Study. This represents a total length of approximately 2,300 feet of corridor.

Right-of-way Surveys: The right-of-way of Spruce Creek Road and the Halifax Canal shall be determined by field Survey.

Baseline: A Baseline will be established in the field and referenced for future use during construction, at 1,000-foot intervals.

Bench Levels: A 4 Mile - Closed Bench Loop will be performed incorporating two Volusia County Published Benchmarks. Elevations will be established along the Project Baseline. Elevations will be relative to the North American Vertical Datum of 1988.

Spruce Creek Road – Dunlawton Avenue Intersection Survey: The Intersection of Spruce Creek Road – Dunlawton Avenue will be Surveyed 150 feet, in all directions from the radius returns. All above ground improvements will be located relative to the roadway right-of-ways. All pavement markings will also be located. Elevations will be obtained on 50-foot cross sections.

Cross-Sections: Cross-sections will be performed of the Project Limits at 50-foot intervals.

City of Port Orange Parcels (CAD only): The Project Alignment traverses the two City owned Parcels: Volusia County Property Appraiser's Alykey Numbers 5080030 and 5578518, between the Spruce Creek Road Northern Terminus and the 6th Street – Herbert Street Intersection. A Boundary and Topographic and Tree Location Survey, of these two parcels will be performed.

Jenzano Corridor Topographic Survey: A Topographic Survey of the westerly 100 feet of the Jenzano Parcel will be performed to include the Halifax Canal.

Sketch of Legal Description of Jenzano Trail Easement: A Sketch of Legal Description for the proposed Trail corridor through the Jenzano ownership will be prepared if required.

Eminent Domain Survey – Jenzano Parent Parcel: If requested the Jenzano ownership will be Surveyed with all above ground improvements located relative to the Boundaries.

Fees: We propose to perform the work for the following Fees:

Right-of-way Surveys:	\$ 7,900.00
Baseline Survey:	\$ 3,000.00
Bench Levels (4 miles):	\$ 4,000.00
Intersection Survey: Spruce Creek Road – Dunlawton Avenue:	\$ 4,500.00
Cross Sections:	\$ 10, 300.00
City Owned Parcels (2) Boundary Topographic and Tree Location Surveys (CAD Only): ...	\$ 9,250.00
Jenzano Corridor Topographic Survey:	\$ 4,000.00
Sketch of Legal Description of Jenzano Trail Easement:	\$ 750.00
Jenzano Parent Parcel Emminent Domain Survey:	\$ 7,500.00

Thank you for the opportunity of submitting this proposal to you. Should you have any questions or comments please advise.

Sincerely

PEC Surveying and Mapping



David A. White P.S.M.

May 6, 2021



Mr. Mikal Hale, P.E.
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive
Debary, Florida 32713

Telephone: (386) 753-0558
E-mail: mhale@teds-fl.com

RE: Proposal for Environmental and Geotechnical Services
City of Port Orange – SUN Trail
Port Orange, Volusia County, Florida
Terracon Proposal No. PEQ217222

Dear Mr. Hale:

Terracon Consultants, Inc. (Terracon) appreciates the opportunity to submit this proposal to Traffic Engineering Data Solutions, Inc. (Client) to provide environmental, cultural resource, and geotechnical services for the above referenced project in Port Orange, Florida. This proposal outlines our understanding of the project, our planned work scope and associated fee, and our terms and conditions associated with the performance of this work.

If this proposal meets with your approval, work may be initiated by returning a fully executed copy of the attached Agreement for Services. Please provide the land owner contact information or access information with the signed agreement. The terms, conditions, and limitations stated in the Agreement for Services and sections of this proposal incorporated therein, shall constitute the exclusive terms and conditions and services to be performed for this project.

We appreciate the opportunity to provide this proposal. If you have questions or comments regarding this proposal or require additional services, please give us a call.

Sincerely,
Terracon Consultants, Inc.

Brett Anderson
Senior Project Manager

Gary K. Howalt, PWS
Senior Principal/Department Manager

Attachments: Detailed Scope of Services
Agreement for Services



Terracon Consultants, Inc. 8001 Baymeadows Way, Suite 1 Jacksonville, FL 32256
P [904] 900-6494 F [904] 268-5255 terracon.com

Environmental



Facilities



Geotechnical



Materials

DETAILED SCOPE OF SERVICES

1.0 PROJECT INFORMATION

The site is located within the City of Port Orange and is part of the St. Johns River to Sea Loop Trail system. This segment, of the much larger trail system, begins south of the intersection of Spruce Creek Road and Selin Circle. The trail will extend northerly along the east side of Spruce Creek Road towards Oak Street. The trail will then continue along Spruce Creek Road from Dunlawton Avenue to Canal View Boulevard. The trail continues through a vacant parcel to Herbert Street, connection to the existing Trail Segment. The total project length is approximately 0.65 miles. If this is not accurate, or if you have additional useful information, please inform us as soon as possible.

Based on Terracon's understanding of the project, TEDS will need support to design the proposed section of trail within the City of Port Orange. Specifically, services to be provided include a natural resource review (wetlands, protected species, essential fish habitat), wetland permitting assistance, and geotechnical services. The following sections outline Terracon's scope and fees to conduct associated environmental and geotechnical services to support permitting efforts.

2.0 ENVIRONMENTAL RESOURCES REPORT

Terracon will perform a detailed natural resource review of the proposed ±0.65-mile section of SUNTrail proposed within the city of Port Orange, Florida. Specifically, Terracon will delineate wetlands within the trail corridor pursuant to the current methodologies of the U.S. Army Corps of Engineers [(USACE) 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0)], Florida Department of Environmental Protection (FDEP) and St. Johns River Water Management District [(SJRWMD) Florida Unified Wetland Delineation Methodology, Chapter 62-340, F.A.C.]. Upon completion of the delineation effort, Terracon will provide the project surveyor with a flagging key map showing the approximate location of the wetland line.

In addition, Terracon will perform a protected species review of the proposed trail corridor. This investigation will survey the proposed corridor for the presence of any state or federally protected wildlife species and their habitat. If protected species or habitats are encountered, Terracon will perform preliminary mapping of the potential habitat area.

Implications to development associated with any identified wetlands and/or protected species will be addressed in an Environmental Resources Report to be provided at the completion of the field investigation efforts.

**Based on the Preliminary Engineering Report (PER) prepared by Scalar Consulting Group, Inc. (Scalar), it is anticipated that wetlands will be found within the project corridor. However, protected*

species impacts are not anticipated based on the Scalar PER. Should Terracon identify any protected species concerns, a supplemental change order may need to be requested to address any necessary surveying, agency coordination, and/or permitting efforts associated with those findings.

3.0 ENVIRONMENTAL PERMITTING

Based on the PER prepared by Scalar on behalf of FDOT, it is anticipated that wetland permitting efforts will be required to address the portion of the trail south of Herbert Street. It is Terracon's understanding that a portion of this section of trail will be an elevated boardwalk within the wetland. Terracon will acquire the necessary wetland authorization from SJRWMD to allow for the proposed wetland impact.

Based on a preliminary review, it is anticipated that the subject wetland would be non-jurisdictional under Section 404 of the Clean Water Act. Therefore, Terracon will submit a No Permit Required Verification Request to the Florida Department of Environmental Protection (jointly with the SJRWMD submittal). Should the wetland be deemed jurisdictional under Section 404 of the Clean Water Act, federal authorization may be necessary, and a supplemental change order may be required.

This fee does not include any application fees charged by the regulatory agencies or any mitigation fees associated with proposed wetland impacts.

4.0 GEOTECHNICAL SERVICES

The following summarizes our assumptions regarding the project:

- We will be granted access by our drill rig and crew to perform the required soil borings for the project elements.
- No roadway lane or shoulder closures are anticipated in order to perform the soil borings. Any necessary Maintenance of Traffic (MOT) will be performed in accordance with the Florida Department of Transportation (FDOT) Standard Plans.
- Survey support will be provided by others.

The following presents the number and depth of soil borings proposed for the project elements described above. Survey control in the field will be needed, as necessary, to assist our crews locate borings.

Boardwalk

Based on provided information, our field program includes performing a total of four Standard Penetration Test (SPT) borings to a depth of 40 feet each. Perform soil probing along the boardwalk alignment.

Following completion of the drilling services described above, the following geotechnical services are proposed for this project:

- Perform visual classification and limited laboratory testing of the soil samples obtained from the borings described above.
- Laboratory testing will include grain size analysis, organic content tests, moisture content tests, and/or Atterberg limits analysis, as appropriate, to aid visual classification of soil types. Laboratory testing will also include limited corrosion series testing.
- Engineering services will include coordination and supervision of all field and laboratory testing as well as engineering analysis of the field and laboratory test results. Specifically, geotechnical analysis and recommendations will be made for the following:
 - Boardwalk: Davisson capacity curves based on SPT boring results, observed groundwater tables, results of soil probing, timber pile driving recommendations, vibration recommendations, as needed, and soil parameters for lateral stability analysis (to be performed by others), if necessary.
- After completion of the field phase of the project, a preliminary report will be prepared for review and comment. After appropriate review, a final report will be prepared.

5.0 ADDITIONAL SERVICES NOT INCLUDED

Should it be necessary to expand our services beyond those outlined in this proposal, we will notify you and send a supplemental proposal stating the additional services and fee. We will not proceed without your authorization.

6.0 SCOPE AND REPORT LIMITATIONS

Client shall secure all necessary site related approvals, permits, licenses, and consents necessary to commence and complete the Services and will execute any necessary site access agreement. Consultant will be responsible for supervision and site safety measures for its own employees but shall not be responsible for the supervision or health and safety precautions for any third parties, including Client's contractors, subcontractors, or other parties present at the site. In addition, Consultant retains the right to stop work without penalty at any time Consultant

believes it is in the best interests of Consultant's employees or subcontractors to do so in order to reduce the risk of exposure to the coronavirus. Client agrees it will respond quickly to all requests for information made by Consultant related to Consultant's pre-task planning and risk assessment processes. Client acknowledges its responsibility for notifying Consultant of any circumstances that present a risk of exposure to the coronavirus or individuals who have tested positive for COVID-19 or are self-quarantining due to exhibiting symptoms associated with the coronavirus.

The findings and conclusions presented in the final report will be based on the site's current utilization, the anticipated future use of the site, if provided to Terracon, and the information collected as discussed in this proposal. Please note that we do not warrant database or third-party information (such as from interviewees) or regulatory agency information used in the compilation of plans or reports. No warranties, express or implied, are intended or made.

7.0 SCHEDULE

Terracon is prepared to begin upon receipt of written notice to proceed. It is anticipated that preliminary efforts (desktop background research, initial planning) will begin within five business days of NTP, while initial field efforts will begin within 10 business days of NTP, weather dependent.

8.0 COMPENSATION

Task	Fees
Environmental Resources Report	\$6,000.00
Environmental Permitting	\$6,000.00
Geotechnical Services	\$14,000.00

The project will be invoiced on a percent complete basis monthly. Payments on invoices will be due in full within 30 days from the date of the invoice.

9.0 OUR COMMITMENT TO SAFETY

Safety is one of Terracon's core values and our commitment to an Incident and Injury-Free® philosophy is one of the pillars of our current Strategic Plan. Incident and Injury-Free (IIF) is about care and concern for our people. It is our personal and organizational commitment at all levels of the company to everyone going home safe to their family every day. It is where safety is held as a core value as well as an operational priority. Working safely is an inseparable part of working correctly, just as much as other operational priorities, in particular quality, profitability and

Proposal for Environmental and Geotechnical Assessment Services

Traffic Engineering Data Solutions, Inc. ■ Port Orange, Florida

May 6, 2021 ■ Terracon Project No. PEQ217222



schedule. IIF is our commitment to our people, who we value for who they are and what they do. We strive to build health and safety into all aspects of our business and into the thinking of our employees.

AGREEMENT FOR SERVICES

This **AGREEMENT** is between Traffic Engineering Data Solutions, Inc. ("Client") and Terracon Consultants, Inc. ("Consultant") for Services to be provided by Consultant for Client on the City of Port Orange - SUN Trail project ("Project"), as described in Consultant's Proposal dated 05/06/2021 ("Proposal"), including but not limited to the Project Information section, unless the Project is otherwise described in Exhibit A to this Agreement (which section or Exhibit is incorporated into this Agreement).

- 1. Scope of Services.** The scope of Consultant's services is described in the Proposal, including but not limited to the Scope of Services section ("Services"), unless Services are otherwise described in Exhibit B to this Agreement (which section or exhibit is incorporated into this Agreement). Portions of the Services may be subcontracted. Consultant's Services do not include the investigation or detection of, nor do recommendations in Consultant's reports address the presence or prevention of biological pollutants (e.g., mold, fungi, bacteria, viruses, or their byproducts) or occupant safety issues, such as vulnerability to natural disasters, terrorism, or violence. If Services include purchase of software, Client will execute a separate software license agreement. Consultant's findings, opinions, and recommendations are based solely upon data and information obtained by and furnished to Consultant at the time of the Services.
- 2. Acceptance/ Termination.** Client agrees that execution of this Agreement is a material element of the consideration Consultant requires to execute the Services, and if Services are initiated by Consultant prior to execution of this Agreement as an accommodation for Client at Client's request, both parties shall consider that commencement of Services constitutes formal acceptance of all terms and conditions of this Agreement. Additional terms and conditions may be added or changed only by written amendment to this Agreement signed by both parties. In the event Client uses a purchase order or other form to administer this Agreement, the use of such form shall be for convenience purposes only and any additional or conflicting terms it contains are stricken. This Agreement shall not be assigned by either party without prior written consent of the other party. Either party may terminate this Agreement or the Services upon written notice to the other. In such case, Consultant shall be paid costs incurred and fees earned to the date of termination plus reasonable costs of closing the Project.
- 3. Change Orders.** Client may request changes to the scope of Services by altering or adding to the Services to be performed. If Client so requests, Consultant will return to Client a statement (or supplemental proposal) of the change setting forth an adjustment to the Services and fees for the requested changes. Following Client's review, Client shall provide written acceptance. If Client does not follow these procedures, but instead directs, authorizes, or permits Consultant to perform changed or additional work, the Services are changed accordingly and Consultant will be paid for this work according to the fees stated or its current fee schedule. If project conditions change materially from those observed at the site or described to Consultant at the time of proposal, Consultant is entitled to a change order equitably adjusting its Services and fee.
- 4. Compensation and Terms of Payment.** Client shall pay compensation for the Services performed at the fees stated in the Proposal, including but not limited to the Compensation section, unless fees are otherwise stated in Exhibit C to this Agreement (which section or Exhibit is incorporated into this Agreement). If not stated in either, fees will be according to Consultant's current fee schedule. Fee schedules are valid for the calendar year in which they are issued. Fees do not include sales tax. Client will pay applicable sales tax as required by law. Consultant may invoice Client at least monthly and payment is due upon receipt of invoice. Client shall notify Consultant in writing, at the address below, within 15 days of the date of the invoice if Client objects to any portion of the charges on the invoice, and shall promptly pay the undisputed portion. Client shall pay a finance fee of 1.5% per month, but not exceeding the maximum rate allowed by law, for all unpaid amounts 30 days or older. Client agrees to pay all collection-related costs that Consultant incurs, including attorney fees. Consultant may suspend Services for lack of timely payment. It is the responsibility of Client to determine whether federal, state, or local prevailing wage requirements apply and to notify Consultant if prevailing wages apply. If it is later determined that prevailing wages apply, and Consultant was not previously notified by Client, Client agrees to pay the prevailing wage from that point forward, as well as a retroactive payment adjustment to bring previously paid amounts in line with prevailing wages. Client also agrees to defend, indemnify, and hold harmless Consultant from any alleged violations made by any governmental agency regulating prevailing wage activity for failing to pay prevailing wages, including the payment of any fines or penalties.
- 5. Third Party Reliance.** This Agreement and the Services provided are for Consultant and Client's sole benefit and exclusive use with no third party beneficiaries intended. Reliance upon the Services and any work product is limited to Client, and is not intended for third parties other than those who have executed Consultant's reliance agreement, subject to the prior approval of Consultant and Client.
- 6. LIMITATION OF LIABILITY. CLIENT AND CONSULTANT HAVE EVALUATED THE RISKS AND REWARDS ASSOCIATED WITH THIS PROJECT, INCLUDING CONSULTANT'S FEE RELATIVE TO THE RISKS ASSUMED, AND AGREE TO ALLOCATE CERTAIN OF THE ASSOCIATED RISKS. TO THE FULLEST EXTENT PERMITTED BY LAW, THE TOTAL AGGREGATE LIABILITY OF CONSULTANT (AND ITS RELATED CORPORATIONS AND EMPLOYEES) TO CLIENT AND THIRD PARTIES GRANTED RELIANCE IS LIMITED TO THE GREATER OF \$50,000 OR CONSULTANT'S FEE, FOR ANY AND ALL INJURIES, DAMAGES, CLAIMS, LOSSES, OR EXPENSES (INCLUDING ATTORNEY AND EXPERT FEES) ARISING OUT OF CONSULTANT'S SERVICES OR THIS AGREEMENT. PRIOR TO ACCEPTANCE OF THIS AGREEMENT AND UPON WRITTEN REQUEST FROM CLIENT, CONSULTANT MAY NEGOTIATE A HIGHER LIMITATION FOR ADDITIONAL CONSIDERATION IN THE FORM OF A SURCHARGE TO BE ADDED TO THE AMOUNT STATED IN THE COMPENSATION SECTION OF THE PROPOSAL. THIS LIMITATION SHALL APPLY REGARDLESS OF AVAILABLE PROFESSIONAL LIABILITY INSURANCE COVERAGE, CAUSE(S), OR THE THEORY OF LIABILITY, INCLUDING NEGLIGENCE, INDEMNITY, OR OTHER RECOVERY. THIS LIMITATION SHALL NOT APPLY TO THE EXTENT THE DAMAGE IS PAID UNDER CONSULTANT'S COMMERCIAL GENERAL LIABILITY POLICY.**
- 7. Indemnity/Statute of Limitations.** Consultant and Client shall indemnify and hold harmless the other and their respective employees from and against legal liability for claims, losses, damages, and expenses to the extent such claims, losses, damages, or expenses are legally determined to be caused by their negligent acts, errors, or omissions. In the event such claims, losses, damages, or expenses are legally determined to be caused by the joint or concurrent negligence of Consultant and Client, they shall be borne by each party in proportion to its own negligence under comparative fault principles. Neither party shall have a duty to defend the other party, and no duty to defend is hereby created by this indemnity provision and such duty is explicitly waived under this Agreement. Causes of action arising out of Consultant's Services or this Agreement regardless of cause(s) or the theory of liability, including negligence, indemnity or other recovery shall be deemed to have accrued and the applicable statute of limitations shall commence to run not later than the date of Consultant's substantial completion of Services on the project.
- 8. Warranty.** Consultant will perform the Services in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. **EXCEPT FOR THE STANDARD OF CARE PREVIOUSLY STATED, CONSULTANT MAKES NO WARRANTIES OR GUARANTEES, EXPRESS OR IMPLIED, RELATING TO CONSULTANT'S SERVICES AND CONSULTANT DISCLAIMS ANY IMPLIED WARRANTIES OR WARRANTIES IMPOSED BY LAW, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**
- 9. Insurance.** Consultant represents that it now carries, and will continue to carry: (i) workers' compensation insurance in accordance with the laws of the states having jurisdiction over Consultant's employees who are engaged in the Services, and employer's liability insurance (\$1,000,000); (ii) commercial general liability insurance (\$1,000,000 occ / \$2,000,000 agg); (iii) automobile liability insurance (\$1,000,000 B.I. and P.D. combined single limit); and (iv) professional liability insurance (\$1,000,000 claim / agg). Certificates of insurance will be provided upon request. Client and Consultant shall waive subrogation against the other party on all general liability and property coverage.

- 10. CONSEQUENTIAL DAMAGES.** NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR LOSS OF PROFITS OR REVENUE; LOSS OF USE OR OPPORTUNITY; LOSS OF GOOD WILL; COST OF SUBSTITUTE FACILITIES, GOODS, OR SERVICES; COST OF CAPITAL; OR FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT, PUNITIVE, OR EXEMPLARY DAMAGES.
- 11. Dispute Resolution.** Client shall not be entitled to assert a Claim against Consultant based on any theory of professional negligence unless and until Client has obtained the written opinion from a registered, independent, and reputable engineer, architect, or geologist that Consultant has violated the standard of care applicable to Consultant's performance of the Services. Client shall provide this opinion to Consultant and the parties shall endeavor to resolve the dispute within 30 days, after which Client may pursue its remedies at law. This Agreement shall be governed by and construed according to Florida law.
- 12. Subsurface Explorations.** Subsurface conditions throughout the site may vary from those depicted on logs of discrete borings, test pits, or other exploratory services. Client understands Consultant's layout of boring and test locations is approximate and that Consultant may deviate a reasonable distance from those locations. Consultant will take reasonable precautions to reduce damage to the site when performing Services; however, Client accepts that invasive services such as drilling or sampling may damage or alter the site. Site restoration is not provided unless specifically included in the Services.
- 13. Testing and Observations.** Client understands that testing and observation are discrete sampling procedures, and that such procedures indicate conditions only at the depths, locations, and times the procedures were performed. Consultant will provide test results and opinions based on tests and field observations only for the work tested. Client understands that testing and observation are not continuous or exhaustive, and are conducted to reduce - not eliminate - project risk. Client shall cause all tests and inspections of the site, materials, and Services performed by Consultant to be timely and properly scheduled in order for the Services to be performed in accordance with the plans, specifications, contract documents, and Consultant's recommendations. No claims for loss or damage or injury shall be brought against Consultant by Client or any third party unless all tests and inspections have been so performed and Consultant's recommendations have been followed. Unless otherwise stated in the Proposal, Client assumes sole responsibility for determining whether the quantity and the nature of Services ordered by Client is adequate and sufficient for Client's intended purpose. Client is responsible (even if delegated to contractor) for requesting services, and notifying and scheduling Consultant so Consultant can perform these Services. Consultant is not responsible for damages caused by Services not performed due to a failure to request or schedule Consultant's Services. Consultant shall not be responsible for the quality and completeness of Client's contractor's work or their adherence to the project documents, and Consultant's performance of testing and observation services shall not relieve Client's contractor in any way from its responsibility for defects discovered in its work, or create a warranty or guarantee. Consultant will not supervise or direct the work performed by Client's contractor or its subcontractors and is not responsible for their means and methods. The extension of unit prices with quantities to establish a total estimated cost does not guarantee a maximum cost to complete the Services. The quantities, when given, are estimates based on contract documents and schedules made available at the time of the Proposal. Since schedule, performance, production, and charges are directed and/or controlled by others, any quantity extensions must be considered as estimated and not a guarantee of maximum cost.
- 14. Sample Disposition, Affected Materials, and Indemnity.** Samples are consumed in testing or disposed of upon completion of the testing procedures (unless stated otherwise in the Services). Client shall furnish or cause to be furnished to Consultant all documents and information known or available to Client that relate to the identity, location, quantity, nature, or characteristic of any hazardous waste, toxic, radioactive, or contaminated materials ("Affected Materials") at or near the site, and shall immediately transmit new, updated, or revised information as it becomes available. Client agrees that Consultant is not responsible for the disposition of Affected Materials unless specifically provided in the Services, and that Client is responsible for directing such disposition. In no event shall Consultant be required to sign a hazardous waste manifest or take title to any Affected Materials. Client shall have the obligation to make all spill or release notifications to appropriate governmental agencies. The Client agrees that Consultant neither created nor contributed to the creation or existence of any Affected Materials conditions at the site and Consultant shall not be responsible for any claims, losses, or damages allegedly arising out of Consultant's performance of Services hereunder, or for any claims against Consultant as a generator, disposer, or arranger of Affected Materials under federal, state, or local law or ordinance.
- 15. Ownership of Documents.** Work product, such as reports, logs, data, notes, or calculations, prepared by Consultant shall remain Consultant's property. Proprietary concepts, systems, and ideas developed during performance of the Services shall remain the sole property of Consultant. Files shall be maintained in general accordance with Consultant's document retention policies and practices.
- 16. Utilities.** Unless otherwise stated in the Proposal, Client shall provide the location and/or arrange for the marking of private utilities and subterranean structures. Consultant shall take reasonable precautions to avoid damage or injury to subterranean structures or utilities. Consultant shall not be responsible for damage to subterranean structures or utilities that are not called to Consultant's attention, are not correctly marked, including by a utility locate service, or are incorrectly shown on the plans furnished to Consultant.
- 17. Site Access and Safety.** Client shall secure all necessary site related approvals, permits, licenses, and consents necessary to commence and complete the Services and will execute any necessary site access agreement. Consultant will be responsible for supervision and site safety measures for its own employees, but shall not be responsible for the supervision or health and safety precautions for any other parties, including Client, Client's contractors, subcontractors, or other parties present at the site. In addition, Consultant retains the right to stop work without penalty at any time Consultant believes it is in the best interests of Consultant's employees or subcontractors to do so in order to reduce the risk of exposure to the coronavirus. Client agrees it will respond quickly to all requests for information made by Consultant related to Consultant's pre-task planning and risk assessment processes. Client acknowledges its responsibility for notifying Consultant of any circumstances that present a risk of exposure to the coronavirus or individuals who have tested positive for COVID-19 or are self-quarantining due to exhibiting symptoms associated with the coronavirus.

PURSUANT TO SECTION 558.0035 OF FLORIDA STATUTES, AN INDIVIDUAL EMPLOYEE OR AGENT OF CONSULTANT MAY NOT BE HELD INDIVIDUALLY LIABLE.

Consultant: **Terracon Consultants, Inc.**

By: _____ Date: **5/6/2021**

Name/Title: **Gary K Howalt / Principal/Department Manager I**

Address: **8001 Baymeadows Way Ste 1
Jacksonville, FL 32256-7521**

Phone: **(904) 900-6494** Fax: **(904) 268-5255**

Email: **Gary.Howalt@terracon.com**

Client: **Traffic Engineering Data Solutions, Inc.**

By: _____ Date: _____

Name/Title: **Mikal R. Hale, P.E. /**

Address: **80 Spring Vista Dr
Debary, FL 32713-1821**

Phone: **(386) 753-0558** Fax: _____

Email: **mhale@teds-fl.com**



Florida Bridge and Transportation, Inc.
Structural Engineers

April 22, 2021

Mr. Mikal Hale, PE
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive
DeBary, Florida 32713
386.753.0558 (o) 386.547.4535 (c)

RE: SJR2C SunTrail
Timber Boardwalk
Proposal for Structural Analysis
FBT Project #21-31.01

Dear Mikal:

Florida Bridge and Transportation, Inc. (FBT) is pleased to submit this proposal to Traffic Engineering Data Solutions, Inc. (TEDS) for engineering services for the above referenced project. The scope of design services for this project includes the following:

- 1) FBT will provide the structural design calculations and plan sheets for a 12-ft wide by approximately 250-ft long timber boardwalk with wood decking as part of the SunTrail Pathway project within a wetland area. The pedestrian walkway will be designed in accordance with AASHTO's LRFD Guide Specifications for Design of Pedestrian Bridges.
- 2) Prepare drawings showing the one typical span for the pedestrian walkway in section, elevation, and plan with accompanying necessary details. The overall bridge plan and profile of the walkway will be shown on the trail plans to be prepared by others.
- 3) Gravity wall abutments will be detailed for each abutment. The gravity walls will reference FDOT design standards for design.
- 4) Respond to review comments from the client regarding the structural design of the boardwalk. This proposal has an allotment of up to eight (8) hours for responding to comments.
- 5) The final project deliverables will consist of signed and sealed calculations and plan sheets detailing the boardwalk.

We propose a lump sum fee of \$19,500.00 for the basic structural engineering services indicated above.

The scope and fee indicated above does not include the following services:

- A plan and elevation sheet showing the overall boardwalk and geometry. This will be provided on overall trail plans by others.
- Field Reviews or attendance at meetings beyond the allotment shown above
- Construction Inspection/Observation of installation and on-going construction
- Specifications - FDOT standard specifications will be referenced
- Preparation of as-built or record drawings

- Post design services

The items indicated above, or any other services not included in the basic scope of design services described above, may be provided for an additional fee. A supplemental agreement must be negotiated prior to the additional work being performed by FBT. Additional services required for this project may be provided based on an addendum to this agreement. Fees for additional services will be addressed on a case by case basis.

In order for FBT to perform these services, we will need the following information from others:

- Trail plans (plan and profile)
- Soil borings (SPT) with Davisson Capacity Curves, groundwater elevations, muck probing along the alignment, timber pile/post driving recommendations, vibration recommendations, and related geotechnical property recommendations

TEDS shall indemnify and hold harmless FBT and all of its personnel from and against any and all claims, damages, losses and expenses (including reasonable attorneys fees) arising out of or resulting from the performance of the services, provided that any such claims, damage, loss or expense is caused in whole or in part by the negligent act or omission and/or strict liability of TEDS, anyone directly or indirectly employed by TEDS (except FBT) or anyone for whose acts any of them may be liable.

This agreement is intended to benefit TEDS and FBT exclusive. Any benefit conferred upon a third party is incidental to this agreement.

This proposal will become invalid if not executed within 90 days. We are prepared to commence the structural design services upon receipt of a written notice to proceed.

We appreciate this opportunity to be of service to Traffic Engineering Data Solutions, Inc.

Very truly yours,

Florida Bridge and Transportation, Inc.



Bassel Kassem, P.E.
Vice President





CITY OF PORT ORANGE MASTER CONTRACT FOR ENGINEERING SERVICES

This Master Contract for Engineering Services ("Contract") is entered into this 14th day of February, 2017, 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 **TRAFFIC ENGINEERING DATA SOLUTIONS, INC.** ("Contractor" or "Engineer"), a Florida corporation, whose principal address is 80 Spring Vista Drive, DeBary, Florida 32713-1821 (collectively "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. These services shall be performed in accordance with Request for Statement of Qualifications No. 16-32 ("RFSQ 16-32") and Engineer's proposal in response thereto. A true and correct copy of RFSQ 16-32 and Engineer's proposal is available in the Office of the City Clerk, City Hall, 1000 City Center Circle, Port Orange.

(a) The Engineer hereby agrees to provide the following services to the City of Port Orange:

- (i) Civil Engineering, Traffic Engineering and Transportation Planning, Landscape Architectural, Environmental and Planning Services, Geotechnical Engineering Services and related services for the City for preparation of a variety of projects administered by various departments within the City, including but not limited to paragraph 5 and the following:
 - (1) Investigation of existing structures or sites and preparation of drawings, reports, calculations, cost estimates, schedules; coordination of special services such as testing and surveying;
 - (2) Studies and planning for construction projects, preparation of drawings, reports, calculations, cost estimates, schedules; coordination of special services such as testing and surveying;
 - (3) Engineering services required to construct a variety of projects and related site work; preparation of design, construction documents, plans, specifications, calculations, cost estimates, reports and schedules; coordination of special services such as testing and surveying; preparation of required documents and services to obtain all construction permits; assisting the City project manager with bidding and construction administration, including field visits, shop drawing review, applications for payment, punch list and certification;
 - (4) Preparation of presentation boards and electronic graphic photo/realistic renderings;
 - (5) Oral presentations and PowerPoint audio visual presentations; and

- (6) Leading project meetings, preparing and distributing meeting minutes
 - (7) Projects may include City of Port Orange existing or proposed sites which require evaluation and/or site design for facilities with uses including Parks and Recreation, Fire and Police, flood control and/or stormwater treatment. Projects may also include review of development projects, traffic simulation/operations analysis models such as HCS, ARTPLAN, SYNCHRO, CUBE, and CFRPM, Traffic Impact Analysis creation and review, signal timing, traffic calming, intersection analyses, traffic improvement justification reports, Traffic Impact Analysis Methodology review, conducting traffic counts, creation and review of roadway classification and Level of Service (LOS) capacity reports.
 - (8) Plans will be drawn in AutoCAD format unless otherwise directed.
 - (9) All documents resulting from any project performed hereunder shall become the sole property of the City.
- (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 thereafter or until either party provides the other party written notice of its intent to terminate 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 two (2) year terms. The City reserves the right to revise rates for consistency with current market trend at least annually.

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. Engineer 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) issued and executed by the City and signed by the Engineer. A sample Task Authorization is attached hereto as Exhibit "1." The City makes no covenant or promise as to the number of orders placed, nor that the City shall place any orders for goods or services during the life of this Contract. The City reserves the right to contract with other parties for the goods and services contemplated by this Contract, as determined in the City's sole and absolute discretion. Furthermore, the City reserves the right, at its sole discretion, to utilize the Master Contract for Engineering Services entered into between the Parties on March 17, 2015 pursuant to Request for Statement of Qualifications No. 14-23, for the scope of services set forth therein, as long as the Contract remains valid.

3. City Obligations. The City reserves the right to utilize either (i) lump sum or (ii) hourly rate compensation as set forth in Exhibit "2" attached hereto. The City's obligation to pay Engineer under this Contract is limited to the

approved Contract fees and the budgeted amount for the fiscal year approved by the Port Orange City Council for the then current 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 ten (10%) percent if approved by the City. 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 Department Head requesting service ("Contract Administrator"), shall perform contract administration of this Contract. For notice provisions, see the paragraph below entitled "Notice." The work shall be reviewed by the authorized Contract Administrator, or designee, who shall have final decision authority for pay requests on all approved phases of the work, including general direction, review, and approval of the work. Neither the Contract Administrator's review, approval or acceptance of, nor payment for, any of the services required under this contract shall be construed to operate as a waiver of any rights under this Contract or of any cause of action arising out of the performance of this Contract, and the Engineer shall be and remain liable to the City for all costs of any kind which were incurred by the City as a result of the Engineer's negligent performance of the services furnished under this Contract.

5. Additional 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 contractor 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 and task authorizations for 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 that building construction permits shall be specifically requested in a task authorization; and provide 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 developed 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 by the Contract Administrator; 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 digital and one paper full scale set of originals as they exist at the time of termination. All plans shall be and remain the property of the City during preparation and upon delivery.
- (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; coordination with the City Attorney and follow-up on contractor execution and delivery to the City Attorney of the original contract and original bond for recording in the public records.
- (vii) Bonding. The Engineer shall coordinate the delivery to the City Attorney of original bonds for recording. All construction contracts shall require two (2) original Bonds in the form approved by the City Attorney. Engineer shall not require duplicate original bond documents in the draft construction documents and agreement for the City.

6. Responsibility of the Engineer. The Engineer shall be responsible for the professional and technical accuracy and the coordination of all designs, drawings, and specifications; contract documentation 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 the Engineer's performance.

7. 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 performed by Engineer shall entitle Engineer to further compensation at rates to be agreed upon by City and Engineer. A reproducible electronic and paper set of plans and specifications shall be delivered to and become the property of the City upon completion of the Project by the Engineer.

8. 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.

9. Modifications to Scope of Work/Change Orders

(a) Change Orders. The Contract Administrator, upon written approval as required by the City's finance ordinances and policies, 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 notify the City requesting an equitable adjustment and the contract shall be modified in writing as mutually agreed by the Parties. Any change order shall include all costs and time extensions 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.

10. Subcontractors and Outside Associates and Consultants. 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 the task authorization amendment. Any substitution in such subcontractors, associates, or consultants shall be subject to the prior approval of the Contract Administrator.

11. 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. If the City terminates the Engineer for failure to adhere to project time lines for completion of the Engineering work, then the City may deduct from amounts owed on the Engineer termination claim, the City's increased costs directly resulting from the failure of the Engineer to timely perform. The Engineer shall not be responsible for a delay in Engineering work that is beyond the Engineer's reasonable control.

(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.

(1) 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

(2) 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 its 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 the termination claim within the time allowed, the Contract Administrator may determine on the basis of information available to them, the amount, if any, due to the Engineer by reason of the termination and shall thereupon pay to the Engineer the amount so determined, so long as all final documentation for the project has been delivered to the Contract Administrator.

(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 contract price for work completed that has been accepted by the Contract Administrator, 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:

(1) 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;

(2) 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

(3) A sum, as profit on Paragraph 11, 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.

12. 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.

13. 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 119.10, 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.

14. Termination 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 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.

15. Insurance

(a) Engineer shall maintain insurance during the life of this Contract. Engineer shall provide to the City a certificate of insurance identifying the City of Port Orange as an additional insured. The Engineer shall furnish policies and certificates of insurance to the City for review and approval on initial contract date and thereafter at least on each anniversary of the contract effective date. Failure of the Engineer to maintain a certificate of insurance in compliance or approval by the City of any policy of insurance shall not, relieve the Engineer from its responsibilities to provide the insurance coverage required herein. The certificates shall clearly indicate that the Engineer has obtained insurance of the type, amount and classification required by these provisions. No work shall be commenced until City has approved the policies. This Contract may be terminated by the City without penalty or expense, if policies requested hereunder are not provided to and approved by the City within thirty (30) days of the date hereof. The Engineer shall notify the City and to the City's designated insurance Risk Manager of any changes in or cancellations of coverage.

(b) For workers' compensation coverage, the bidder's insurance certificate shall include the insurer's waiver of subrogation in lieu of naming the city as an additional insured for workers' compensation. 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. Policies for Workers' Compensation may be issued by companies authorized as a group self-insurer by F.S. 440.572. Engineer shall not commence work under this Agreement until the City has received a certificate or certificates of insurance and endorsement evidencing the required insurance. Engineer shall be solely responsible to provide the City written original certificate, notice of cancellation, nonrenewal or any other changes in coverage no later than ten (10) days prior to the effective date of the change.

The City reserves the right to increase insurance coverage as determined for higher risk contracts and shall reimburse the Engineer for the reasonable additional costs of increased coverage. The Engineer shall maintain the following coverages:

Required Insurance	Insurance	Standards	Comments
☒	Workers' Compensation <u>Additional Coverage:</u>	<u>Limits:</u> Coverage A - Statutory Coverage B - \$100,000 All States (Broad Form) Voluntary Compensation	If the contract requires work on or about navigable waters, require Longshoreman's and Harbor Workers' Coverage. If vessels involved, require Jones Act coverage with limits of \$500,000.
☒	Comprehensive General Liability (including Completed Operations and Contractual Liability) <u>Limits:</u>	Combined Single Limit Bodily Injury and Property damage \$500,000 occurrence \$1,000,000 Aggregate	When the Contract work 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 automobiles. <u>Additional Coverage:</u>	<u>Limits:</u> Auto Liability Body Injury: \$100,000 each person \$300,000 each occurrence. Property Damage Liability \$100,000 each occurrence. Non-Owned, Hired Car	Or \$500,000 Combined Single Limit for Bodily Injury and Property Damage.
☒	Professional Liability (Errors & Omissions) <u>Limits:</u>	Coverage- \$1,000,000 minimum	

16. **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.

17. Liability for Loss or Damage. Engineer shall be liable for any loss of, or damage to, City property caused by the negligence, recklessness, or intended wrongful misconduct of Engineer, 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 Engineer, 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.

18. 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) Engineer shall be solely responsible for compliance with all federal, state and local laws, rules and regulations prohibiting discrimination of its officers, agents, employees and subcontractors. Engineer shall post notices, advertisements and solicitations in accordance with federal law, rule or regulation. 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.

19. 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 during the term of this Contract and shall expressly require any subcontractor performing services pursuant to this 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 this Contract.

20. 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.

21. 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.

22. 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.

23. Additional Provisions. This Contract includes all additional provisions as may have been outlined in Request for Statement of Qualifications identified herein and any attachments or exhibits to this Contract whether delivered herewith or subsequently approved as a part hereof.

24. 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.

25. 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: <i>(Department Head Requesting Service)</i> 1000 City Center Circle Port Orange, Florida 32129 (386) 506-5500
Engineer:	Traffic Engineering Data Solutions, Inc. Attention: Deanna F. Ferrell, President 80 Spring Vista Drive DeBary, Florida 3217432713-1821 (386) 753-0558 – Telephone (386) 753-0778 – Facsimile dferrell@teds-fl.com

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.

26. 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 except for the bond. No contract shall be formed between Engineer and the City until the City signs this Agreement.

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:

Brooke Markham
Printed Name: Brooke Markham

Eileen Wright
Printed Name: Eileen Wright

Traffic Engineering Data Solutions, Inc.

By: Deanna F. Ferrell
Deanna F. Ferrell, 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.

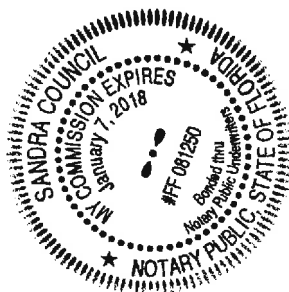
Date: FEB 9, 2017

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me this 9 day of FEB-, 2017, by Deanna F. Ferrell, as President of Traffic Engineering Data Solutions, Inc., a Florida corporation, and who:

(Notary: Please select one)

☒ is personally known to me; or
☐ has produced _____ as identification.



Sandra Council
Notary Public, State of Florida
Printed, typed or stamped name, commission and expiration:

Witnesses:

CITY OF PORT ORANGE

Cynthia K Rivera
Printed Name: Cynthia K. Rivera

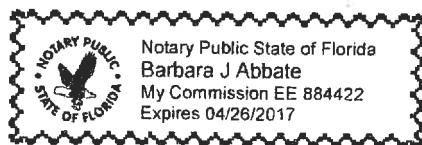
By: Donald O. Burnette
Donald O. Burnette, Mayor

Barbara J. Abbate
Printed Name: Barbara J. Abbate

Date: 2/14/17

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me this 14th day of February, 2017, by Donald O. Burnette, as Mayor of the City of Port Orange, a Florida municipal corporation, on behalf of the city, and who is personally known to me.



Barbara J. Abbate
Notary Public, State of Florida
Printed, typed or stamped name, commission and expiration:

Witnesses:

ATTEST:

Cynthia K Rivera
Printed Name: Cynthia K. Rivera

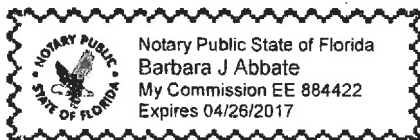
By: Robin L. Fenwick
Robin L. Fenwick, CMC, City Clerk

Barbara J. Abbate
Printed Name: Barbara J. Abbate

Date: 2/14/17

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me this 14th day of February, 2017, by Robin L. Fenwick, as City Clerk of the City of Port Orange, a Florida municipal corporation, on behalf of the city, and who is personally known to me.



Barbara J. Abbate
Notary Public, State of Florida
Printed, typed or stamped name, commission and expiration:

[CA 5671]

CITY OF PORT ORANGE – MASTER CONTRACT FOR ENGINEERING SERVICES [CA5671]

Page 14

EXHIBIT “1”

(Consisting of 3 pages)

TASK AUTHORIZATION NO. ____
Standard Contract for Services dated _____
Between the City of Port Orange, Florida and Traffic Engineering Data Solutions, 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 **TRAFFIC ENGINEERING DATA SOLUTIONS, INC.**, a Florida corporation with its principal place of business at 80 Spring Vista Drive, Debary, Florida 32713-1821 ("Contractor"), and hereinafter collectively referred to as the "Parties," and is to that certain Master Contract for Engineering Services dated _____, 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. The Contract Administrator may be contacted as follows:
Name: _____
Address: _____
Phone: _____
Mobile: _____
E-Mail: _____
3. In addition to all other terms and conditions contained in the Contract, Contractor shall provide services relating to _____ as more particularly described in the Scope of Services attached hereto and incorporated herein as Task Authorization Exhibit "A."
4. Contractor shall complete the services to be provided herein within _____ days of the date of written notice by the City to the Contractor.
5. In return for the services identified above, the City agrees to compensate Contractor at the prices set forth in Exhibit "____" attached hereto and made a part hereof for all purposes, subject to a limit up to but 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.
6. Contractor shall provide a 100% Combination Payment and Performance Bond in accordance with Florida Statutes Section 255.05, including the Front Page and Certificate for Filing in Public Records, in a form substantially similar to the forms attached hereto as Task Authorization Exhibit "B," and acceptable to the Port Orange City Attorney, and recorded with the Clerk of Volusia County at Contractor's expense. A separate bond shall be provided from the Surety which identifies and covers the scope of work for the project stated in this Task Authorization along with all other provisions of this Task Authorization with the penal sum of such bond being not less than the contract sum described in this Task Authorization. If any surety bond furnished in connection with this Task Authorization becomes unacceptable to the City, Contractor shall promptly furnish such additional security as may be required from time to time to protect the interests of the City and a person supplying labor and materials in the prosecution of work contemplated by this Task Authorization No. ____.

7. 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 Contractor 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:

TRAFFIC ENGINEERING DATA SOLUTIONS, INC.

Printed Name: _____

By: _____
Deanna F. Ferrell, 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.

Printed Name: _____

Date: _____

Witnesses:

CITY OF PORT ORANGE

Printed Name: _____ By: _____
Donald O. Burnette, Mayor

Printed Name: _____ Date: _____

Witnesses: ATTEST:

Printed Name: _____ By: _____
Robin L. Fenwick, CMC, City Clerk

Printed Name: _____ Date: _____

[CA 5671]

HOURLY RATE SCHEDULE

CONTRACT FOR PROFESSIONAL ENGINEERING SERVICES CITY OF PORT ORANGE RFSQ # 16-32

The following schedule provides a maximum direct salary hourly rate for the disciplines, which are likely to be engaged for projects associated with the contract referenced above for the City of Port Orange.

COMPANY NAME: TRAFFIC ENGINEERING DATA SOLUTIONS, INC.

LABOR CATEGORY		HOURLY RATES	
President			\$200.00
Chief Engineer / Sr. Vice President			\$180.00
Sr. Engineer / Vice President			\$180.00
Project Engineer / Project Planner			\$125.00
Engineer / Planner			\$115.00
Engineer Intern			\$85.00
Sr. Designer			\$100.00
Designer			\$60.00
Senior Technician			\$60.00
Technician			\$55.00
Administrative Assistant			\$65.00
Secretary			\$45.00
NON-LABOR CATEGORY		RATES	
<u>Reproduction:</u>			
	<u>Black & White:</u>		
	8.5 x 11		\$0.10 / sheet
	11 x 17		\$0.20 / sheet
	24 x 36		\$3.00 / sheet
	<u>Color:</u>		
	8.5 x 11		\$1.00 / sheet
	11 x 17		\$2.00 / sheet
	24 X 36		\$20.00 / sheet
Mileage (travel to meetings and project site)		Current Federal Rate	
Shipping / Postage		Cost	



City of Port Orange

Agreement

RENEWAL FORM

*****THIS FORM IS VALID IF EXECUTED PRIOR TO THE ORIGINAL AGREEMENT/CONTRACT EXPIRATION DATE.*****

To be completed by Contractor:

YES ☒ We desire to renew this agreement for another term at the same price, requirements, specifications, and conditions as the previous term as per the following:

☒ Standard Contract for Service CA No. 5671

☐ Piggyback Agreement CA No. _____

☐ Purchase Order No. _____

Term From: February 14, 2020

To: February 14, 2022

Attached:

☐ Updated Bond

☒ Insurance Certificate/City as additional insured

NO ☐ We do not desire to renew this agreement for another term.

Verify your records by providing the following information:

Name of Company / Organization: Traffic Engineering Data Solutions, Inc.

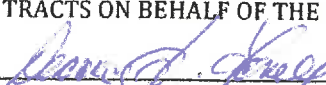
Name of Contact Person: Deanna F. Ferrell

Mailing Address: 80 Spring Vista Drive, DeBary, Florida 32713

Email Contact Address: dferrell@teds-fl.com

Phone: (386) 753-0558 Fax: (386) 753-0778

IF THIS RENEWAL IS NOT SIGNED BY THE CONTRACTOR'S LEGALLY AUTHORIZED PERSON, THEN ATTACH WRITTEN AUTHORIZATION TO ENTER INTO CONTRACTS ON BEHALF OF THE CONTRACTOR FOR THE PERSON WHO SIGNS.

Contractor's Authorized Representative:  Date: 10/21/19
Signature

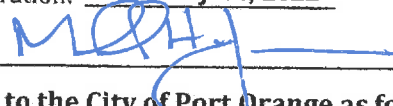
For City Use Only:

Department completes the following:

☒ Renewal Accepted Bond attached

☒ Insurance attached OR Insurance waived per Agreement

Agreement Expiration: February 14, 2022

City Manager:  Date: 11-13-19

Please return to the City of Port Orange as follows:

Department: Community Development Telephone: 386-506-5661

Contact: Margaret Tomlinson Fax: 386-506-5699

Email: mtomlinson@port-orange.org

Completed Form Must Be Returned to the City Clerk for Recordation

ACORD™

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

2/03/2021

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 any rights to the certificate holder in lieu of such endorsement(s).

PRODUCER USI Insurance Services, LLC 2502 N Rocky Point Drive Suite 400 Tampa, FL 33607	CONTACT NAME: PHONE (A/C, No, Ext): 813 321-7500 FAX (A/C, No): 813 321-7525 E-MAIL ADDRESS:														
INSURED Traffic Engineering Data Solutions, Inc 80 Spring Vista Drive Debar, FL 32713	<table border="1"> <thead> <tr> <th>INSURER(S) AFFORDING COVERAGE</th> <th>NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A : Travelers Property Cas. Co. of America</td> <td>25674</td> </tr> <tr> <td>INSURER B : Travelers Indemnity Company</td> <td>25658</td> </tr> <tr> <td>INSURER C : Travelers Casualty and Surety Company</td> <td>19038</td> </tr> <tr> <td>INSURER D : Travelers Casualty & Surety Co. of Amer</td> <td>31194</td> </tr> <tr> <td>INSURER E :</td> <td></td> </tr> <tr> <td>INSURER F :</td> <td></td> </tr> </tbody> </table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A : Travelers Property Cas. Co. of America	25674	INSURER B : Travelers Indemnity Company	25658	INSURER C : Travelers Casualty and Surety Company	19038	INSURER D : Travelers Casualty & Surety Co. of Amer	31194	INSURER E :		INSURER F :	
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INSURER E :															
INSURER F :															

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 INSR	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:			680001H70658A	01/31/2021	01/31/2022	EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$1,000,000 MED EXP (Any one person) \$10,000 PERSONAL & ADV INJURY \$1,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COMP/OP AGG \$2,000,000 \$
A	AUTOMOBILE LIABILITY ☒ ANY AUTO OWNED AUTOS ONLY ☒ HIRED AUTOS ONLY ☐ SCHEDULED AUTOS NON-OWNED AUTOS ONLY			BA2C270946	01/31/2021	01/31/2022	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
B	☒ UMBRELLA LIAB ☒ EXCESS LIAB ☒ RETENTION \$10,000			CUP003C418899	01/31/2021	01/31/2022	EACH OCCURRENCE \$3,000,000 AGGREGATE \$3,000,000 \$
C	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	UB9J775967	01/31/2021	01/31/2022	☒ PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE - EA EMPLOYEE \$1,000,000 E.L. DISEASE - POLICY LIMIT \$1,000,000
D	Professional Liability			106883019	01/31/2021	01/31/2022	\$2,000,000 per claim \$4,000,000 annl aggr.

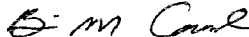
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Professional Liability coverage is written on a claims-made basis.

Professional Engineering Services RFSQ #16-32; Certificate Holder is an additional insured with respect to General Liability and Auto Liability per written contract prior to loss per policy terms and conditions.

CERTIFICATE HOLDER

CANCELLATION

City of Port Orange 1000 City Center Circle Port Orange, FL 32127	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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EXHIBIT A

SCOPE OF SERVICES

Contract: Master Contract for Engineering Services dated February 14, 2017

Task Authorization No.: 09

Project Name: SJR2C Loop Trail (Spruce Creek Rd) from South of Selin Circle to Herbert St (FPN 439865-3-34-01)

TEDS Project Number: 10962

Date: April 26, 2021
Revised May 19, 2021

Traffic Engineering Data Solutions, Inc. (TEDS) is pleased to offer this scope of services to the City of Port Orange (CITY) for providing professional engineering services for the above referenced project.

PROJECT UNDERSTANDING

- The CITY furnished a copy of the Scope & Schedule for this trail project being completed through the Shared Use Nonmotorized (SUN) Trail Program, with state funding allocated under FPID 439865-3-34-01 to be administered by the Florida Department of Transportation (FDOT). Federal funding requirements do not apply.
- The CITY also furnished a copy of the Preliminary Engineering Report (PER) for FPID 439865-1-22-01, as prepared by FDOT's consultant in conducting the preceding Project Development & Environment (PD&E) study. The PER was finalized as of April 6, 2020.
- While the PER addresses a much longer corridor spanning through other cities, this proposal is being provided for design and permitting of a shared use path over a ± 0.65 miles corridor alongside the Halifax Canal / Spruce Creek Road, extending from Selin Circle north to Herbert Street, within the City of Port Orange, Volusia County, Florida.
- The Spruce Creek Road Right-of-Way (R/W) is maintained by the CITY, though the Halifax Canal is maintained by Volusia County Public Works. There are no formal easement(s) or agreement(s) in place between the CITY and County related to maintenance of the canal. A R/W Use Permit will be required for the County's review and approval of the proposed trail improvements.
- As shown on the Concept Plans within the PER, several portions of the design segment corridor already contain existing trails (< 12' in width) that will remain in place, and no new trail facilities are required within these areas.
- FDOT is the maintenance authority for SR 421 (Dunlawton Avenue). Upgrades to the existing curb ramps may be necessary if determined to be non-compliant with current accessibility criteria, or if FDOT requires the existing shared curb ramps to be separated, thereby warranting relocation of existing crosswalks. Traffic signalization design is required for modification of the existing pedestrian signalization system. The CITY will provide copies of the plans to FDOT for review of proposed improvements, and it is anticipated that Driveway / Drainage Connection permits will not be required.
- The CITY provided copies of the Utility and Access Easement (ORB 5920, pgs 2088-2091) previously obtained over parcel Volusia County 631019000170 (presently owned by BLEDSOE & COLEMAN GENERAL) that provides the right to construct additional pedestrian facilities and perpetual use on the property. In addition, the CITY would like to explore the dedication of proposed R/W and/or easement(s) on the adjacent parcel 630901010080 (presently owned by JENZANO GROUP LLC), such that the trail could be maintained entirely on the east side of the Halifax Canal, in which case the proposed crossing of Spruce Creek Road just south of Selin Circle could be eliminated. The City will conduct all negotiations with existing private property owners required for dedication of proposed R/W and/or easements required to host the new trail, and the R/W support services included within this proposal are limited to basic surveying services intended to support the CITY's negotiations. A separate proposal will be provided for any additional R/W support services that may later be

determined to be desired, such as records research, abstracting, title opinions, legal, noticing, certified mailings, valuations, certified appraisals, assistance with negotiations, eminent domain, expert witness testimony, etc.

- FEMA FIRM Map 12127C0388J (effective September 29, 2017) indicates that that majority of the proposed trail corridor is located entirely within the Special Flood Hazard Area (SFHA) with a Base Flood Elevation (BFE) determined to be at elevation 5.00' NAVD 88 on the south of Dunlawton Ave. (SR 421), and at elevation 6.00' NAVD 88 on the north side of this roadway. Design will be based on constructing the proposed trail at or below existing grade in order to minimize impacts to existing flood plain, though compensating storage calculations will likely be required in areas where minimal amounts of fill is required.
- The proposed trail is routed across parcels 63040600008A and 630406000091, which are controlled by the CITY. The preferred alternative from the PD&E prescribes approximately 300' of boardwalk on these parcels in order to minimize impacts to existing wetlands located on these parcels. For maintenance reasons, the CITY desires the use of wood decking on boardwalks.
- Based on preliminary review, it is anticipated that the subject wetland would be non-jurisdictional under Section 404 of the Clean Water Act, such that required permitting includes only submitting a No Permit Required Verification Request to the Florida Department of Environmental Protection (FDEP). In the event the wetlands are deemed jurisdictional under this regulation, and federal authorization is necessary, a separate proposal will be provided for any such services required.
- Multi-use recreational paths less than 14' in width typically qualify for exemption from Environmental Resource Permit from the St. Johns River Water Management District (SJRWMD), unless there is work in, on, or over wetlands or other surface waters other than drainage ditches constructed in uplands, or unless they are located with previously permitted area(s). The PER did not contain any discussion of historical ERP's affected by the proposed trail construction, but under ERP Series 29869, it appears an original ERP and five (5) subsequent modifications were issued to the CITY for roadway drainage projects located within close proximity to the project, such that at least one (1) ERP modification will be required. There are numerous documents of record on file with SJRWMD which have not been fully reviewed at the time of preparation of this proposal, so the full extent of modification that may be required to the previous permit(s) is not presently known. However, given that the trail is to be constructed at existing grade in all locations other than boardwalk, it is presently anticipated that no drainage analysis will be required for this project, including but not limited to pollutant loading, treatment, attenuation, HGL analysis, spread calculations, etc.
- Based on the PER, protected species impacts are not anticipated. A review of the proposed trail corridor will be conducted with preliminary mapping of encountered protected species or habitats, but surveying, agency coordination, and/or permitting of protected species is not included in this proposal, as those services are not anticipated to be required.
- The two (2) parcels controlled by the CITY contain numerous existing trees. Tree survey information is necessary in these areas to ensure the proposed trail alignment minimizes impacts to existing trees, while at same time adhering to required design criteria as set forth in the PER. The CITY will be responsible for confirming tree species surveyed and evaluating the quality and/or health of trees as it relates to their removal or preservation.
- Given the shallow nature of excavation required for proposed trail construction, only minor adjustment of existing utilities is anticipated to be required. Obtaining Utility Work Schedule (UWS) information from the UAO's is not anticipated to be required. Subsurface Utility Engineering (SUE) including utility locates is not included in this proposal as it is not expected to be required, and the CITY will provide any such services that may later be determined to be required.
- Geotechnical and structural engineering services included in this agreement are limited to that required for the proposed trail and boardwalk. However, no other geotechnical or structural engineering design services are expected to be required for other project elements, such as retaining walls or box culverts, and therefore those services are not included in this agreement at this time.
- Pursuant to the CITY's prior coordination with FDOT, cultural resources assessment and contamination screening services are not included in this agreement, as they are not expected to be required.
- Landscape architecture, hardscape design, and irrigation design are not required in this project.

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- The PER vaguely indicated that lighting along the trails should be given consideration, and lighting improvements were also referenced in the Scope & Schedule. However, lighting design services are not included in this proposal at this time.

SCOPE OF SERVICES

Task 1 – Project Management & Administration

TEDS will complete administrative procedures intended to aid in the successful management of the project, including the following services:

- Schedule, prepare for and attend a kickoff meeting with the CITY, FDOT and the County present, with preparation of meeting minutes
- Preparation of project schedule, as well as update(s) thereto
- General coordination with the CITY to discuss project issues or provide status updates on current progress
- Administration of the design contract through completion of the project, including monthly invoicing
- Initial setup of sub-consultant contracts and administration, including monthly invoicing
- Prepare for and attend a City Council meeting to address questions regarding the project design

Task 2 – Surveying

TEDS will retain PEC Surveying and Mapping, LLC (PEC) to provide the surveying services as described in their letter proposal No. PS16805r-TEDS dated April 26, 2021, a copy of which has been attached to this proposal.

Task 3 – Environmental Resources & Permitting

TEDS will retain Terracon Consultants, Inc. (Terracon) to provide the environmental services described in their letter proposal No. PEQ217222 dated May 6, 2021, a copy of which has been attached to this proposal. More specifically, this includes the work described in the following sections of the proposal:

- 2.0 ENVIRONMENTAL RESOURCES REPORT
- 3.0 ENVIRONMENTAL PERMITTING

Task 4 – Geotechnical Engineering

TEDS will retain Terracon Consultants, Inc. (Terracon) to provide the geotechnical engineering services described in their letter proposal No. PEQ217222 dated April 16, 2021, a copy of which has been attached to this proposal. More specifically, this includes the work described in the following section of the proposal:

- 4.0 GEOTECHNICAL SERVICES

Task 5 – Design Development

TEDS will provide the following services to address the critical roadway design elements for the proposed trail improvements:

- Obtain and review record plan information that may be on file with the CITY, Volusia County, or SJRWMD, and reference to project CAD files for analyses relevant to project design
- Process aerial photographs or other supporting base map files or imagery, such as GIS data, quad maps, FEMA maps, etc., such that it can be referenced to project CAD files for analyses relevant to project design
- Conduct field review of project corridor and obtain photographs of existing conditions
- Review the completed survey
- Develop an alignment for the proposed trail improvements and typical section(s) based on avoidance and/or minimization of impacts to existing elements, such as trees, utilities, etc.

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- Assess profile along centerline of trail to ensure accessible slopes (*not to be presented in plans*)
- Assess existing drainage basinology and proposed grading needed to maintain existing drainage patterns
- Assess minor adjustments to existing drainage structures that may be required
- Calculate and report earthwork by section using average end area method (*in addition to 3-D earthwork completed via grading models*)
- Assess relocation and/or modification of existing signage and pavement markings within the right of way, as well as any proposed signage / pavement markings that may be necessary

Task 6 – Roadway Plans - Approximately 0.65 mile corridor

TEDS will prepare the following roadway construction plans for the project:

- Key Sheet (1 sheet)
- Summary of Pay Items (1 sheet)
- Signature Sheet (1 sheet)
- Drainage Map (1"=200' scale) (1 sheet)
- General Notes (1 sheet)
- Project Layout (1 sheet)
- Project Control (1 sheet) – based on information provided by surveyor
- Typical Section (2 sheets)
- Roadway Plan (1"=40' scale) (6 sheets) – minor utility adjustments to be shown on these sheets
- Bridge Plan & Profile (1"=40' scale) (1 sheet)
- Cross-Sections (10 sheets) – 100' intervals with roadway borings depicted (assume 20 cross-sections)
- Construction Details (1 sheet)
- Traffic Control Plans (2 sheets) – FDOT Standard Plans only
- Stormwater Pollution Prevention Plan (SWPPP) Notes (1 sheet) – with notes to describe erosion control measures necessary for the CITY's contractor to maintain compliance with the National Pollutant Discharge Elimination System (NPDES) program during construction
- Erosion Control Plans (1"=40' scale) (3 sheets) – double plan windows
- Signing & Pavement Marking Plans (1"=40' scale) (3 sheets) – double plan windows

Design provided by TEDS will be based on the standard practices and publications utilized by the FDOT, including the FDOT Design Manual (FDM), the Florida Greenbook, Standard Plans, Standard Specifications, the Utility Accommodation Manual (UAM), etc. Preliminary roadway plans will be prepared and provided to the CITY for their initial negotiation(s) of proposed R/W and/or easements with private property owners, as necessary to maintain the trail east of the Halifax Canal. The roadway plans will be updated based on the outcome of those negotiations and will be formally prepared for progress review by the CITY and FDOT at 60%, and 90% levels of completion, along with an Engineer's Opinion of Probable Costs (EOPC).

Task 7 – Traffic Signal Design

TEDS shall prepare a signed and sealed set of traffic signal plans for the modification of the traffic signal at the intersection of SR 421 (Dunlawton Avenue) and Spruce Creek Road suitable for permitting, bidding and construction. The plans shall be prepared to Volusia County/FDOT standards. The tasks involved in this process include design of the traffic signal modifications, submission of the preliminary design for review and finalization of design plans including the incorporation of appropriate design review comments. Final plans will be prepared at a scale of 1" = 40'. It is understood that the plans will be a component set of the overall roadway plans for the trail project. The design tasks are detailed on the following page:

Task 7.1 – Data Collection

TEDS shall obtain a surveyed base plan, signed and sealed by a surveyor duly registered in the State of Florida, depicting existing and proposed conditions, including above ground and below ground utilities, suitable for preparing

Traffic Engineering Data Solutions, Inc.

the traffic signal design. Survey coverage shall include the turn lanes and tapers for the intersecting roadways but shall not be less than 150 feet along each leg of the intersection. The base plan shall be transmitted to TEDS in both hard copy and electronic format at a scale of 1" = 40'. The base plan shall indicate the edge of pavement, lane utilization including pavement markings, any medians or sidewalks within the intersection, drainage appurtenances (inlets, ditches, storm drain pipes showing size and direction of run), manholes and the presence of any known above or below ground utilities.

Task 7.2 – Initial Plan Preparation

TEDS shall prepare a traffic signalization base plan from this data. TEDS' design shall include sufficient vehicular detection modifications as required for semi-actuated control as well as pedestrian feature modifications. TEDS will also conduct one (1) field review to review existing field conditions and discuss preliminary modifications to the signal with the County.

TEDS shall provide the traffic signal plan package to include the following:

- Key Sheet (1 sheet) identifying the project name and location, Engineer of Record, the date of the design plan preparation, appropriate standards and specifications identification, revision block and plan sheet table of contents;
- General Notes Sheet (1 sheet) containing traffic signal design and installation notes standard to The COUNTY;
- Tabulation of Quantities Sheet (1 sheet) identifying the pay item descriptions and quantities of the traffic signal components, identifying appropriate general design notes pertaining to the traffic signal design;
- Traffic Signal Plans (1 sheet) presenting the intersection layout at the intersection in plan view, appropriate traffic signal design components including FDOT Pay Item Numbers, and notes pertaining to the operation of the new traffic signal and removal of the existing traffic signal items;
- Signal Details Sheet (1 sheet) presenting zoomed in view of the details in the quadrants of the intersection.

TEDS shall provide a digital copy of the submittal to the CITY/Volusia County/FDOT for review and comment.

Task 7.3 – Final Design Plan Preparation

Upon receipt of agency comments, TEDS shall address each comment in writing and shall discuss the appropriate revisions to the plans with the agency staff. Once the comments have been addressed, TEDS shall submit a revised draft traffic signal plan package for final review and comment. Once these comments are received, TEDS shall address same and shall provide to the CITY one (1) electronic plan set and five (5) signed and sealed plan sets. TEDS shall repeat the review and response to comments until final resolution with the agencies to obtain final signal plan approval.

Task 8 – Structural Engineering

TEDS will retain Florida Bridge and Transportation, Inc. (FBT) to provide the structural engineering services related to the proposed boardwalk as described in their letter proposal for FBT Project No. 21-31.01 dated April 22, 2021, a copy of which has been attached to this proposal.

Task 9 – Utility Coordination

TEDS will coordinate a Sunshine 811 design ticket for the project in an attempt to identify any Utility Agency Owner's (UAO's) that may currently be using the right of way and reach out to them to confirm the appropriate representatives. Upon completion of 60% plans, TEDS will transmit courtesy copies to the utility companies for their review and comment on the accuracy of utilities shown in the plan, conflicts that may exist between existing utilities and proposed construction, and minor relocation(s) that may be required. Minor adjustments to be designed and constructed by the UAO's will be graphically depicted on the plan sheets.

Traffic Engineering Data Solutions, Inc.

Task 10 – Agency Permitting

At 60% and 90% levels of completion, TEDS will submit copies of the plans and other pertinent documents to the CITY for review. Once comments have been received from the CITY and FDOT, TEDS will revise the plans and respond to comments. In addition, TEDS will prepare the following permit application packages for submittal to the agencies listed below:

- A. SJRWMD – Modification for ERP Series 29869
- B. Volusia County – R/W Use Permit

Task 11 – Bid Phase Services

As Engineer of Record for the project, TEDS will provide support to the CITY during the bid phase, including the following services:

- Review of draft bid documents prepared by the CITY's Purchasing Division
- Prepare technical specifications for the project, with support from the sub-consultants as may be necessary, and provide copies for insertion into the CITY's bid documents (through FDOT Specs on the Web)
- Prepare a project description narrative
- Prepare a bid sheet
- Revise documents per comments received from the CITY and/or FDOT
- Prepare for and attend a pre-bid meeting
- Answer questions during the bid process
- Prepare bid tabulation and assist with selection of a contractor

Task 12 – Limited Post-Design Services

As Engineer of Record for the project, TEDS will provide support to the CITY in administering the construction contract through completion of the project construction, including the following limited post-design services:

- Attendance at a pre-construction meeting
- Provide review of civil-related shop drawing submittals for approval
(to be received from the contractor in one (1) single package)
- Attend up to five (5) meetings at the CITY or the project site for general coordination or to complete limited construction observation
- Review and respond to up to five (5) Requests for Information (RFI's) during construction
- Provide up to 20 hours of general construction administration assistance, such as review of change order(s)
- Review As-Built surveys provided by contractor with overlay of CAD files on design
- Prepare certification package for submittal to Volusia County for R/W Use Permit close-out
- Prepare a *MSSW/Stormwater As-Built Certification By A Registered Professional Engineer* for submittal to the SJRWMD for permit closure
- Prepare Engineer's Certification of Completion
(to serve as Exhibit C to State Funded Grant Agreement with FDOT)

Deliverables: Plans for this project will be developed in English units and formatted for printing on 11"x17" sheets at the scales noted in the individual tasks above. TEDS will provide PDF's of the plans throughout progress completion, and up to (10) sets of deliverables once they have been finalized, for bidding or construction.

FEES

TEDS shall conduct the work in the tasks described above for the lump sum fees indicated below:

<i>Description</i>	<i>Fee</i>
Task 1 – Project Management & Administration	\$9,135.00
Task 2 – Surveying	\$51,200.00
<i>Task 2.1 – Right-of-Way Surveys</i>	<i>\$7,900.00</i>
<i>Task 2.2 – Baseline Survey</i>	<i>\$3,000.00</i>
<i>Task 2.3 – Bench Levels</i>	<i>\$4,000.00</i>
<i>Task 2.4 – Intersection Survey</i>	<i>\$4,500.00</i>
<i>Task 2.5 – Cross-Sections</i>	<i>\$10,300.00</i>
<i>Task 2.6 – City Parcels - Boundary Topographic and Tree Location Surveys</i>	<i>\$9,250.00</i>
<i>Task 2.7 – Jenzano Corridor Topographic Survey</i>	<i>\$4,000.00</i>
<i>Task 2.8 – Sketch of Legal Description of Jenzano Trail Easement</i>	<i>\$750.00</i>
<i>Task 2.9 – Jenzano Parent Parcel Eminent Domain Survey</i>	<i>\$7,500.00</i>
Task 3 – Environmental Resources & Permitting	\$12,000.00
Task 4 – Geotechnical Engineering	\$14,000.00
Task 5 – Design Development	\$14,460.00
Task 6 – Roadway Plans	\$22,480.00
Task 7 – Traffic Signal Design	\$10,460.00
Task 8 – Structural Engineering	\$19,500.00
Task 9 – Utility Coordination	\$4,725.00
Task 10 – Agency Permitting	\$14,625.00
Task 11 – Bid Phase Services	\$4,575.00
Task 12 – Limited Post-Design Services	\$11,285.00
Direct Expenses	\$1,872.08
Total	\$190,317.08

An estimate of man-hours and expenses is provided on the following pages.

Traffic Engineering Data Solutions, Inc.

**CITY OF PORT ORANGE
MAN-HOUR ESTIMATE**



May 19, 2021

TEDS PROJECT No.: 10962
CONTRACT DESCRIPTION: Master Contract for Engineering Services
(February 14, 2017)

TASK AUTHORIZATION No.: 09
PROJECT DESCRIPTION: SJR2C Loop Trail (Spruce Creek Rd) from South of Selin Circle to Herbert St
(FPN 439865-3-34-01)

PRIME CONSULTANT: Traffic Engineering Data Solutions, Inc.

ESTIMATE PREPARED BY: Mikal R. Hale, P.E.

ACTIVITY	Chief Engineer / Vice President		Engineer		Engineer Intern		Sr. Designer		Senior Technician		Admin. Assistant		TOTAL		
	Rate/Hr:	\$180.00	Rate/Hr:	\$115.00	Rate/Hr:	\$85.00	Rate/Hr:	\$100.00	Rate/Hr:	\$60.00	Rate/Hr:	\$65.00	Man-hours By Activity	Activity Cost	Avg. Hourly Rate
	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act			
Task 1 – Project Management & Administration	40.0	7,200.00	0.0	0.00	9.0	765.00	0.0	0.00	0.0	0.00	18.0	1,170.00	67.0	9,135.00	136.34
Prepare for / attend kickoff meeting / minutes	4.0				4.0								8.0		
Prepare project schedule / updates	5.0				2.0								7.0		
General coordination / progress status updates	5.0				3.0								8.0		
Administration of design contract / monthly invoicing	12.0										6.0		18.0		
Initial setup & admin of sub-contracts / monthly invoicing	10.0										12.0		22.0		
Prepare for / attend City Council meeting	4.0												4.0		
Task 5 – Design Development	14.0	2,520.00	41.0	4,715.00	85.0	7,225.00	0.0	0.00	0.0	0.00	0.0	0.00	140.0	14,460.00	103.29
Obtain and review record plans / trace for insertion	2.0		10.0		15.0								27.0		
Process GIS data (aerials, FEMA, LIDAR, parcels, etc.)			5.0		10.0								15.0		
Conduct field review / site photos	3.0				3.0								6.0		
Review completed survey	1.0		1.0		3.0								5.0		
Develop alignment & typical sections	2.0		10.0		20.0								32.0		
Assess trail profile	2.0		5.0		10.0								17.0		
Assess drainage basinology & minor drainage structure mods	2.0		5.0		10.0								17.0		
Earthwork / average end area calcs	1.0		2.0		8.0								11.0		
Assess S&PM modifications	1.0		3.0		6.0								10.0		
Task 6 – Roadway Plans	36.0	6,480.00	50.0	5,750.00	110.0	9,350.00	9.0	900.00	0.0	0.00	0.0	0.00	205.0	22,480.00	109.66
Key Sheet (1 sheet)	1.0				3.0								4.0		
Summary of Pay Items (1 sheet)	1.0				5.0		2.0						8.0		
Signature Sheet (1 sheet)	1.0				1.0								2.0		
Drainage Map (1"=200' scale) (1 sheet)	2.0		2.0		10.0		2.0						16.0		
General Notes (1 sheet)	2.0		2.0										4.0		
Project Layout (1 sheet)					3.0								3.0		
Project Control (1 sheet)	1.0				3.0								4.0		
Typical Section (2 sheets)	2.0		2.0		2.0								6.0		
Roadway Plan (1"=40' scale) (6 sheets)	5.0		20.0		25.0								50.0		
Bridge Plan & Profile (1"=40' scale) (1 sheet)	5.0		5.0		8.0								18.0		
Cross-Sections (10 sheets)	2.0		15.0		10.0								27.0		
Construction Details (1 sheet)	1.0		1.0		2.0								4.0		
Traffic Control Plans (2 sheets) – FDOT Standard Plans			1.0		2.0								3.0		
SWPPP Notes (1 sheet)	1.0		1.0		3.0								5.0		
Erosion Control Plans (1"=40' scale) (3 sheets)			1.0		5.0								6.0		
S&PM Plans (1"=40' scale) (3 sheets)	3.0				10.0		5.0						18.0		
Engineer's Opinion of Probable Costs (60%, 90%, & Final)	3.0				18.0								21.0		
QA/QC (60%, 90%, & Final)	6.0												6.0		
													0.0		
Task 7 – Traffic Signal Design	16.0	2,880.00	12.0	1,380.00	0.0	0.00	62.0	6,200.00	0.0	0.00	0.0	0.00	90.0	10,460.00	116.22
Initial Plans Package	8.0		8.0				50.0						66.0		
Field Meeting	4.0						4.0						8.0		
Final Plans Package	4.0		4.0				8.0						16.0		

**CITY OF PORT ORANGE
MAN-HOUR ESTIMATE**



May 19, 2021

TEDS PROJECT No.: 10962
CONTRACT DESCRIPTION: Master Contract for Engineering Services
(February 14, 2017)

TASK AUTHORIZATION No.: 09
PROJECT DESCRIPTION: SJR2C Loop Trail (Spruce Creek Rd) from South of Selin Circle to Herbert St
(FPN 439865-3-34-01)

PRIME CONSULTANT: Traffic Engineering Data Solutions, Inc.

ESTIMATE PREPARED BY: Mikal R. Hale, P.E.

ACTIVITY	Chief Engineer / Vice President		Engineer		Engineer Intern		Sr. Designer		Senior Technician		Admin. Assistant		TOTAL		
	Rate/Hr:	\$180.00	Rate/Hr:	\$115.00	Rate/Hr:	\$85.00	Rate/Hr:	\$100.00	Rate/Hr:	\$60.00	Rate/Hr:	\$65.00	Man-hours By Activity	Activity Cost	Avg. Hourly Rate
	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act			
Task 9 – Utility Coordination	4.0	720.00	6.0	690.00	39.0	3,315.00	0.0	0.00	0.0	0.00	0.0	0.00	49.0	4,725.00	96.43
811 Design Ticket					1.0								1.0		
Confirm representatives					5.0								5.0		
Prepare & send notification e-mails with plans	1.0				8.0								9.0		
Adjust location of existing utilities per UAO markups	2.0		3.0		20.0								25.0		
Depict relocations by UAO's per conflicts (if applicable)	1.0		3.0		5.0								9.0		
Task 10 – Agency Permitting	16.0	2,880.00	43.0	4,945.00	80.0	6,800.00	0.0	0.00	0.0	0.00	0.0	0.00	139.0	14,625.00	105.22
Submit 60% plans to City & FDOT	1.0		2.0		2.0								5.0		
Review comments and revise plans	3.0		15.0		25.0								43.0		
Submit 90% plans to City & FDOT	1.0		2.0		2.0								5.0		
Review comments and revise plans	3.0		10.0		20.0								33.0		
Submit FINAL plans to City & FDOT	1.0		2.0		2.0								5.0		
Prepare & submit SJRWMD ERP Modification	3.0		5.0		10.0								18.0		
Review comments and revise plans	2.0		3.0		15.0								20.0		
Prepare & submit County R/W Use Permit	1.0		2.0		2.0								5.0		
Review comments and revise plans	1.0		2.0		2.0								5.0		
Task 11 – Bid Phase Services	12.0	2,160.00	21.0	2,415.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	33.0	4,575.00	138.64
Review draft bid docs (by City)	3.0		3.0										6.0		
Prepare Technical Specifications	1.0		3.0										4.0		
Prepare project description & bid sheet	1.0		2.0										3.0		
Revisions per City & FDOT	1.0		5.0										6.0		
Attend pre-bid meeting	3.0												3.0		
Answer bid questions	1.0		3.0										4.0		
Prepare bid tabulation	2.0		5.0										7.0		

**CITY OF PORT ORANGE
MAN-HOUR ESTIMATE**



May 19, 2021

TEDS PROJECT No.: 10962
CONTRACT DESCRIPTION: Master Contract for Engineering Services
(February 14, 2017)
PRIME CONSULTANT: Traffic Engineering Data Solutions, Inc.

TASK AUTHORIZATION No.: 09
PROJECT DESCRIPTION: SJR2C Loop Trail (Spruce Creek Rd) from South of Selin Circle to Herbert St
(FPN 439865-3-34-01)
ESTIMATE PREPARED BY: Mikal R. Hale, P.E.

ACTIVITY	Chief Engineer / Vice President		Engineer		Engineer Intern		Sr. Designer		Senior Technician		Admin. Assistant		TOTAL		
	Rate/Hr:	\$180.00	Rate/Hr:	\$115.00	Rate/Hr:	\$85.00	Rate/Hr:	\$100.00	Rate/Hr:	\$60.00	Rate/Hr:	\$65.00	Man-hours By Activity	Activity Cost	Avg. Hourly Rate
	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act	Man Hours	Cost by Pos & Act			
Task 12 – Limited Post-Design Services	31.0	5,580.00	40.0	4,600.00	13.0	1,105.00	0.0	0.00	0.0	0.00	0.0	0.00	84.0	11,285.00	134.35
Attend pre-con meeting	3.0												3.0		
Shop drawing review	2.0		8.0										10.0		
Attend (5) meetings at City	10.0		5.0										15.0		
Review and respond to (5) RAI's	2.0		3.0		5.0								10.0		
General construction administration	10.0		20.0										30.0		
Review As-Built / overlay CAD files on design	1.0		1.0		2.0								4.0		
Certification package for Volusia County R/W Use	1.0		1.0		2.0								4.0		
Certification package for SJRWMD ERP Mod	1.0		1.0		2.0								4.0		
Engineer's Certification of Completion for FDOT	1.0		1.0		2.0								4.0		
TOTALS	169.0	30,420.00	213.0	24,495.00	336.0	28,560.00	71.0	7,100.00	0.0	0.00	18.0	1,170.00	586.0	91,745.00	156.56

TEDS LABOR **\$91,745.00**

EXPENSES *(Refer to backup provided on the following page)*

Sub-Consultant Fees

I. SUB-CONSULTANT FEES **\$96,700.00**

Direct Expenses

II. REPRODUCTION **\$52.80**

III. MILEAGE / TRAVEL **\$629.28**

IV. PERMIT REVIEW FEES **\$1,190.00**

V. SHIPPING / POSTAGE **\$0.00**

Sub-Total Direct Expenses **\$1,872.08**

SUB-TOTAL EXPENSES **\$98,572.08**

TOTAL LUMP SUM CONTRACT AMOUNT **\$190,317.08**

CITY OF PORT ORANGE
EXPENSES
May 19, 2021



TEDS PROJECT No.: 10962 CONTRACT DESCRIPTION: Master Contract for Engineering Services (February 14, 2017)		TASK AUTHORIZATION No.: 09 PROJECT DESCRIPTION: SJR2C Loop Trail (Spruce Creek Rd) from South of Selin Circle to Herbert St (FPN 439865-3-34-01)	
PRIME CONSULTANT: Traffic Engineering Data Solutions, Inc.		ESTIMATE PREPARED BY: Mikal R. Hale, P.E.	

I. SUB-CONSULTANT FEES			
Sub-Consultant	Description of Services		Fee
a) PEC Surveying and Mapping, LLC	Task 2.1 – Right-of-Way Surveys		\$7,900.00
b) PEC Surveying and Mapping, LLC	Task 2.2 – Baseline Survey		\$3,000.00
c) PEC Surveying and Mapping, LLC	Task 2.3 – Bench Levels		\$4,000.00
d) PEC Surveying and Mapping, LLC	Task 2.4 – Intersection Survey		\$4,500.00
e) PEC Surveying and Mapping, LLC	Task 2.5 – Cross-Sections		\$10,300.00
f) PEC Surveying and Mapping, LLC	Task 2.6 – City Parcels - Boundary Topographic and Tree Location Surveys		\$9,250.00
g) PEC Surveying and Mapping, LLC	Task 2.7 – Jenzano Corridor Topographic Survey		\$4,000.00
h) PEC Surveying and Mapping, LLC	Task 2.8 – Sketch of Legal Description of Jenzano Trail Easement		\$750.00
i) PEC Surveying and Mapping, LLC	Task 2.9 – Jenzano Parent Parcel Eminent Domain Survey		\$7,500.00
j) Terracon Consulting, Inc.	Task 3 – Environmental Resources & Permitting		\$12,000.00
k) Terracon Consulting, Inc.	Task 4 – Geotechnical Engineering		\$14,000.00
l) Florida Bridge and Transportation, Inc.	Task 8 – Structural Engineering		\$19,500.00
Totals			\$96,700.00

II. REPRODUCTION							
Contract Rate		<u>Black / White:</u>	8.5" x 11"	\$0.10 / sheet	<u>Color:</u>	8.5" x 11"	\$1.20 / sheet
			11" x 17"	\$0.20 / sheet		11" x 17"	\$2.00 / sheet
			24" x 36"	\$3.00 / sheet		24" x 36"	\$20.00 / sheet
Job Estimate		Number of Sheets					
		<u>Black / White</u>			<u>Color</u>		
Document Description	8.5" x 11"	11" x 17"	24" x 36"	8.5" x 11"	11" x 17"	24" x 36"	Number of Sets
a) Construction Plans - FINAL Submittal		56			1		4
Total Reproduction Costs							\$52.80

III. MILEAGE / TRAVEL			
Contract Rate		0.57 / mile (Current Federal Rate)	
Reason for Trip / Destination	Distance / Mileage (round trip)	Number of Trips	Cost
a) Kickoff meeting / City Hall	64	1	\$36.48
b) City Council / City Hall	64	1	\$36.48
c) Coordination meetings / City Hall	64	3	\$109.44
d) Field review / project site	66	1	\$75.24
e) Pre-bid meeting / City Hall	64	1	\$72.96
f) Pre-con meeting / City Hall	64	1	\$72.96
g) Construction observation / project site	66	2	\$150.48
h) Final walk-through / project site	66	1	\$75.24
Total Mileage / Travel Costs			\$629.28

IV. PERMIT REVIEW FEES	
Contract Rate Cost	
Description	Estimated Cost
a) SJRWMD Major Mod to ERP	\$1,190.00
b) Volusia County R/W Use Permit	\$0.00
<i>application fees to be waived by County</i>	
Total Permit Review Fees \$1,190.00	

V. SHIPPING / POSTAGE	
Contract Rate Cost	
Description	Estimated Cost
a) N/A	
b)	
Total Shipping / Postage Costs \$0.00	



Surveying and Mapping

May 13, 2021

Transportation Engineering Data Solutions
Mr. Mikal Hale P.E., Vice President
80 Spring Vista Drive
DeBary, Florida 32713

PS16805r-TED

**Re: Port Orange Sea Loop Trail - Surveying and Mapping Services
City of Port Orange, Florida**

Dear Mr. Hale:

PEC-Surveying and Mapping (PEC) is pleased to submit our proposal for surveying and mapping services in connection with the above-referenced Project.

DESIGN SURVEY: We propose to perform a Design Survey to support the Engineering of the City of Port Orange Sea Loop Trail Segment. The Project Corridor is depicted on the attached portions of the Preliminary Engineering Report (PER) of the Florida Department of Transportation St Johns River to Sea (SJR2C) Loop Project Development and Environmental (PD&E) Study Dated April of 2020.

The Project Limits are that portion of the Corridor being the entire right-of-way width of Spruce Creek Road together with the Halifax Canal, lying east of the Road Spruce Creek Road, from Station 164 to Station 171; the Spruce Creek Road – Dunlawton Avenue Intersection, north, along Spruce Creek Road through the City Owned Parcels, to 50 feet north of the Herbert Street 6th Street Intersection, as shown in the PD&E Study. This represents a total length of approximately 2,300 feet of corridor.

Right-of-way Surveys: The right-of-way of Spruce Creek Road and the Halifax Canal shall be determined by field Survey.

Baseline: A Baseline will be established in the field and referenced for future use during construction, at 1,000-foot intervals.

Bench Levels: A 4 Mile - Closed Bench Loop will be performed incorporating two Volusia County Published Benchmarks. Elevations will be established along the Project Baseline. Elevations will be relative to the North American Vertical Datum of 1988.

Spruce Creek Road – Dunlawton Avenue Intersection Survey: The Intersection of Spruce Creek Road – Dunlawton Avenue will be Surveyed 150 feet, in all directions from the radius returns. All above ground improvements will be located relative to the roadway right-of-ways. All pavement markings will also be located. Elevations will be obtained on 50-foot cross sections.

Cross-Sections: Cross-sections will be performed of the Project Limits at 50-foot intervals.

City of Port Orange Parcels (CAD only): The Project Alignment traverses the two City owned Parcels: Volusia County Property Appraiser's Alykey Numbers 5080030 and 5578518, between the Spruce Creek Road Northern Terminus and the 6th Street – Herbert Street Intersection. A Boundary and Topographic and Tree Location Survey, of these two parcels will be performed.

Jenzano Corridor Topographic Survey: A Topographic Survey of the westerly 100 feet of the Jenzano Parcel will be performed to include the Halifax Canal.

Sketch of Legal Description of Jenzano Trail Easement: A Sketch of Legal Description for the proposed Trail corridor through the Jenzano ownership will be prepared if required.

Eminent Domain Survey – Jenzano Parent Parcel: If requested the Jenzano ownership will be Surveyed with all above ground improvements located relative to the Boundaries.

Fees: We propose to perform the work for the following Fees:

Right-of-way Surveys:	\$ 7,900.00
Baseline Survey:	\$ 3,000.00
Bench Levels (4 miles):	\$ 4,000.00
Intersection Survey: Spruce Creek Road – Dunlawton Avenue:	\$ 4,500.00
Cross Sections:	\$ 10, 300.00
City Owned Parcels (2) Boundary Topographic and Tree Location Surveys (CAD Only): ...	\$ 9,250.00
Jenzano Corridor Topographic Survey:	\$ 4,000.00
Sketch of Legal Description of Jenzano Trail Easement:	\$ 750.00
Jenzano Parent Parcel Emminent Domain Survey:	\$ 7,500.00

Thank you for the opportunity of submitting this proposal to you. Should you have any questions or comments please advise.

Sincerely

PEC Surveying and Mapping



David A. White P.S.M.

May 6, 2021



Mr. Mikal Hale, P.E.
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive
Debary, Florida 32713

Telephone: (386) 753-0558
E-mail: mhale@teds-fl.com

RE: Proposal for Environmental and Geotechnical Services
City of Port Orange – SUN Trail
Port Orange, Volusia County, Florida
Terracon Proposal No. PEQ217222

Dear Mr. Hale:

Terracon Consultants, Inc. (Terracon) appreciates the opportunity to submit this proposal to Traffic Engineering Data Solutions, Inc. (Client) to provide environmental, cultural resource, and geotechnical services for the above referenced project in Port Orange, Florida. This proposal outlines our understanding of the project, our planned work scope and associated fee, and our terms and conditions associated with the performance of this work.

If this proposal meets with your approval, work may be initiated by returning a fully executed copy of the attached Agreement for Services. Please provide the land owner contact information or access information with the signed agreement. The terms, conditions, and limitations stated in the Agreement for Services and sections of this proposal incorporated therein, shall constitute the exclusive terms and conditions and services to be performed for this project.

We appreciate the opportunity to provide this proposal. If you have questions or comments regarding this proposal or require additional services, please give us a call.

Sincerely,
Terracon Consultants, Inc.

Brett Anderson
Senior Project Manager

Gary K. Howalt, PWS
Senior Principal/Department Manager

Attachments: Detailed Scope of Services
Agreement for Services



Terracon Consultants, Inc. 8001 Baymeadows Way, Suite 1 Jacksonville, FL 32256
P [904] 900-6494 F [904] 268-5255 terracon.com

Environmental



Facilities



Geotechnical



Materials

DETAILED SCOPE OF SERVICES

1.0 PROJECT INFORMATION

The site is located within the City of Port Orange and is part of the St. Johns River to Sea Loop Trail system. This segment, of the much larger trail system, begins south of the intersection of Spruce Creek Road and Selin Circle. The trail will extend northerly along the east side of Spruce Creek Road towards Oak Street. The trail will then continue along Spruce Creek Road from Dunlawton Avenue to Canal View Boulevard. The trail continues through a vacant parcel to Herbert Street, connection to the existing Trail Segment. The total project length is approximately 0.65 miles. If this is not accurate, or if you have additional useful information, please inform us as soon as possible.

Based on Terracon's understanding of the project, TEDS will need support to design the proposed section of trail within the City of Port Orange. Specifically, services to be provided include a natural resource review (wetlands, protected species, essential fish habitat), wetland permitting assistance, and geotechnical services. The following sections outline Terracon's scope and fees to conduct associated environmental and geotechnical services to support permitting efforts.

2.0 ENVIRONMENTAL RESOURCES REPORT

Terracon will perform a detailed natural resource review of the proposed ±0.65-mile section of SUNTrail proposed within the city of Port Orange, Florida. Specifically, Terracon will delineate wetlands within the trail corridor pursuant to the current methodologies of the U.S. Army Corps of Engineers [(USACE) 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0)], Florida Department of Environmental Protection (FDEP) and St. Johns River Water Management District [(SJRWMD) Florida Unified Wetland Delineation Methodology, Chapter 62-340, F.A.C.]. Upon completion of the delineation effort, Terracon will provide the project surveyor with a flagging key map showing the approximate location of the wetland line.

In addition, Terracon will perform a protected species review of the proposed trail corridor. This investigation will survey the proposed corridor for the presence of any state or federally protected wildlife species and their habitat. If protected species or habitats are encountered, Terracon will perform preliminary mapping of the potential habitat area.

Implications to development associated with any identified wetlands and/or protected species will be addressed in an Environmental Resources Report to be provided at the completion of the field investigation efforts.

**Based on the Preliminary Engineering Report (PER) prepared by Scalar Consulting Group, Inc. (Scalar), it is anticipated that wetlands will be found within the project corridor. However, protected*

species impacts are not anticipated based on the Scalar PER. Should Terracon identify any protected species concerns, a supplemental change order may need to be requested to address any necessary surveying, agency coordination, and/or permitting efforts associated with those findings.

3.0 ENVIRONMENTAL PERMITTING

Based on the PER prepared by Scalar on behalf of FDOT, it is anticipated that wetland permitting efforts will be required to address the portion of the trail south of Herbert Street. It is Terracon's understanding that a portion of this section of trail will be an elevated boardwalk within the wetland. Terracon will acquire the necessary wetland authorization from SJRWMD to allow for the proposed wetland impact.

Based on a preliminary review, it is anticipated that the subject wetland would be non-jurisdictional under Section 404 of the Clean Water Act. Therefore, Terracon will submit a No Permit Required Verification Request to the Florida Department of Environmental Protection (jointly with the SJRWMD submittal). Should the wetland be deemed jurisdictional under Section 404 of the Clean Water Act, federal authorization may be necessary, and a supplemental change order may be required.

This fee does not include any application fees charged by the regulatory agencies or any mitigation fees associated with proposed wetland impacts.

4.0 GEOTECHNICAL SERVICES

The following summarizes our assumptions regarding the project:

- We will be granted access by our drill rig and crew to perform the required soil borings for the project elements.
- No roadway lane or shoulder closures are anticipated in order to perform the soil borings. Any necessary Maintenance of Traffic (MOT) will be performed in accordance with the Florida Department of Transportation (FDOT) Standard Plans.
- Survey support will be provided by others.

The following presents the number and depth of soil borings proposed for the project elements described above. Survey control in the field will be needed, as necessary, to assist our crews locate borings.

Boardwalk

Based on provided information, our field program includes performing a total of four Standard Penetration Test (SPT) borings to a depth of 40 feet each. Perform soil probing along the boardwalk alignment.

Following completion of the drilling services described above, the following geotechnical services are proposed for this project:

- Perform visual classification and limited laboratory testing of the soil samples obtained from the borings described above.
- Laboratory testing will include grain size analysis, organic content tests, moisture content tests, and/or Atterberg limits analysis, as appropriate, to aid visual classification of soil types. Laboratory testing will also include limited corrosion series testing.
- Engineering services will include coordination and supervision of all field and laboratory testing as well as engineering analysis of the field and laboratory test results. Specifically, geotechnical analysis and recommendations will be made for the following:
 - Boardwalk: Davisson capacity curves based on SPT boring results, observed groundwater tables, results of soil probing, timber pile driving recommendations, vibration recommendations, as needed, and soil parameters for lateral stability analysis (to be performed by others), if necessary.
- After completion of the field phase of the project, a preliminary report will be prepared for review and comment. After appropriate review, a final report will be prepared.

5.0 ADDITIONAL SERVICES NOT INCLUDED

Should it be necessary to expand our services beyond those outlined in this proposal, we will notify you and send a supplemental proposal stating the additional services and fee. We will not proceed without your authorization.

6.0 SCOPE AND REPORT LIMITATIONS

Client shall secure all necessary site related approvals, permits, licenses, and consents necessary to commence and complete the Services and will execute any necessary site access agreement. Consultant will be responsible for supervision and site safety measures for its own employees but shall not be responsible for the supervision or health and safety precautions for any third parties, including Client's contractors, subcontractors, or other parties present at the site. In addition, Consultant retains the right to stop work without penalty at any time Consultant

believes it is in the best interests of Consultant's employees or subcontractors to do so in order to reduce the risk of exposure to the coronavirus. Client agrees it will respond quickly to all requests for information made by Consultant related to Consultant's pre-task planning and risk assessment processes. Client acknowledges its responsibility for notifying Consultant of any circumstances that present a risk of exposure to the coronavirus or individuals who have tested positive for COVID-19 or are self-quarantining due to exhibiting symptoms associated with the coronavirus.

The findings and conclusions presented in the final report will be based on the site's current utilization, the anticipated future use of the site, if provided to Terracon, and the information collected as discussed in this proposal. Please note that we do not warrant database or third-party information (such as from interviewees) or regulatory agency information used in the compilation of plans or reports. No warranties, express or implied, are intended or made.

7.0 SCHEDULE

Terracon is prepared to begin upon receipt of written notice to proceed. It is anticipated that preliminary efforts (desktop background research, initial planning) will begin within five business days of NTP, while initial field efforts will begin within 10 business days of NTP, weather dependent.

8.0 COMPENSATION

Task	Fees
Environmental Resources Report	\$6,000.00
Environmental Permitting	\$6,000.00
Geotechnical Services	\$14,000.00

The project will be invoiced on a percent complete basis monthly. Payments on invoices will be due in full within 30 days from the date of the invoice.

9.0 OUR COMMITMENT TO SAFETY

Safety is one of Terracon's core values and our commitment to an Incident and Injury-Free® philosophy is one of the pillars of our current Strategic Plan. Incident and Injury-Free (IIF) is about care and concern for our people. It is our personal and organizational commitment at all levels of the company to everyone going home safe to their family every day. It is where safety is held as a core value as well as an operational priority. Working safely is an inseparable part of working correctly, just as much as other operational priorities, in particular quality, profitability and

Proposal for Environmental and Geotechnical Assessment Services

Traffic Engineering Data Solutions, Inc. ■ Port Orange, Florida

May 6, 2021 ■ Terracon Project No. PEQ217222



schedule. IIF is our commitment to our people, who we value for who they are and what they do. We strive to build health and safety into all aspects of our business and into the thinking of our employees.

AGREEMENT FOR SERVICES

This **AGREEMENT** is between Traffic Engineering Data Solutions, Inc. ("Client") and Terracon Consultants, Inc. ("Consultant") for Services to be provided by Consultant for Client on the City of Port Orange - SUN Trail project ("Project"), as described in Consultant's Proposal dated 05/06/2021 ("Proposal"), including but not limited to the Project Information section, unless the Project is otherwise described in Exhibit A to this Agreement (which section or Exhibit is incorporated into this Agreement).

- 1. Scope of Services.** The scope of Consultant's services is described in the Proposal, including but not limited to the Scope of Services section ("Services"), unless Services are otherwise described in Exhibit B to this Agreement (which section or exhibit is incorporated into this Agreement). Portions of the Services may be subcontracted. Consultant's Services do not include the investigation or detection of, nor do recommendations in Consultant's reports address the presence or prevention of biological pollutants (e.g., mold, fungi, bacteria, viruses, or their byproducts) or occupant safety issues, such as vulnerability to natural disasters, terrorism, or violence. If Services include purchase of software, Client will execute a separate software license agreement. Consultant's findings, opinions, and recommendations are based solely upon data and information obtained by and furnished to Consultant at the time of the Services.
- 2. Acceptance/ Termination.** Client agrees that execution of this Agreement is a material element of the consideration Consultant requires to execute the Services, and if Services are initiated by Consultant prior to execution of this Agreement as an accommodation for Client at Client's request, both parties shall consider that commencement of Services constitutes formal acceptance of all terms and conditions of this Agreement. Additional terms and conditions may be added or changed only by written amendment to this Agreement signed by both parties. In the event Client uses a purchase order or other form to administer this Agreement, the use of such form shall be for convenience purposes only and any additional or conflicting terms it contains are stricken. This Agreement shall not be assigned by either party without prior written consent of the other party. Either party may terminate this Agreement or the Services upon written notice to the other. In such case, Consultant shall be paid costs incurred and fees earned to the date of termination plus reasonable costs of closing the Project.
- 3. Change Orders.** Client may request changes to the scope of Services by altering or adding to the Services to be performed. If Client so requests, Consultant will return to Client a statement (or supplemental proposal) of the change setting forth an adjustment to the Services and fees for the requested changes. Following Client's review, Client shall provide written acceptance. If Client does not follow these procedures, but instead directs, authorizes, or permits Consultant to perform changed or additional work, the Services are changed accordingly and Consultant will be paid for this work according to the fees stated or its current fee schedule. If project conditions change materially from those observed at the site or described to Consultant at the time of proposal, Consultant is entitled to a change order equitably adjusting its Services and fee.
- 4. Compensation and Terms of Payment.** Client shall pay compensation for the Services performed at the fees stated in the Proposal, including but not limited to the Compensation section, unless fees are otherwise stated in Exhibit C to this Agreement (which section or Exhibit is incorporated into this Agreement). If not stated in either, fees will be according to Consultant's current fee schedule. Fee schedules are valid for the calendar year in which they are issued. Fees do not include sales tax. Client will pay applicable sales tax as required by law. Consultant may invoice Client at least monthly and payment is due upon receipt of invoice. Client shall notify Consultant in writing, at the address below, within 15 days of the date of the invoice if Client objects to any portion of the charges on the invoice, and shall promptly pay the undisputed portion. Client shall pay a finance fee of 1.5% per month, but not exceeding the maximum rate allowed by law, for all unpaid amounts 30 days or older. Client agrees to pay all collection-related costs that Consultant incurs, including attorney fees. Consultant may suspend Services for lack of timely payment. It is the responsibility of Client to determine whether federal, state, or local prevailing wage requirements apply and to notify Consultant if prevailing wages apply. If it is later determined that prevailing wages apply, and Consultant was not previously notified by Client, Client agrees to pay the prevailing wage from that point forward, as well as a retroactive payment adjustment to bring previously paid amounts in line with prevailing wages. Client also agrees to defend, indemnify, and hold harmless Consultant from any alleged violations made by any governmental agency regulating prevailing wage activity for failing to pay prevailing wages, including the payment of any fines or penalties.
- 5. Third Party Reliance.** This Agreement and the Services provided are for Consultant and Client's sole benefit and exclusive use with no third party beneficiaries intended. Reliance upon the Services and any work product is limited to Client, and is not intended for third parties other than those who have executed Consultant's reliance agreement, subject to the prior approval of Consultant and Client.
- 6. LIMITATION OF LIABILITY. CLIENT AND CONSULTANT HAVE EVALUATED THE RISKS AND REWARDS ASSOCIATED WITH THIS PROJECT, INCLUDING CONSULTANT'S FEE RELATIVE TO THE RISKS ASSUMED, AND AGREE TO ALLOCATE CERTAIN OF THE ASSOCIATED RISKS. TO THE FULLEST EXTENT PERMITTED BY LAW, THE TOTAL AGGREGATE LIABILITY OF CONSULTANT (AND ITS RELATED CORPORATIONS AND EMPLOYEES) TO CLIENT AND THIRD PARTIES GRANTED RELIANCE IS LIMITED TO THE GREATER OF \$50,000 OR CONSULTANT'S FEE, FOR ANY AND ALL INJURIES, DAMAGES, CLAIMS, LOSSES, OR EXPENSES (INCLUDING ATTORNEY AND EXPERT FEES) ARISING OUT OF CONSULTANT'S SERVICES OR THIS AGREEMENT. PRIOR TO ACCEPTANCE OF THIS AGREEMENT AND UPON WRITTEN REQUEST FROM CLIENT, CONSULTANT MAY NEGOTIATE A HIGHER LIMITATION FOR ADDITIONAL CONSIDERATION IN THE FORM OF A SURCHARGE TO BE ADDED TO THE AMOUNT STATED IN THE COMPENSATION SECTION OF THE PROPOSAL. THIS LIMITATION SHALL APPLY REGARDLESS OF AVAILABLE PROFESSIONAL LIABILITY INSURANCE COVERAGE, CAUSE(S), OR THE THEORY OF LIABILITY, INCLUDING NEGLIGENCE, INDEMNITY, OR OTHER RECOVERY. THIS LIMITATION SHALL NOT APPLY TO THE EXTENT THE DAMAGE IS PAID UNDER CONSULTANT'S COMMERCIAL GENERAL LIABILITY POLICY.**
- 7. Indemnity/Statute of Limitations.** Consultant and Client shall indemnify and hold harmless the other and their respective employees from and against legal liability for claims, losses, damages, and expenses to the extent such claims, losses, damages, or expenses are legally determined to be caused by their negligent acts, errors, or omissions. In the event such claims, losses, damages, or expenses are legally determined to be caused by the joint or concurrent negligence of Consultant and Client, they shall be borne by each party in proportion to its own negligence under comparative fault principles. Neither party shall have a duty to defend the other party, and no duty to defend is hereby created by this indemnity provision and such duty is explicitly waived under this Agreement. Causes of action arising out of Consultant's Services or this Agreement regardless of cause(s) or the theory of liability, including negligence, indemnity or other recovery shall be deemed to have accrued and the applicable statute of limitations shall commence to run not later than the date of Consultant's substantial completion of Services on the project.
- 8. Warranty.** Consultant will perform the Services in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. **EXCEPT FOR THE STANDARD OF CARE PREVIOUSLY STATED, CONSULTANT MAKES NO WARRANTIES OR GUARANTEES, EXPRESS OR IMPLIED, RELATING TO CONSULTANT'S SERVICES AND CONSULTANT DISCLAIMS ANY IMPLIED WARRANTIES OR WARRANTIES IMPOSED BY LAW, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**
- 9. Insurance.** Consultant represents that it now carries, and will continue to carry: (i) workers' compensation insurance in accordance with the laws of the states having jurisdiction over Consultant's employees who are engaged in the Services, and employer's liability insurance (\$1,000,000); (ii) commercial general liability insurance (\$1,000,000 occ / \$2,000,000 agg); (iii) automobile liability insurance (\$1,000,000 B.I. and P.D. combined single limit); and (iv) professional liability insurance (\$1,000,000 claim / agg). Certificates of insurance will be provided upon request. Client and Consultant shall waive subrogation against the other party on all general liability and property coverage.

- 10. CONSEQUENTIAL DAMAGES.** NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR LOSS OF PROFITS OR REVENUE; LOSS OF USE OR OPPORTUNITY; LOSS OF GOOD WILL; COST OF SUBSTITUTE FACILITIES, GOODS, OR SERVICES; COST OF CAPITAL; OR FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT, PUNITIVE, OR EXEMPLARY DAMAGES.
- 11. Dispute Resolution.** Client shall not be entitled to assert a Claim against Consultant based on any theory of professional negligence unless and until Client has obtained the written opinion from a registered, independent, and reputable engineer, architect, or geologist that Consultant has violated the standard of care applicable to Consultant's performance of the Services. Client shall provide this opinion to Consultant and the parties shall endeavor to resolve the dispute within 30 days, after which Client may pursue its remedies at law. This Agreement shall be governed by and construed according to Florida law.
- 12. Subsurface Explorations.** Subsurface conditions throughout the site may vary from those depicted on logs of discrete borings, test pits, or other exploratory services. Client understands Consultant's layout of boring and test locations is approximate and that Consultant may deviate a reasonable distance from those locations. Consultant will take reasonable precautions to reduce damage to the site when performing Services; however, Client accepts that invasive services such as drilling or sampling may damage or alter the site. Site restoration is not provided unless specifically included in the Services.
- 13. Testing and Observations.** Client understands that testing and observation are discrete sampling procedures, and that such procedures indicate conditions only at the depths, locations, and times the procedures were performed. Consultant will provide test results and opinions based on tests and field observations only for the work tested. Client understands that testing and observation are not continuous or exhaustive, and are conducted to reduce - not eliminate - project risk. Client shall cause all tests and inspections of the site, materials, and Services performed by Consultant to be timely and properly scheduled in order for the Services to be performed in accordance with the plans, specifications, contract documents, and Consultant's recommendations. No claims for loss or damage or injury shall be brought against Consultant by Client or any third party unless all tests and inspections have been so performed and Consultant's recommendations have been followed. Unless otherwise stated in the Proposal, Client assumes sole responsibility for determining whether the quantity and the nature of Services ordered by Client is adequate and sufficient for Client's intended purpose. Client is responsible (even if delegated to contractor) for requesting services, and notifying and scheduling Consultant so Consultant can perform these Services. Consultant is not responsible for damages caused by Services not performed due to a failure to request or schedule Consultant's Services. Consultant shall not be responsible for the quality and completeness of Client's contractor's work or their adherence to the project documents, and Consultant's performance of testing and observation services shall not relieve Client's contractor in any way from its responsibility for defects discovered in its work, or create a warranty or guarantee. Consultant will not supervise or direct the work performed by Client's contractor or its subcontractors and is not responsible for their means and methods. The extension of unit prices with quantities to establish a total estimated cost does not guarantee a maximum cost to complete the Services. The quantities, when given, are estimates based on contract documents and schedules made available at the time of the Proposal. Since schedule, performance, production, and charges are directed and/or controlled by others, any quantity extensions must be considered as estimated and not a guarantee of maximum cost.
- 14. Sample Disposition, Affected Materials, and Indemnity.** Samples are consumed in testing or disposed of upon completion of the testing procedures (unless stated otherwise in the Services). Client shall furnish or cause to be furnished to Consultant all documents and information known or available to Client that relate to the identity, location, quantity, nature, or characteristic of any hazardous waste, toxic, radioactive, or contaminated materials ("Affected Materials") at or near the site, and shall immediately transmit new, updated, or revised information as it becomes available. Client agrees that Consultant is not responsible for the disposition of Affected Materials unless specifically provided in the Services, and that Client is responsible for directing such disposition. In no event shall Consultant be required to sign a hazardous waste manifest or take title to any Affected Materials. Client shall have the obligation to make all spill or release notifications to appropriate governmental agencies. The Client agrees that Consultant neither created nor contributed to the creation or existence of any Affected Materials conditions at the site and Consultant shall not be responsible for any claims, losses, or damages allegedly arising out of Consultant's performance of Services hereunder, or for any claims against Consultant as a generator, disposer, or arranger of Affected Materials under federal, state, or local law or ordinance.
- 15. Ownership of Documents.** Work product, such as reports, logs, data, notes, or calculations, prepared by Consultant shall remain Consultant's property. Proprietary concepts, systems, and ideas developed during performance of the Services shall remain the sole property of Consultant. Files shall be maintained in general accordance with Consultant's document retention policies and practices.
- 16. Utilities.** Unless otherwise stated in the Proposal, Client shall provide the location and/or arrange for the marking of private utilities and subterranean structures. Consultant shall take reasonable precautions to avoid damage or injury to subterranean structures or utilities. Consultant shall not be responsible for damage to subterranean structures or utilities that are not called to Consultant's attention, are not correctly marked, including by a utility locate service, or are incorrectly shown on the plans furnished to Consultant.
- 17. Site Access and Safety.** Client shall secure all necessary site related approvals, permits, licenses, and consents necessary to commence and complete the Services and will execute any necessary site access agreement. Consultant will be responsible for supervision and site safety measures for its own employees, but shall not be responsible for the supervision or health and safety precautions for any other parties, including Client, Client's contractors, subcontractors, or other parties present at the site. In addition, Consultant retains the right to stop work without penalty at any time Consultant believes it is in the best interests of Consultant's employees or subcontractors to do so in order to reduce the risk of exposure to the coronavirus. Client agrees it will respond quickly to all requests for information made by Consultant related to Consultant's pre-task planning and risk assessment processes. Client acknowledges its responsibility for notifying Consultant of any circumstances that present a risk of exposure to the coronavirus or individuals who have tested positive for COVID-19 or are self-quarantining due to exhibiting symptoms associated with the coronavirus.

PURSUANT TO SECTION 558.0035 OF FLORIDA STATUTES, AN INDIVIDUAL EMPLOYEE OR AGENT OF CONSULTANT MAY NOT BE HELD INDIVIDUALLY LIABLE.

Consultant: **Terracon Consultants, Inc.**

By: _____ Date: **5/6/2021**

Name/Title: **Gary K Howalt / Principal/Department Manager I**

Address: **8001 Baymeadows Way Ste 1
Jacksonville, FL 32256-7521**

Phone: **(904) 900-6494** Fax: **(904) 268-5255**

Email: **Gary.Howalt@terracon.com**

Client: **Traffic Engineering Data Solutions, Inc.**

By: _____ Date: _____

Name/Title: **Mikal R. Hale, P.E. /**

Address: **80 Spring Vista Dr
Debary, FL 32713-1821**

Phone: **(386) 753-0558** Fax: _____

Email: **mhale@teds-fl.com**



Florida Bridge and Transportation, Inc.
Structural Engineers

April 22, 2021

Mr. Mikal Hale, PE
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive
DeBary, Florida 32713
386.753.0558 (o) 386.547.4535 (c)

RE: SJR2C SunTrail
Timber Boardwalk
Proposal for Structural Analysis
FBT Project #21-31.01

Dear Mikal:

Florida Bridge and Transportation, Inc. (FBT) is pleased to submit this proposal to Traffic Engineering Data Solutions, Inc. (TEDS) for engineering services for the above referenced project. The scope of design services for this project includes the following:

- 1) FBT will provide the structural design calculations and plan sheets for a 12-ft wide by approximately 250-ft long timber boardwalk with wood decking as part of the SunTrail Pathway project within a wetland area. The pedestrian walkway will be designed in accordance with AASHTO's LRFD Guide Specifications for Design of Pedestrian Bridges.
- 2) Prepare drawings showing the one typical span for the pedestrian walkway in section, elevation, and plan with accompanying necessary details. The overall bridge plan and profile of the walkway will be shown on the trail plans to be prepared by others.
- 3) Gravity wall abutments will be detailed for each abutment. The gravity walls will reference FDOT design standards for design.
- 4) Respond to review comments from the client regarding the structural design of the boardwalk. This proposal has an allotment of up to eight (8) hours for responding to comments.
- 5) The final project deliverables will consist of signed and sealed calculations and plan sheets detailing the boardwalk.

We propose a lump sum fee of \$19,500.00 for the basic structural engineering services indicated above.

The scope and fee indicated above does not include the following services:

- A plan and elevation sheet showing the overall boardwalk and geometry. This will be provided on overall trail plans by others.
- Field Reviews or attendance at meetings beyond the allotment shown above
- Construction Inspection/Observation of installation and on-going construction
- Specifications - FDOT standard specifications will be referenced
- Preparation of as-built or record drawings

- Post design services

The items indicated above, or any other services not included in the basic scope of design services described above, may be provided for an additional fee. A supplemental agreement must be negotiated prior to the additional work being performed by FBT. Additional services required for this project may be provided based on an addendum to this agreement. Fees for additional services will be addressed on a case by case basis.

In order for FBT to perform these services, we will need the following information from others:

- Trail plans (plan and profile)
- Soil borings (SPT) with Davisson Capacity Curves, groundwater elevations, muck probing along the alignment, timber pile/post driving recommendations, vibration recommendations, and related geotechnical property recommendations

TEDS shall indemnify and hold harmless FBT and all of its personnel from and against any and all claims, damages, losses and expenses (including reasonable attorneys fees) arising out of or resulting from the performance of the services, provided that any such claims, damage, loss or expense is caused in whole or in part by the negligent act or omission and/or strict liability of TEDS, anyone directly or indirectly employed by TEDS (except FBT) or anyone for whose acts any of them may be liable.

This agreement is intended to benefit TEDS and FBT exclusive. Any benefit conferred upon a third party is incidental to this agreement.

This proposal will become invalid if not executed within 90 days. We are prepared to commence the structural design services upon receipt of a written notice to proceed.

We appreciate this opportunity to be of service to Traffic Engineering Data Solutions, Inc.

Very truly yours,

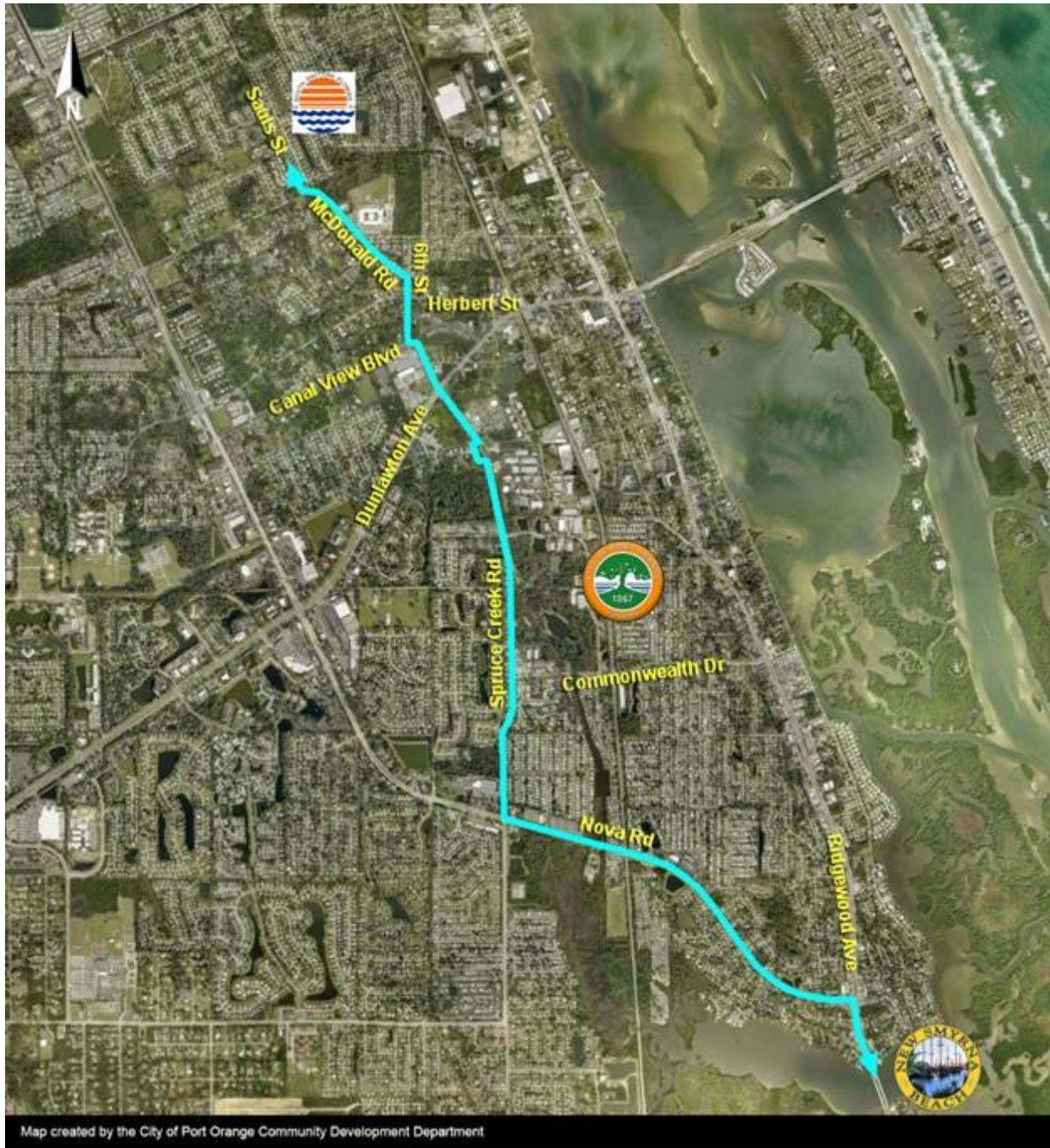
Florida Bridge and Transportation, Inc.



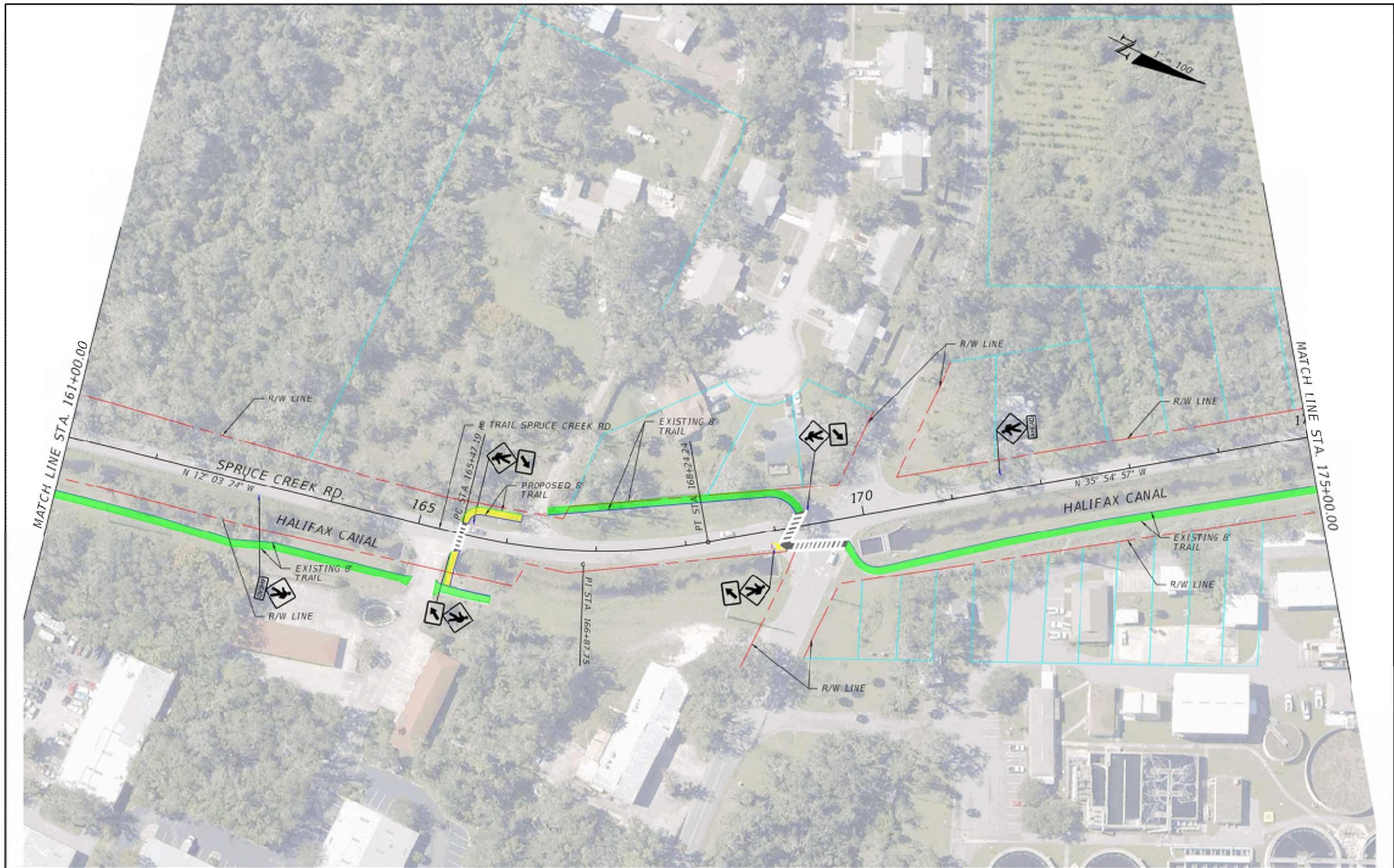
Bassel Kassem, P.E.
Vice President



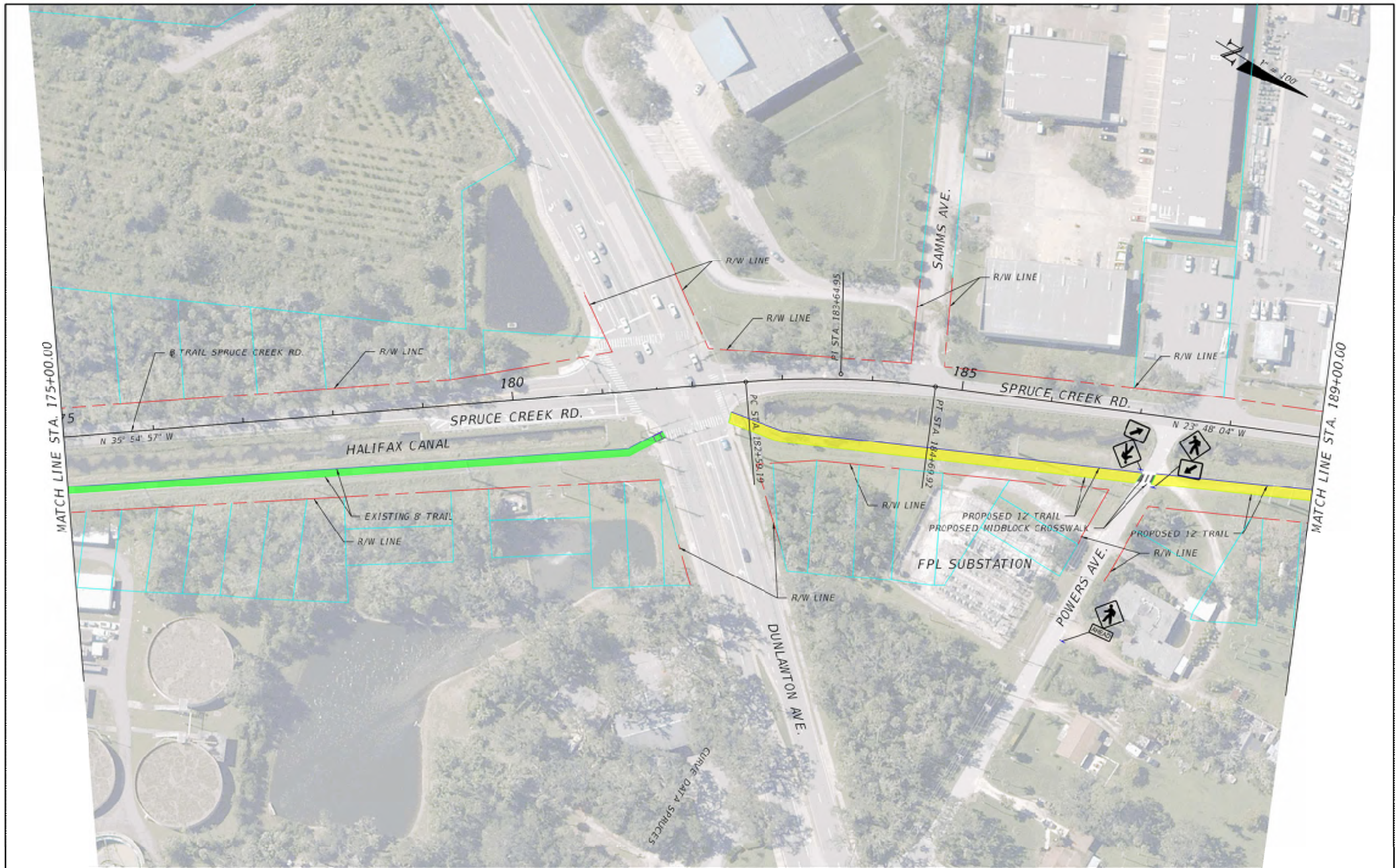
Location Map







LEGEND:			PROPOSED TRAIL		GUARDRAIL	 4152 W. BLUE HERON BOULEVARD, SUITE 119 RIVIERA BEACH, FL 33404 PH: (561) 429-5065	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			<i>CONCEPT PLAN</i>	SHEET NO.
	PROPOSED R/W		PROPERTY LINE		SHARROW		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		48
	EXISTING R/W		EXISTING TRAIL (TO REMAIN)			-	VOLUSIA	439865-1-22-01			
	TRAFFIC SIGNAL		PROPOSED TRAIL (PREVIOUS CONTRACT)		PROPOSED BOARDWALK						

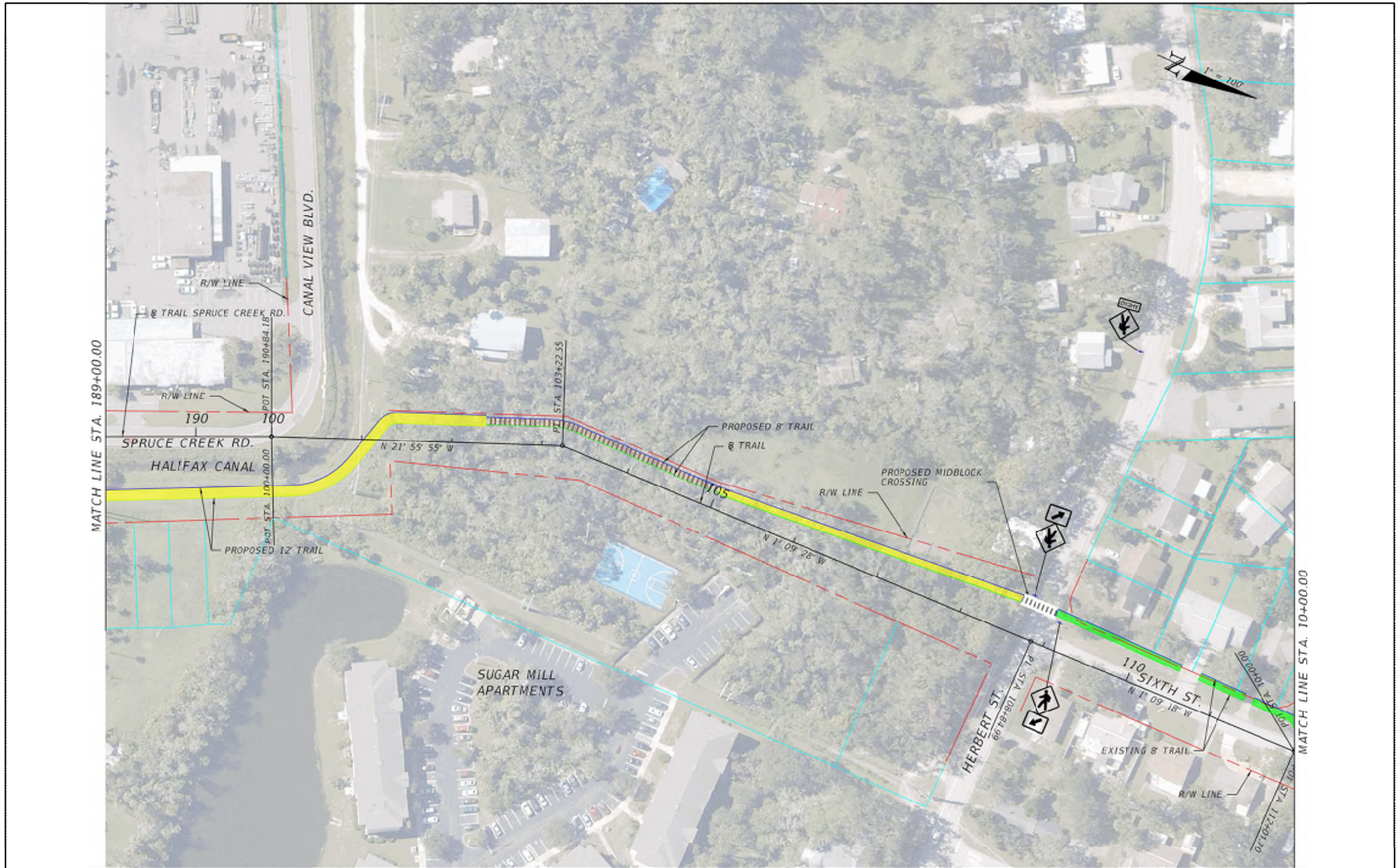


LEGEND: PROPOSED R/W EXISTING R/W TRAFFIC SIGNAL PROPOSED TRAIL PROPERTY LINE EXISTING TRAIL (TO REMAIN) PROPOSED TRAIL (PREVIOUS CONTRACT) GUARDRAIL SHARROW PROPOSED BOARDWALK				SCALAR Consulting Group Inc. 4152 W. BLUE HERON BOULEVARD, SUITE 119 RIVIERA BEACH, FL 33404 PH: (561) 429-5065		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION <table><tr><td>ROAD NO.</td><td>COUNTY</td><td>FINANCIAL PROJECT ID</td></tr><tr><td>-</td><td>VOLUSIA</td><td>439865-1-22-01</td></tr></table>		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	-	VOLUSIA	439865-1-22-01	CONCEPT PLAN		SHEET NO. 49
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LEGEND:		 PROPOSED TRAIL	 GUARDRAIL	 4152 W. BLUE HERON BOULEVARD, SUITE 119 RIVIERA BEACH, FL 33404 PH: (561) 429-5065	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			CONCEPT PLAN	SHEET NO.
 PROPOSED R/W	 EXISTING R/W	 PROPERTY LINE	 SHARROW		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		50
 TRAFFIC SIGNAL	 EXISTING TRAIL (TO REMAIN)	 PROPOSED TRAIL (PREVIOUS CONTRACT)	 PROPOSED BOARDWALK		-	VOLUSIA	439865-1-22-01		
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CITY COUNCIL AGENDA ITEM

REQUESTED COUNCIL MEETING DATE 6/15/2021

Consent item: Yes

SUBJECT: (C8g) Approval of Task Authorization No. 12 to Kimley-Horn for Phase 2 of the ADA Transition Plan

DEPARTMENT: Community Development

GOAL: 1 - Public Safety, 3 - Quality of Life

RECOMMENDED MOTION: Move to approve Task Authorization No. 12 to Kimley-Horn for Phase 2 of the ADA Transition Plan.

SUMMARY: Community Development is requesting approval of Task Authorization No. 12 with Kimley-Horn for the preparation of Phase 2 of the Americans with Disabilities Act (ADA) Transition Plan. The purpose of the ADA Transition Plan is to provide the framework for achieving equal access to the City of Port Orange's programs, services, activities, and facilities within a reasonable timeframe to remain in compliance with Title II of the ADA. The Transition Plan is a working document that will be updated until all barriers have been addressed.

Phase 2 of the ADA Transition Plan consist of ADA compliance review of City buildings and associated parking lots including paths of travel. The facilities to be evaluated are those that haven't been built or renovated recently and are most frequented by the public including City Hall, City Center Playground, Port Orange Adult Center, Lakeside Community Center, Allen Green Center, Public Utilities: Office/Field Ops, Public Utilities: Warehouse/Office Bldg., Public Works: Office and Garage, and Fire Station #73. Possible solutions to bring any non-compliant elements that are not considered to be a de minimus barrier and are not "safe harbored" into compliance will be provided. The City's ADA Transition Plan document will be updated and include formal documentation of tasks and associated findings. City Council adopted a FY19 budget of \$200,000 for the ADA Transition Plan. There is currently \$100,000 available for Phase 2 in the project budget. The fee for Phase 2 is \$51,700.

In 2018, the City contracted with Kimley-Horn to prepare Phase 1 of the City's ADA Transition Plan. Phase 1 consisted of ADA compliance review of City public rights-of-way sidewalks and associated curb ramps utilizing the sidewalk and curb ramp data collected by the Infrastructure Management Services (IMS) Study. The City's ADA Transition Plan Phase 1 document was completed in January 2020. Included in Kimley-Horn's Phase 1 contract is the requirement to conduct an online citizen survey and collect citizen input through a Wikimap. A Wikimap is an online tool that allows users to identify ADA barriers on an interactive map of the City. Kimley-Horn has submitted

these for staff review and it is anticipated that the citizen survey and Wikimap will be distributed for public input this summer. The data collected from the survey and Wikimap will be added to the ADA Transition Plan document. At the time the Wikimap is ready to be distributed to the public, City staff will use various methods to promote and encourage participation with the survey and Wikimap.

Project No.: ZMI076

Funding Account No.: 317-1000-519-63-97

Presenter: Margaret Tomlinson

ATTACHMENTS:

1.	Task Authorization No. 12	Task Authorization No. 12.pdf
2.	Master Contract for Engineering Services	Master Contract for Engineering Services.pdf
3.	Renewal form 2020-2022	Renewal form 2020-2022.pdf

Margaret Tomlinson

Created/Initiated - 5/20/2021

Tim Burman

Approved - 5/27/2021

Lupe Reyna-Coffin

Approved - 6/2/2021

Scott Neils

Approved - 6/2/2021

Matthew Jones

Approved - 6/4/2021

Wayne Clark

Approved - 6/7/2021

Robin Fenwick

Final Approval - 6/8/2021

TASK AUTHORIZATION NO. 12
Master Contract for Engineering Services dated March 9, 2017
Between the City of Port Orange, Florida and Kimley-Horn and Associates, 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 **KIMLEY-HORN & ASSOCIATES, INC.**, a Florida corporation with its principal place of business at 421 Fayetteville Street, Suite 600, Raleigh, North Carolina 27601 ("Contractor"), and hereinafter collectively referred to as the "Parties," and is to that certain Master Contract for Engineering Services dated March 9, 2017, 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. The Construction & Engineering Manager, Margaret Tomlinson, shall perform contract administration for this Task Authorization No. 12 and can be reached at (386) 506-5661.
3. In addition to all other terms and conditions contained in the Contract, Contractor shall provide professional consultant services relating to the American with Disabilities Act ("ADA") Transition Plan – Phase 2, and as more particularly described in the Scope of Services attached hereto and incorporated herein as Task Authorization Exhibit "A."
4. Contractor shall complete the services to be provided herein within eighteen (18) months after the City's issuance of the Notice to Proceed to the Contractor.
5. In return for the services identified above, the City agrees to compensate Contractor in an amount not to exceed \$51,700.00. 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.
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 Contractor 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:

KIMLEY-HORN AND ASSOCIATES, INC.

Printed Name: _____ By: _____
Malcolm L. Bryant, PE, 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.

Printed Name: _____ Date: _____

Witnesses:

CITY OF PORT ORANGE

Printed Name: _____ By: _____
Donald O. Burnette, Mayor

Printed Name: _____ Date: _____

Witnesses: **ATTEST:**

Printed Name: _____ By: _____
Robin L. Fenwick, MMC, City Clerk

Printed Name: _____ Date: _____

/

SCOPE OF SERVICES

PROJECT NAME: City of Port Orange ADA Transition Plan - Phase 2

PROJECT UNDERSTANDING

Kimley-Horn and Associates, Inc. ("Consultant") will provide professional services based on our project understanding as follows:

- The City of Port Orange, FL ("Client") wants to develop their Americans with Disabilities Act (ADA) Self-Evaluation and Transition Plan in multiple phases.
- This assignment will constitute Phase 2 of the ADA Self-Evaluation and Transition Plan and will include an ADA compliance review of City buildings and associated parking lots including paths of travel. Possible solutions to bring any non-compliant elements that are not considered to be a de minimis barrier and are not "safe harbored" into compliance will be provided. The City's ADA Transition Plan document will be updated and include formal documentation of tasks and associated findings outlined in this Scope of Services.
- Future phases of this project could include, but are not limited to:
 - Development of existing facility inventory of sidewalk/trails within parks and building sites to determine the number of miles of sidewalk/trails that need to be evaluated;
 - Evaluations of facilities not listed above, including determination of compliance status, possible solutions, cost estimates to implement possible solutions, and prioritization of evaluated facilities for implementation; and
 - Update of Transition Plan to document additional work.

SCOPE OF PROFESSIONAL SERVICES

Task 1 – Project Management

- 1.1 The Consultant will maintain project records, budgets, and communications for the duration of the project. It is understood the project will have a 6-month duration.
- 1.2 The Consultant will prepare monthly progress reports for the duration of the project.

Task 2 – Project Kick-off Meeting

- 2.1 The Consultant will meet with Client staff representing major program areas and orient them to the process that will be used to develop the Client's ADA Transition Plan and introduce the proposed project tasks and schedule. The Consultant will coordinate with Client staff to identify and obtain all necessary documents and materials to support the Self-Evaluation process. This will include a list of all Client sponsored programs and Client leased and owned facilities to be included in the project. The Consultant will produce meeting materials and handouts, conduct staff orientation, and prepare a summary of action items resulting from the meeting (1-hour meeting).

Task 3 – Self-Evaluation

- 3.1 Facilities Review. The Consultant will establish field teams which will conduct evaluations based on forms developed by the Consultant. The evaluation forms for facilities listed in **Tasks 3.1.1.1 – 3.1.1.2** will be based on the 2010 ADA Standards for Accessible Design and applicable access-related state and local standards. All field data will be compatible with the Client’s existing Geographic Information System (GIS).

3.1.1 Facilities Listing

3.1.1.1 Buildings and Parking Lots – The following buildings will be evaluated:

Location Name		Property Address
1.	City Hall Building and Pedestrian Bridge	1000 City Center Cir
2.	City Center Playground	4655 City Center Cir
3.	Port Orange Adult Center	4790 S Ridgewood Ave
4.	Lakeside Community Center	1999 City Center Cir
5.	Allen Green Center	4705 Clyde Morris Blvd
6.	Public Utilities: Office/Field Ops	407 Virginia Ave
7.	Public Utilities: Warehouse/Office Building	407 Virginia Ave
8.	Public Works: Office and Garage	407 Virginia Ave
9.	Fire Station #73	1090 City Center Blvd

Building evaluations are limited to all common-use spaces, including common-use spaces located in employee-only areas. Areas used only by employees as work areas will not be evaluated.

- 3.1.1.2 Building Sidewalks – On-site building sidewalk (excludes perimeter sidewalk within the public right-of-way) and all associated curb ramps, ramps, stairs, and other paths of travel required to be ADA compliant will be evaluated.

Facility Reports. The Consultant will create a separate report for each facility type. Each facility report will identify compliance status of each facility and include the following:

- Listing of facilities that are in compliance with ADA requirements.
- Listing of facilities that are not in compliance with ADA requirements.
- Possible solutions to resolve non-compliance issues for each facility.
- Prioritized list of improvements using criteria developed by the Consultant.
- “Cost report” that assigns conceptual budget estimates to each possible solution. Because the Consultant does not control the cost of labor, materials, equipment or services furnished by others, methods of determining prices, or competitive bidding or market conditions, any opinions rendered as to costs, including but not limited to opinions as to the costs of construction and materials, shall be made on the basis of its experience and represent its judgment as an experienced and qualified professional, familiar with the industry. The Consultant cannot and does not guarantee that proposals, bids or actual costs will not vary

- from its opinions of cost. If the Client wishes greater assurance as to the amount of any cost, it shall employ an independent cost estimator. Consultant's services required to bring costs within any limitation established by the Client will be paid for as Additional Services.
- Pay item descriptions, units, and unit prices will be based on the Means ADA Compliance Pricing Guide. Changes to the pay item units after project commencement will be considered Additional Services.
 - Photolog summary for each facility.
 - Catalog of all field data compatible with the Client's existing GIS databases.
 - The compliance status and possible solutions for facilities listed in **Tasks 3.1.1.1 – 3.1.1.2** will be based on the 2010 ADA Standards for Accessible Design and applicable access-related state and local standards.

Task 4 – Transition Plan Update

The Consultant will coordinate with Client staff in updating the Transition Plan as follows:

- 4.1 Prioritization Criteria. The Consultant will recommend criteria for prioritizing identified accessibility improvements.
- 4.2 Exceptions and Exemptions. The Consultant will evaluate and provide possible solutions for exceptions or exemptions that may apply under the terms of the ADA. This may include exemptions related to structures of historic significance, alterations affecting the fundamental nature of a program, service, or activity under financial and administrative burden, or structural changes.
- 4.3 Budget. The Consultant will assist the Client to develop a multi-year budget needed for accessibility improvements. Possible funding sources to achieve compliance will be provided. It will be the Client's responsibility to confirm the City's eligibility for each funding source.
- 4.4 Draft Transition Plan Update. Based on the Self-Evaluation, the Consultant will prepare a draft update of the Transition Plan for the Client. The plan will include:
 - Executive summary which will describe the project purpose, process, and most significant findings;
 - Summary and detailed findings of Self-Evaluation; and
 - A phased schedule with cost estimates for the removal of facility barriers that cannot be resolved through relocation of services, the provision of auxiliary aids, or equivalent facilitation.

The Consultant will provide electronic copies of the Draft Transition Plan Update in Microsoft Word and Adobe PDF formats to the Client.

- 4.5 Final Transition Plan Update. The Consultant will address one (1) round of comments from Client staff to prepare a Final ADA Self-Evaluation and Transition Plan Update for the Client. The Consultant will provide the following deliverables to the Client:
 - Electronic copies of the Final Transition Plan in Microsoft Word and Adobe PDF formats; and

- Electronic copies of the Final Transition Plan Appendices in Adobe PDF format. Printed copies of the Appendices will be considered Additional Services.

Task 5 – Meetings

- 5.1 **Progress Meetings.** The Consultant will meet with the City’s ADA Action Team throughout the process of completing the Self-Evaluation and updating the Transition Plan and will continue to meet and actively participate after the completion of this project. The Consultant will work with the ADA Action Team throughout the duration of the project to receive feedback and incorporate information from the ADA Action Team into the project. The Consultant will prepare for and attend up to two (2) virtual progress meeting with the ADA Action Team. The Consultant will produce meeting materials and handouts and prepare a summary of action items resulting from the meeting (1-hour meeting(s)).

Services Not Included

Any other services, including but not limited to the following, are not included in this Agreement:

- Development of policies, procedures, and/or guidelines;
- Evaluation of programs, services, or activities offered to the public;
- Evaluation and reporting of facilities not listed in **Task 3.1**;
- Evaluation of areas used only by employees as work areas.
- Providing printed copies of Appendices.

Additional Services

Any services not specifically provided for in the above scope will be billed as additional services and performed at our then current hourly rates.

Schedule: The Consultant will provide its services as expeditiously as practicable and work with the Client to develop a mutually agreeable schedule.

Deliverables: The Consultant will deliver the following materials to the Client:

- Electronic copies of the Draft Transition Plan in Microsoft Word and Adobe PDF formats;
- Electronic copies of the Final Transition Plan in Microsoft Word and Adobe PDF formats;
- Electronic copies of the Appendices in Adobe PDF format. Printed copies of the Appendices will be considered Additional Services.
- Field work data in GIS format, compatible with the Client’s GIS system.

Fee Schedule:

Task 1 Project Management	\$4,500
Task 2 Project Kick-off Meeting	\$4,000
Task 3 Self-Evaluation	
• Facility Reviews	
o Buildings and Associated Parking Lots/Sidewalks	\$27,600
Task 4 Transition Plan Update	\$10,400
Task 5 Meetings	<u>\$5,200</u>
Total	\$51,700



CITY OF PORT ORANGE MASTER CONTRACT FOR ENGINEERING SERVICES

This Master Contract for Engineering Services ("Contract") is entered into this 9 day of March, 2017, 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 **KIMLEY-HORN AND ASSOCIATES, INC.** ("Engineer"), a North Carolina corporation registered to transact business in Florida whose principal address is 3001 Weston Parkway, Cary, North Carolina 27513 (collectively "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 These services shall be performed in accordance with Request for Statement of Qualifications No. 16-32 ("RFSQ 16-32") and Engineer's proposal in response thereto. A true and correct copy of RFSQ 16-32 and Engineer's proposal is available in the Office of the City Clerk, City Hall, 1000 City Center Circle, Port Orange.

- (a) The Engineer hereby agrees to provide the following services to the City of Port Orange:
 - (i) Civil Engineering, Traffic Engineering and Transportation Planning, Landscape Architectural, Environmental and Planning Services, Geotechnical Engineering Services and related services for the City for preparation of a variety of projects administered by various departments within the City, including but not limited to paragraph 5 and the following:
 - (1) Investigation of existing structures or sites and preparation of drawings, reports, calculations, cost estimates, schedules; coordination of special services such as testing and surveying;
 - (2) Studies and planning for construction projects, preparation of drawings, reports, calculations, cost estimates, schedules; coordination of special services such as testing and surveying;
 - (3) Engineering services required to construct a variety of projects and related site work; preparation of design, construction documents, plans, specifications, calculations, cost estimates, reports and schedules; coordination of special services such as testing and surveying; preparation of required documents and services to obtain all construction permits; assisting the City project manager with bidding and construction administration, including field visits, shop drawing review, applications for payment, punch list and certification;
 - (4) Preparation of presentation boards and electronic graphic photo/realistic renderings;

- (5) Oral presentations and PowerPoint audio visual presentations; and
- (6) Leading project meetings, preparing and distributing meeting minutes
- (7) Projects may include City of Port Orange existing or proposed sites which require evaluation and/or site design for facilities with uses including Parks and Recreation, Fire and Police, flood control and/or stormwater treatment. Projects may also include review of development projects, traffic simulation/operations analysis models such as HCS, ARTPLAN, SYNCHRO, CUBE, and CFRPM, Traffic Impact Analysis creation and review, signal timing, traffic calming, intersection analyses, traffic improvement justification reports, Traffic Impact Analysis Methodology review, conducting traffic counts, creation and review of roadway classification and Level of Service (LOS) capacity reports.
- (8) Plans will be drawn in AutoCAD format unless otherwise directed.
- (9) All documents resulting from any project performed hereunder shall become the sole property of the City.

(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 thereafter or until either party provides the other party written notice of its intent to terminate 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 two (2) year terms. The City reserves the right to revise rates for consistency with current market trend at least annually.

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. Engineer 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) issued and executed by the City and signed by the Engineer. A sample Task Authorization is attached hereto as Exhibit "1." The City makes no covenant or promise as to the number of orders placed, nor that the City shall place any orders for goods or services during the life of this Contract. The City reserves the right to contract with other parties for the goods and services contemplated by this Contract, as determined in the City's sole and absolute discretion. Furthermore, the City reserves the right, at its sole discretion, to utilize the Master Contract for Engineering Services entered into between the Parties on March 17, 2015 pursuant to Request for Statement of Qualifications No. 14-23, for the scope of services set forth therein, as long as the Contract remains valid.

3. City Obligations. The City reserves the right to utilize either (i) lump sum or (ii) hourly rate compensation as set forth in Exhibit "2" attached hereto. The City's obligation to pay Engineer under this Contract is limited to the approved Contract fees and the budgeted amount for the fiscal year approved by the Port Orange City Council for the then current 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 ten (10%) percent if approved by the City. 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 Department Head requesting service ("Contract Administrator"), shall perform contract administration of this Contract. For notice provisions, see the paragraph below entitled "Notice." The work shall be reviewed by the authorized Contract Administrator, or designee, who shall have final decision authority for pay requests on all approved phases of the work, including general direction, review, and approval of the work. Neither the Contract Administrator's review, approval or acceptance of, nor payment for, any of the services required under this contract shall be construed to operate as a waiver of any rights under this Contract or of any cause of action arising out of the performance of this Contract, and the Engineer shall be and remain liable to the City for all costs of any kind which were incurred by the City as a result of the Engineer's negligent performance of the services furnished under this Contract.

5. Additional 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 contractor 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 and task authorizations for 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 that building construction

permits shall be specifically requested in a task authorization; and provide 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 developed 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 by the Contract Administrator; 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 digital and one paper full scale set of originals as they exist at the time of termination. All plans shall be and remain the property of the City during preparation and upon delivery.
- (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; coordination with the City Attorney and follow-up on contractor execution and delivery to the City Attorney of the original contract and original bond for recording in the public records.
- (vii) Bonding. The Engineer shall coordinate the delivery to the City Attorney of original bonds for recording. All construction contracts shall require two (2) original Bonds in the form approved by the City Attorney. Engineer shall not require duplicate original bond documents in the draft construction documents and agreement for the City.

6. Responsibility of the Engineer. The Engineer shall be responsible for the professional and technical accuracy and the coordination of all designs, drawings, and specifications; contract documentation 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 the Engineer's performance.

7. 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 performed by Engineer shall entitle Engineer to further compensation at rates to be agreed upon by City and Engineer. A reproducible electronic and paper set of plans and specifications shall be delivered to and become the property of the City upon completion of the Project by the Engineer.

8. 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.

9. Modifications to Scope of Work/Change Orders

(a) Change Orders. The Contract Administrator, upon written approval as required by the City's finance ordinances and policies, 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 notify the City requesting an equitable adjustment and the contract shall be modified in writing as mutually agreed by the Parties. Any change order shall include all costs and time extensions 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.

10. Subcontractors and Outside Associates and Consultants. 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 the task authorization amendment. Any substitution in such subcontractors, associates, or consultants shall be subject to the prior approval of the Contract Administrator.

11. 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. If the City terminates the Engineer for failure to adhere to project time lines for completion of the Engineering work, then the City may deduct from amounts owed on the Engineer termination claim, the City's increased costs directly resulting from the failure of the Engineer to timely perform. The Engineer shall not be responsible for a delay in Engineering work that is beyond the Engineer's reasonable control.

(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.

(1) 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

(2) 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 its 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 the termination claim within the time allowed, the Contract Administrator may determine on the basis of information available to them, the amount, if any, due to the Engineer by reason of the termination and shall thereupon pay to the Engineer the amount so determined, so long as all final documentation for the project has been delivered to the Contract Administrator.

(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 contract price for work completed that has been accepted by the Contract Administrator, 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:

(1) 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;

(2) 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

(3) A sum, as profit on Paragraph 11, 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.

12. 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.

13. 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 119.10, 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.

14. Termination 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 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.

15. Insurance

(a) Engineer shall maintain insurance during the life of this Contract. Engineer shall provide to the City a certificate of insurance identifying the City of Port Orange as an additional insured. The Engineer shall furnish policies and certificates of insurance to the City for review and approval on initial contract date and thereafter at least on each anniversary of the contract effective date. Failure of the Engineer to maintain a certificate of insurance in compliance or approval by the City of any policy of insurance shall not, relieve the Engineer from its responsibilities to provide the insurance coverage required herein. The certificates shall clearly indicate that the Engineer has obtained insurance of the type, amount and classification required by these provisions. No work shall be commenced until City has approved the policies. This Contract may be terminated by the City without penalty or expense, if policies requested hereunder are not provided to and approved by the City within thirty (30) days of the date hereof. The Engineer shall notify the City and to the City's designated insurance Risk Manager of any changes in or cancellations of coverage.

(b) For workers' compensation coverage, the bidder's insurance certificate shall include the insurer's waiver of subrogation in lieu of naming the city as an additional insured for workers' compensation. 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. Policies for Workers' Compensation may be issued by companies authorized as a group self-insurer by F.S. 440.572. Engineer shall not commence work under this Agreement until the City has received a certificate or certificates of insurance and endorsement evidencing the required insurance. Engineer shall be solely responsible to provide the City written original certificate, notice of cancellation, nonrenewal or any other changes in coverage no later than ten (10) days prior to the effective date of the change.

The City reserves the right to increase insurance coverage as determined for higher risk contracts and shall reimburse the Engineer for the reasonable additional costs of increased coverage. The Engineer shall maintain the following coverages:

Required Insurance	Insurance	Standards	Comments
☒	Workers' Compensation <u>Limits:</u> <u>Additional Coverage:</u>	Coverage A - Statutory Coverage B - \$100,000 All States (Broad Form) Voluntary Compensation	If the contract requires work on or about navigable waters, require Longshoreman's and Harbor Workers' Coverage. If vessels involved, require Jones Act coverage with limits of \$500,000.
☒	Comprehensive General Liability (including Completed Operations and Contractual Liability) <u>Limits:</u>	Combined Single Limit Bodily Injury and Property damage \$500,000 occurrence \$1,000,000 Aggregate	When the Contract work 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 automobiles. <u>Limits:</u> <u>Additional Coverage:</u>	Auto Liability Body Injury: \$100,000 each person \$300,000 each occurrence. Property Damage Liability \$100,000 each occurrence. Non-Owned, Hired Car	Or \$500,000 Combined Single Limit for Bodily Injury and Property Damage.
☒	Professional Liability (Errors & Omissions) <u>Limits:</u>	Coverage- \$1,000,000 minimum	

16. 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.

17. Liability for Loss or Damage. Engineer shall be liable for any loss of, or damage to, City property caused by the negligence, recklessness, or intended wrongful misconduct of Engineer, 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 negligent performance of the Contract by Engineer, 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.

18. 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) Engineer shall be solely responsible for compliance with all federal, state and local laws, rules and regulations prohibiting discrimination of its officers, agents, employees and subcontractors. Engineer shall post notices, advertisements and solicitations in accordance with federal law, rule or regulation. 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.

19. 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 during the term of this Contract and shall expressly require any subcontractor performing services pursuant to this 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 this Contract.

20. 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.

21. 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.

22. **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.

23. **Additional Provisions.** This Contract includes all additional provisions as may have been outlined in Request for Statement of Qualifications identified herein and any attachments or exhibits to this Contract whether delivered herewith or subsequently approved as a part hereof.

24. **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.

25. **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: <i>(Department Head Requesting Service)</i> 1000 City Center Circle Port Orange, Florida 32129 (386) 506-5500
Engineer:	Kimley-Horn and Associates, Inc. Attention: Lewis Bryant, Project Manager, Associate 1823 SE Fort King Street, Suite 200 Ocala, Florida 34474 (352) 438-3000 - Telephone lewis.bryant@kimley-horn.com 3001 Weston Parkway Cary, North Carolina 27513

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.

26. 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 except for the bond. No contract shall be formed between Engineer and the City until the City signs this Agreement.

27. 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:

Kelly A. Starkey
Printed Name: KELLY A. STARKEY

Lisa Crane
Printed Name: Lisa Crane

KIMLEY-HORN AND ASSOCIATES, INC.

By: Jonathan Martin
Jonathan Martin, Sr. 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: 2-28-17

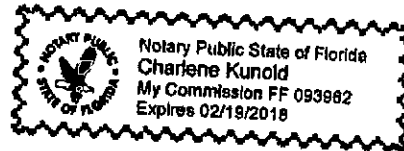
STATE OF FLORIDA
COUNTY OF ~~MARION~~ ORANGE

The foregoing instrument was acknowledged before me this 28th day of FEBRUARY, 2017, by Jonathan Martin, Sr. Vice President of Kimley-Horn and Associates, Inc., a Florida corporation, and who:

(Notary: Please select one)

☒ is personally known to me; or
☐ has produced _____ as identification.

Charlene Kunold
Notary Public, State of Florida
Printed, typed or stamped name, commission and expiration:



Witnesses:

CITY OF PORT ORANGE

Frances Gosnell
Printed Name: Frances Gosnell

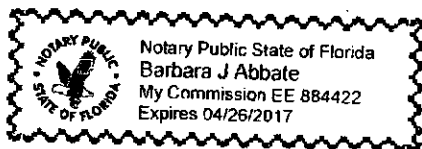
By: [Signature]
Donald O. Burnette, Mayor

Barbara J. Abbate
Printed Name: Barbara J. Abbate

Date: 3/9/17

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me this 9 day of Mar, 2017, by Donald O. Burnette, as Mayor of the City of Port Orange, a Florida municipal corporation, on behalf of the city, and who is personally known to me.



Barbara J. Abbate
Notary Public, State of Florida
Printed, typed or stamped name, commission and expiration:

Witnesses:

ATTEST:

Frances Gosnell
Printed Name: Frances Gosnell

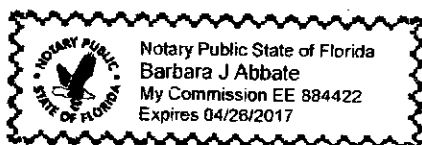
By: [Signature]
Robin L. Fenwick, CMC, City Clerk

Barbara J. Abbate
Printed Name: Barbara J. Abbate

Date: 3/9/17

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me this 9 day of Mar, 2017, by Robin L. Fenwick, as City Clerk of the City of Port Orange, a Florida municipal corporation, on behalf of the city, and who is personally known to me.



Barbara J. Abbate
Notary Public, State of Florida
Printed, typed or stamped name, commission and expiration:

[CA 5674]

CITY OF PORT ORANGE – MASTER CONTRACT FOR ENGINEERING SERVICES [CA5674]

Page 14

EXHIBIT “1”

(Consisting of 3 pages)

TASK AUTHORIZATION NO. ____
Standard Contract for Services dated ____
Between the City of Port Orange, Florida and Kimbley-Horn and Associate, 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 **KIMBERLY-HORN & ASSOCIATES, INC.**, a Florida corporation with its principal place of business at 421 Fayetteville Street, Suite 600, Raleigh, North Carolina 27601 ("Contractor"), and hereinafter collectively referred to as the "Parties," and is to that certain Master Contract for Engineering Services dated _____, 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. The Contract Administrator may be contacted as follows:
Name: _____
Address: _____
Phone: _____
Mobile: _____
E-Mail: _____
3. In addition to all other terms and conditions contained in the Contract, Contractor shall provide services relating to _____ as more particularly described in the Scope of Services attached hereto and incorporated herein as Task Authorization Exhibit "A."
4. Contractor shall complete the services to be provided herein within _____ days of the date of written notice by the City to the Contractor.
5. In return for the services identified above, the City agrees to compensate Contractor at the prices set forth in Exhibit "____" attached hereto and made a part hereof for all purposes, subject to a limit up to but 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.
6. Contractor shall provide a 100% Combination Payment and Performance Bond in accordance with Florida Statutes Section 255.05, including the Front Page and Certificate for Filing in Public Records, in a form substantially similar to the forms attached hereto as Task Authorization Exhibit "B," and acceptable to the Port Orange City Attorney, and recorded with the Clerk of Volusia County at Contractor's expense. A separate bond shall be provided from the Surety which identifies and covers the scope of work for the project stated in this Task Authorization along with all other provisions of this Task Authorization with the penal sum of such bond being not less than the contract sum described in this Task Authorization. If any surety bond furnished in connection with this Task Authorization becomes unacceptable to the City, Contractor shall promptly furnish such additional security as may be required from time to time to protect the interests of the City and a person supplying labor and materials in the prosecution of work contemplated by this Task Authorization No. ____.

7. 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 Contractor 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:

KIMLEY-HORN AND ASSOCIATES, INC.

Printed Name: _____

By: _____

Jonathan Martin, Sr. 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.

Printed Name: _____

Date: _____

Witnesses:

CITY OF PORT ORANGE

Printed Name: _____ By: _____
Donald O. Burnette, Mayor

Printed Name: _____ Date: _____

Witnesses:

ATTEST:

Printed Name: _____ By: _____
Robin L. Fenwick, CMC, City Clerk

Printed Name: _____ Date: _____

[CA 5574]



**HOURLY RATE SCHEDULE
CONTRACT FOR PROFESSIONAL ENGINEERING SERVICES
CITY OF PORT ORANGE RFSQ # 16-32**

The following schedule provides a maximum range of direct salary hourly rate for the disciplines, which are likely to be engaged for projects associated with the contract referenced above for the City of Port Orange.

**KIMLEY-HORN AND ASSOCIATES, INC.
2016-17 BILLING RATE SCHEDULE**

<u>Category</u>	<u>Hourly Rate</u>
Clerical	\$65.00
Technician	\$65.00 – \$160.00
Professional	\$90.00 - \$165.00
Senior Professional	\$165.00 - \$230.00
Principal	\$230.00 - \$265.00

EXHIBIT "2"



City of Port Orange

Agreement

RENEWAL FORM

****THIS FORM IS VALID IF EXECUTED PRIOR TO THE ORIGINAL AGREEMENT/CONTRACT EXPIRATION DATE.****

To be completed by Contractor:

YES ☒ We desire to renew this agreement for another term at the same price, requirements, specifications, and conditions as the previous term as per the following:

☒ Standard Contract for Service CA No. 5674

☐ Piggyback Agreement CA No. _____

☐ Purchase Order No. _____

Term From: MARCH 9, 2020

To: MARCH 9, 2022

Attached:

☐ Updated Bond

☒ Insurance Certificate/City as additional insured - Current under existing

NO _____ We do not desire to renew this agreement for another term.

Verify your records by providing the following information:

Name of Company / Organization: Kimley-Horn and Associates Inc.

Name of Contact Person: Jonathan A. Martin

Mailing Address: 189 South Orange Ave Orlando FL 32801

Email Contact Address: Jonathan.Martin@kimley-horn.com

Phone: 407 8981511

Fax: - NA -

IF THIS RENEWAL IS NOT SIGNED BY THE CONTRACTOR'S LEGALLY AUTHORIZED PERSON, THEN ATTACH WRITTEN AUTHORIZATION TO ENTER INTO CONTRACTS ON BEHALF OF THE CONTRACTOR FOR THE PERSON WHO SIGNS.

Contractor's Authorized Representative: Gas D. Murt

Signature

Date: 10-18-19

For City Use Only:

Department completes the following:

☐ Renewal Accepted ☐ Bond attached

☐ Insurance attached **OR** ☐ Insurance waived per Agreement

Agreement Expiration: _____

City Manager: [Signature]

Date: 11.8.19

Please return to the City of Port Orange as follows:

Department: _____ Telephone: _____

Contact: _____ Fax: _____

Email: _____

Completed Form Must Be Returned to the City Clerk for Recordation



CITY COUNCIL AGENDA ITEM

REQUESTED COUNCIL MEETING DATE 6/15/2021

Consent item: Yes

SUBJECT: (C9) Resolution No. 21-26 - Authorizing the City to join as a participant in the MOU and Formal Agreements implementing a Unified Plan regarding the Opioid Litigation

DEPARTMENT: City Attorney

GOAL: 1 - Public Safety 3 - Quality of Life 5 - Fiscal Sustainability 6 - Organizational Excellence

RECOMMENDED MOTION: Move to approve Resolution No. 21-26.

SUMMARY: The City is part of a class action against various large-scale opioid producers that profited from the Country's opioid crisis. The class is comprised of almost every local government in the Nation. The City Attorney briefed City Council in November on the opioid litigation and recommended for the City of Port Orange to be included in the class action.

The Florida Attorney General has now proposed a framework for the comprehensive resolution of the current litigation. The proposed MOU establishes a method for determining how settlement sums would be paid to each governmental entity, as well as to regional and State funds. All money received must be spent on expanded or new programs to combat the opioid crisis. Current estimates show the City of Port Orange receiving an annual amount somewhere between \$20,000 and \$35,000 each year for the next 7-10 years (possibly up to 18 years). This range is dependent upon how many jurisdictions sign-on to the settlement.

The City Attorney is recommending approval of the MOU by adoption of Resolution 21-26 which authorizes the City Manager to execute the MOU and any corresponding documents necessary to finalize the settlement and implement the MOU.

Project No.: N/A

Funding Account No.: 0

Presenter: Matthew Jones

ATTACHMENTS:

1.	Reso. No. 21-26 - Opioid MOU	Reso. No. 21-26 - Opioid MOU.pdf
2.	Ex. A - Proposed MOU	Ex. A - Proposed MOU.pdf
3.	Summary of MOU and FAQ from Attorney General's Office 3	Summary of MOU and FAQ from Attorney General's Office 3.pdf

Paula Andrews
Matthew Jones
Wayne Clark
Robin Fenwick

Created/Initiated - 4/14/2021
Approved - 6/1/2021
Approved - 6/3/2021
Final Approval - 6/3/2021

RESOLUTION NO. 21-26

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA AUTHORIZING THE CITY OF PORT ORANGE TO JOIN WITH THE STATE OF FLORIDA AND OTHER LOCAL GOVERNMENTAL UNITS AS A PARTICIPANT IN THE FLORIDA MEMORANDUM OF UNDERSTANDING AND FORMAL AGREEMENTS IMPLEMENTING A UNIFIED PLAN.

WHEREAS, the City of Port Orange has suffered harm from the opioid epidemic;

WHEREAS, the City of Port Orange recognizes that the entire State of Florida has suffered harm as a result from the opioid epidemic;

WHEREAS, the State of Florida has filed an action pending in Pasco County, Florida, and a number of Florida Cities and Counties have also filed an action In re: National Prescription Opiate Litigation, MDL No. 2804 (N.D. Ohio) (the “Opioid Litigation”) and City of Port Orange is a class member in the Opioid Litigation;

WHEREAS, the State of Florida and lawyers representing certain various local governments involved in the Opioid Litigation have proposed a unified plan for the allocation and use of prospective settlement dollars from opioid related litigation;

WHEREAS, the Florida Memorandum of Understanding (the “Florida Plan”) sets forth sets forth a framework of a unified plan for the proposed allocation and use of opioid settlement proceeds and it is anticipated that formal agreements implementing the Florida Plan will be entered into at a future date; and,

WHEREAS, participation in the Florida Plan by a large majority of Florida cities and counties will materially increase the amount of funds to Florida and should improve Florida’s relative bargaining position during additional settlement negotiations; and

WHEREAS, failure to participate in the Florida Plan will reduce funds available to the

State, the City of Port Orange and every other Florida city and county.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY OF PORT ORANGE:

Section 1. That the City Council finds that participation in the Florida Plan would be in the best interest of the City of Port Orange and its citizens in that such a plan ensures that almost all of the settlement funds go to abate and resolve the opioid epidemic and each and every city and county receives funds for the harm that it has suffered.

Section 2. That the City Council hereby expresses its support of a unified plan for the allocation and use of opioid settlement proceeds as generally described in the Florida Plan, attached hereto as Exhibit "A."

Section 3. That the City Manager is hereby expressly authorized to execute the Florida Plan in substantially the form contained in Exhibit "A."

Section 4. That the City Manager is hereby authorized to execute any formal agreements implementing a unified plan for the allocation and use of opioid settlement proceeds that is not substantially inconsistent with the Florida Plan and this Resolution.

Section 5. That the City Clerk be instructed to record this Resolution in the appropriate record book upon its adoption.

Section 6. That the City Clerk be directed to furnish a certified copy of this Resolution to:

Florida League of Cities
c/o Kraig Conn
FL League of Cities Inc.
PO Box 1757
Tallahassee, FL 32302-1757

Florida Attorney General Ashley Moody
c/o John M. Guard
The Capitol, PL-01
Tallahassee, FL 32399-1050

Section 7. This resolution shall become effective immediately upon adoption.

MAYOR DONALD O. BURNETTE

ATTEST:

Robin L. Fenwick, MMC, City Clerk

Adopted on the day of June, 2021.

Reviewed and Approved: _____
Matthew J. Jones, City Attorney

[CA-7043]

PROPOSAL
MEMORANDUM OF UNDERSTANDING

Whereas, the people of the State of Florida and its communities have been harmed by misfeasance, nonfeasance and malfeasance committed by certain entities within the Pharmaceutical Supply Chain;

Whereas, the State of Florida, through its Attorney General, and certain Local Governments, through their elected representatives and counsel, are separately engaged in litigation seeking to hold Pharmaceutical Supply Chain Participants accountable for the damage caused by their misfeasance, nonfeasance and malfeasance;

Whereas, the State of Florida and its Local Governments share a common desire to abate and alleviate the impacts of that misfeasance, nonfeasance and malfeasance throughout the State of Florida;

Whereas, it is the intent of the State of Florida and its Local Governments to use the proceeds from Settlements with Pharmaceutical Supply Chain Participants to increase the amount of funding presently spent on opioid and substance abuse education, treatment and other related programs and services, such as those identified in Exhibits A and B, and to ensure that the funds are expended in compliance with evolving evidence-based “best practices”;

Whereas, the State of Florida and its Local Governments, subject to the completion of formal documents that will effectuate the Parties’ agreements, enter into this Memorandum of Understanding (“MOU”) relating to the allocation and use of the proceeds of Settlements described herein; and

Whereas, this MOU is a preliminary non-binding agreement between the Parties, is not legally enforceable, and only provides a basis to draft formal documents which will effectuate the Parties’ agreements.

A. Definitions

As used in this MOU:

1. “Approved Purpose(s)” shall mean forward-looking strategies, programming and services used to expand the availability of treatment for individuals impacted by substance use disorders, to: (a) develop, promote, and provide evidence-based substance use prevention strategies; (b) provide substance use avoidance and awareness education; (c) decrease the oversupply of licit and illicit opioids; and (d) support recovery from addiction. Approved Purposes shall include, but are not limited to, the opioid abatement strategies listed on Exhibits A and B which are incorporated herein by reference.

2. “Local Governments” shall mean all counties, cities, towns and villages located within the geographic boundaries of the State.

3. “Managing Entities” shall mean the corporations selected by and under contract with the Florida Department of Children and Families or its successor (“DCF”) to manage the

daily operational delivery of behavioral health services through a coordinated system of care. The singular “Managing Entity” shall refer to a singular of the Managing Entities.

4. “County” shall mean a political subdivision of the state established pursuant to s. 1, Art. VIII of the State Constitution.

5. “Municipalities” shall mean cities, towns, or villages of a County within the State with a Population greater than 10,000 individuals and shall also include cities, towns or villages within the State with a Population equal to or less than 10,000 individuals which filed a Complaint in this litigation against Pharmaceutical Supply Chain Participants. The singular “Municipality” shall refer to a singular of the Municipalities.

6. “Negotiating Committee” shall mean a three-member group comprised by representatives of the following: (1) the State; and (2) two representatives of Local Governments of which one representative will be from a Municipality and one shall be from a County (collectively, “Members”) within the State. The State shall be represented by the Attorney General or her designee.

7. “Negotiation Class Metrics” shall mean those county and city settlement allocations which come from the official website of the Negotiation Class of counties and cities certified on September 11, 2019 by the U.S. District for the Northern District of Ohio in *In re National Prescription Opiate Litigation*, MDL No. 2804 (N.D. Ohio). The website is located at <https://allocationmap.iclaimsonline.com>.

8. “Opioid Funds” shall mean monetary amounts obtained through a Settlement as defined in this MOU.

9. “Opioid Related” shall have the same meaning and breadth as in the agreed Opioid Abatement Strategies attached hereto as Exhibits A or B.

10. “Parties” shall mean the State and Local Governments. The singular word “Party” shall mean either the State or Local Governments.

11. “PEC” shall mean the Plaintiffs’ Executive Committee of the National Prescription Opiate Multidistrict Litigation pending in the United States District Court for the Northern District of Ohio.

12. “Pharmaceutical Supply Chain” shall mean the process and channels through which Controlled Substances are manufactured, marketed, promoted, distributed or dispensed.

13. “Pharmaceutical Supply Chain Participant” shall mean any entity that engages in, or has engaged in the manufacture, marketing, promotion, distribution or dispensing of an opioid analgesic.

14. “Population” shall refer to published U.S. Census Bureau population estimates as of July 1, 2019, released March 2020, and shall remain unchanged during the term of this MOU. These estimates can currently be found at <https://www.census.gov>

15. "Qualified County" shall mean a charter or non-chartered county within the State that: has a Population of at least 300,000 individuals and (a) has an opioid taskforce of which it is a member or operates in connection with its municipalities or others on a local or regional basis; (b) has an abatement plan that has been either adopted or is being utilized to respond to the opioid epidemic; (c) is currently either providing or is contracting with others to provide substance abuse prevention, recovery, and treatment services to its citizens; and (d) has or enters into an agreement with a majority of Municipalities (Majority is more than 50% of the Municipalities' total population) related to the expenditure of Opioid Funds. The Opioid Funds to be paid to a Qualified County will only include Opioid Funds for Municipalities whose claims are released by the Municipality or Opioid Funds for Municipalities whose claims are otherwise barred.

16. "SAMHSA" shall mean the U.S. Department of Health & Human Services, Substance Abuse and Mental Health Services Administration.

17. "Settlement" shall mean the negotiated resolution of legal or equitable claims against a Pharmaceutical Supply Chain Participant when that resolution has been jointly entered into by the State and Local Governments or a settlement class as described in (B)(1) below.

18. "State" shall mean the State of Florida.

B. Terms

1. **Only Abatement** - Other than funds used for the Administrative Costs and Expense Fund as hereinafter described in paragraph 6 and paragraph 9, respectively), all Opioid Funds shall be utilized for Approved Purposes. To accomplish this purpose, the State will either file a new action with Local Governments as Parties or add Local Governments to its existing action, sever settling defendants, and seek entry of a consent order or other order binding both the State, Local Governments, and Pharmaceutical Supply Chain Participant(s) ("Order"). The Order may be part of a class action settlement or similar device. The Order shall provide for continuing jurisdiction of a state court to address non-performance by any party under the Order. Any Local Government that objects to or refuses to be included under the Order or entry of documents necessary to effectuate a Settlement shall not be entitled to any Opioid Funds and its portion of Opioid Funds shall be distributed to, and for the benefit of, the other Local Governments.

2. **Avoid Claw Back and Recoupment** - Both the State and Local Governments wish to maximize any Settlement and Opioid Funds. In addition to committing to only using funds for the Expense Funds, Administrative Costs and Approved Purposes, both Parties will agree to utilize a percentage of funds for the core strategies highlighted in Exhibit A. Exhibit A contains the programs and strategies prioritized by the U.S. Department of Justice and/or the U.S. Department of Health & Human Services ("Core Strategies"). The State is trying to obtain the United States' agreement to limit or reduce the United States' ability to recover or recoup monies from the State and Local Government in exchange for prioritization of funds to certain projects. If no agreement is reached with the United States, then there will be no requirement that a percentage be utilized for Core Strategies.

3. **Distribution Scheme** - All Opioid Funds will initially go to the State, and then be distributed according to the following distribution scheme. The Opioid Funds will be divided into three funds after deducting costs of the Expense Fund detailed in paragraph 9 below:

- (a) City/County Fund- The city/county fund will receive 15% of all Opioid Funds to directly benefit all Counties and Municipalities. The amounts to be distributed to each County and Municipality shall be determined by the Negotiation Class Metrics or other metrics agreed upon, in writing, by a County and a Municipality. For Local Governments that are not within the definition of County or Municipality, those Local Governments may receive that government's share of the City/County Fund under the Negotiation Class Metrics, if that government executes a release as part of a Settlement. Any Local Government that is not within the definition of County or Municipality and that does not execute a release as part of a Settlement shall have its share of the City/County Fund go to the County in which it is located.
- (b) Regional Fund- The regional fund will be subdivided into two parts.
 - (i) The State will annually calculate the share of each County within the State of the regional fund utilizing the sliding scale in section 4 of the allocation contained in the Negotiation Class Metrics or other metrics that the Parties agree upon.
 - (ii) For Qualified Counties, the Qualified County's share will be paid to the Qualified County and expended on Approved Purposes, including the Core Strategies identified in Exhibit A, if applicable.
 - (iii) For all other Counties, the regional share for each County will be paid to the Managing Entities providing service for that County. The Managing Entities will be required to expend the monies on Approved Purposes, including the Core Strategies. The Managing Entities shall endeavor to the greatest extent possible to expend these monies on counties within the State that are non-Qualified Counties and to ensure that there are services in every County.
- (c) State Fund - The remainder of Opioid Funds after deducting the costs of the Expense Fund detailed in paragraph 9, the City/County Fund and the Regional Fund will be expended by the State on Approved Purposes, including the provisions related to Core Strategies, if applicable.
- (d) To the extent that Opioid Funds are not appropriated and expended in a year by the State, the State shall identify the investments where settlement funds will be deposited. Any gains, profits, or interest accrued from the deposit of the Opioid Funds to the extent that any funds are not appropriated and expended within a calendar year, shall be the sole property of the Party that was entitled to the initial deposit.

4. Regional Fund Sliding Scale- The Regional Fund shall be calculated by utilizing the following sliding scale of the Opioid Funds available in any year:

- A. Years 1-6: 40%
- B. Years 7-9: 35%
- C. Years 10-12: 34%
- D. Years 13-15: 33%
- E. Years 16-18: 30%

5. Opioid Abatement Taskforce or Council - The State will create an Opioid Abatement Taskforce or Council (sometimes hereinafter "Taskforce" or "Council") to advise the Governor, the Legislature, Florida's Department of Children and Families ("DCF"), and Local Governments on the priorities that should be addressed as part of the opioid epidemic and to review how monies have been spent and the results that have been achieved with Opioid Funds.

- (a) Size - The Taskforce or Council shall have ten Members equally balanced between the State and the Local Governments.
- (b) Appointments Local Governments - Two Municipality representatives will be appointed by or through Florida League of Cities. Two county representatives, one from a Qualified County and one from a county within the State that is not a Qualified County, will be appointed by or through the Florida Association of Counties. The final representative will alternate every two years between being a county representative (appointed by or through Florida Association of Counties) or a Municipality representative (appointed by or through the Florida League of Cities). One Municipality representative must be from a city of less than 50,000 people. One county representative must be from a county less than 200,000 people and the other county representative must be from a county whose population exceeds 200,000 people.
- (c) Appointments State -
 - (i) The Governor shall appoint two Members.
 - (ii) The Speaker of the House shall appoint one Member.
 - (iii) The Senate President shall appoint one Member.
 - (iv) The Attorney General or her designee shall be a Member.
- (d) Chair - The Attorney General or designee shall be the chair of the Taskforce or Council.
- (e) Term - Members will be appointed to serve a two-year term.

- (f) Support - DCF shall support the Taskforce or Council and the Taskforce or Council shall be administratively housed in DCF.
- (g) Meetings - The Taskforce or Council shall meet quarterly in person or virtually using communications media technology as defined in section 120.54(5)(b)(2), Florida Statutes.
- (h) Reporting - The Taskforce or Council shall provide and publish a report annually no later than November 30th or the first business day after November 30th, if November 30th falls on a weekend or is otherwise not a business day. The report shall contain information on how monies were spent the previous fiscal year by the State, each of the Qualified Counties, each of the Managing Entities, and each of the Local Governments. It shall also contain recommendations to the Governor, the Legislature, and Local Governments for priorities among the Approved Purposes for how monies should be spent the coming fiscal year to respond to the opioid epidemic.
- (i) Accountability - Prior to July 1st of each year, the State and each of the Local Governments shall provide information to DCF about how they intend to expend Opioid Funds in the upcoming fiscal year. The State and each of the Local Government shall report its expenditures to DCF no later than August 31st for the previous fiscal year. The Taskforce or Council will set other data sets that need to be reported to DCF to demonstrate the effectiveness of Approved Purposes. All programs and expenditures shall be audited annually in a similar fashion to SAMHSA programs. Local Governments shall respond and provide documents to any reasonable requests from the State for data or information about programs receiving Opioid Funds.
- (j) Conflict of Interest - All Members shall adhere to the rules, regulations and laws of Florida including, but not limited to, Florida Statute §112.311, concerning the disclosure of conflicts of interest and recusal from discussions or votes on conflicted matters.

6. **Administrative Costs**- The State may take no more than a 5% administrative fee from the State Fund ("Administrative Costs") and any Regional Fund that it administers for counties that are not Qualified Counties. Each Qualified County may take no more than a 5% administrative fee from its share of the Regional Funds.

7. **Negotiation of Non-Multistate Settlements** - If the State begins negotiations with a Pharmaceutical Supply Chain Participant that is separate and apart from a multi-state negotiation, the State shall include Local Governments that are a part of the Negotiating Committee in such negotiations. No Settlement shall be recommended or accepted without the affirmative votes of both the State and Local Government representatives of the Negotiating Committee.

8. **Negotiation of Multistate or Local Government Settlements** - To the extent practicable and allowed by other parties to a negotiation, both Parties agree to communicate with

members of the Negotiation Committee regarding the terms of any other Pharmaceutical Supply Chain Participant Settlement.

9. **Expense Fund** - The Parties agree that in any negotiation every effort shall be made to cause Pharmaceutical Supply Chain Participants to pay costs of litigation, including attorneys' fees, in addition to any agreed to Opioid Funds in the Settlement. To the extent that a fund sufficient to pay the entirety of all contingency fee contracts for Local Governments in the State of Florida is not created as part of a Settlement by a Pharmaceutical Supply Chain Participant, the Parties agree that an additional expense fund for attorneys who represent Local Governments (herein "Expense Fund") shall be created out of the City/County fund for the purpose of paying the hard costs of a litigating Local Government and then paying attorneys' fees.

- (a) The Source of Funds for the Expense Fund- Money for the Expense Fund shall be sourced exclusively from the City/County Fund.
- (b) The Amount of the Expense Fund- The State recognizes the value litigating Local Governments bring to the State of Florida in connection with the Settlement because their participation increases the amount Incentive Payments due from each Pharmaceutical Supply Chain Participant. In recognition of that value, the amount of funds that shall be deposited into the Expense fund shall be contingent upon on the percentage of litigating Local Government participation in the Settlement, according to the following table:

Litigating Local Government Participation in the Settlement (by percentage of the population)	Amount that shall be paid into the Expense Fund from (and as a percentage of) the City/County fund
96 to 100%	10%
91 to 95%	7.5%
86 to 90%	5%
85%	2.5%
Less than 85%	0%

If fewer than 85% percent of the litigating Local Governments (by population) participate, then the Expense Fund shall not be funded, and this Section of the MOU shall be null and void.

- (c) The Timing of Payments into the Expense Fund- Although the amount of the Expense Fund shall be calculated based on the entirety of payments due to the City/County fund over a ten to eighteen year period, the Expense Fund shall be funded entirely from payments made by Pharmaceutical Supply Chain Participants during the first two years of the Settlement. Accordingly, to offset the amounts being paid from the City/County to the Expense Fund in the first two years, Counties or Municipalities may borrow from the Regional Fund during the first two years and pay the borrowed amounts back to the Regional Fund during years three, four, and five.

For the avoidance of doubt, the following provides an illustrative example regarding the calculation of payments and amounts that may be borrowed under the terms of this MOU, consistent with the provisions of this Section:

Opioid Funds due to State of Florida and Local Governments (over 10 to 18 years):	\$1,000
Litigating Local Government Participation:	100%
City/County Fund (over 10 to 18 years):	\$150
Expense Fund (paid over 2 years):	\$15
Amount Paid to Expense Fund in 1st year:	\$7.5
Amount Paid to Expense Fund in 2nd year:	\$7.5
Amount that may be borrowed from Regional Fund in 1st year:	\$7.5
Amount that may be borrowed from Regional Fund in 2nd year:	\$7.5
Amount that must be paid back to Regional Fund in 3rd year:	\$5
Amount that must be paid back to Regional Fund in 4th year:	\$5
Amount that must be paid back to Regional Fund in 5th year:	\$5

- (d) Creation of and Jurisdiction over the Expense Fund- The Expense Fund shall be established, consistent with the provisions of this Section of the MOU, by order of the Circuit Court of the Sixth Judicial Circuit in and for Pasco County, West Pasco Division New Port Richey, Florida, in the matter of *The State of Florida, Office of the Attorney General, Department of Legal Affairs v. Purdue Pharma L.P., et al.*, Case No. 2018-CA-001438 (the “Court”). The Court shall have jurisdiction over the Expense Fund, including authority to allocate and disburse amounts from the Expense Fund and to resolve any disputes concerning the Expense Fund.
- (e) Allocation of Payments to Counsel from the Expense Fund- As part of the order establishing the Expense Fund, counsel for the litigating Local Governments shall seek to have the Court appoint a third-neutral to serve as a special master for purposes of allocating the Expense Fund. Within 30 days of entry of the order appointing a special master for the Expense Fund, any counsel who intend to seek an award from the Expense Fund shall provide the copies of their contingency fee contracts to the special master. The special master shall then build a mathematical model, which shall be based on each litigating Local Government’s share under the Negotiation Class Metrics and the rate set forth in their contingency contracts, to calculate a proposed award for each litigating Local Government who timely provided a copy of its contingency contract.

10. **Dispute resolution**- Any one or more of the Local Governments or the State may object to an allocation or expenditure of Opioid Funds solely on the basis that the allocation or expenditure at issue (a) is inconsistent with the Approved Purposes; (b) is inconsistent with the distribution scheme as provided in paragraph 3, or (c) violates the limitations set forth herein with respect to administrative costs or the Expense Fund. There shall be no other basis for bringing an objection to the approval of an allocation or expenditure of Opioid Funds.

Schedule A

Core Strategies

States and Qualifying Block Grantees shall choose from among the abatement strategies listed in Schedule B. However, priority shall be given to the following core abatement strategies (“**Core Strategies**”)[, such that a minimum of ___% of the [aggregate] state-level abatement distributions shall be spent on [one or more of] them annually].¹

A. Naloxone or other FDA-approved drug to reverse opioid overdoses

1. Expand training for first responders, schools, community support groups and families; and
2. Increase distribution to individuals who are uninsured or whose insurance does not cover the needed service.

B. Medication-Assisted Treatment (“MAT”) Distribution and other opioid-related treatment

1. Increase distribution of MAT to non-Medicaid eligible or uninsured individuals;
2. Provide education to school-based and youth-focused programs that discourage or prevent misuse;
3. Provide MAT education and awareness training to healthcare providers, EMTs, law enforcement, and other first responders; and
4. Treatment and Recovery Support Services such as residential and inpatient treatment, intensive outpatient treatment, outpatient therapy or counseling, and recovery housing that allow or integrate medication with other support services.

C. Pregnant & Postpartum Women

1. Expand Screening, Brief Intervention, and Referral to Treatment (“SBIRT”) services to non-Medicaid eligible or uninsured pregnant women;
2. Expand comprehensive evidence-based treatment and recovery services, including MAT, for women with co-occurring Opioid Use Disorder (“OUD”) and other Substance Use Disorder (“SUD”)/Mental Health disorders for uninsured individuals for up to 12 months postpartum; and
3. Provide comprehensive wrap-around services to individuals with Opioid Use Disorder (OUD) including housing, transportation, job placement/training, and childcare.

D. Expanding Treatment for Neonatal Abstinence Syndrome

1. Expand comprehensive evidence-based and recovery support for NAS babies;
2. Expand services for better continuum of care with infant-need dyad; and
3. Expand long-term treatment and services for medical monitoring of NAS babies and their families.

¹ As used in this Schedule A, words like “expand,” “fund,” “provide” or the like shall not indicate a preference for new or existing programs. Priorities will be established through the mechanisms described in the Term Sheet.

E. Expansion of Warm Hand-off Programs and Recovery Services

1. Expand services such as navigators and on-call teams to begin MAT in hospital emergency departments;
2. Expand warm hand-off services to transition to recovery services;
3. Broaden scope of recovery services to include co-occurring SUD or mental health conditions. ;
4. Provide comprehensive wrap-around services to individuals in recovery including housing, transportation, job placement/training, and childcare; and
5. Hire additional social workers or other behavioral health workers to facilitate expansions above.

F. Treatment for Incarcerated Population

1. Provide evidence-based treatment and recovery support including MAT for persons with OUD and co-occurring SUD/MH disorders within and transitioning out of the criminal justice system; and
2. Increase funding for jails to provide treatment to inmates with OUD.

G. Prevention Programs

1. Funding for media campaigns to prevent opioid use (similar to the FDA's "Real Cost" campaign to prevent youth from misusing tobacco);
2. Funding for evidence-based prevention programs in schools.;
3. Funding for medical provider education and outreach regarding best prescribing practices for opioids consistent with the 2016 CDC guidelines, including providers at hospitals (academic detailing);
4. Funding for community drug disposal programs; and
5. Funding and training for first responders to participate in pre-arrest diversion programs, post-overdose response teams, or similar strategies that connect at-risk individuals to behavioral health services and supports.

H. Expanding Syringe Service Programs

1. Provide comprehensive syringe services programs with more wrap-around services including linkage to OUD treatment, access to sterile syringes, and linkage to care and treatment of infectious diseases.

I. Evidence-based data collection and research analyzing the effectiveness of the abatement strategies within the State.

Schedule B

Approved Uses

PART ONE: TREATMENT

A. TREAT OPIOID USE DISORDER (OUD)

Support treatment of Opioid Use Disorder (OUD) and any co-occurring Substance Use Disorder or Mental Health (SUD/MH) conditions through evidence-based or evidence-informed programs or strategies that may include, but are not limited to, the following:²

1. Expand availability of treatment for OUD and any co-occurring SUD/MH conditions, including all forms of Medication-Assisted Treatment (MAT) approved by the U.S. Food and Drug Administration.
2. Support and reimburse evidence-based services that adhere to the American Society of Addiction Medicine (ASAM) continuum of care for OUD and any co-occurring SUD/MH conditions
3. Expand telehealth to increase access to treatment for OUD and any co-occurring SUD/MH conditions, including MAT, as well as counseling, psychiatric support, and other treatment and recovery support services.
4. Improve oversight of Opioid Treatment Programs (OTPs) to assure evidence-based or evidence-informed practices such as adequate methadone dosing and low threshold approaches to treatment.
5. Support mobile intervention, treatment, and recovery services, offered by qualified professionals and service providers, such as peer recovery coaches, for persons with OUD and any co-occurring SUD/MH conditions and for persons who have experienced an opioid overdose.
6. Treatment of trauma for individuals with OUD (e.g., violence, sexual assault, human trafficking, or adverse childhood experiences) and family members (e.g., surviving family members after an overdose or overdose fatality), and training of health care personnel to identify and address such trauma.
7. Support evidence-based withdrawal management services for people with OUD and any co-occurring mental health conditions.
8. Training on MAT for health care providers, first responders, students, or other supporting professionals, such as peer recovery coaches or recovery outreach specialists, including telementoring to assist community-based providers in rural or underserved areas.
9. Support workforce development for addiction professionals who work with persons with OUD and any co-occurring SUD/MH conditions.
10. Fellowships for addiction medicine specialists for direct patient care, instructors, and clinical research for treatments.
11. Scholarships and supports for behavioral health practitioners or workers involved in addressing OUD and any co-occurring SUD or mental health conditions, including but not limited to training,

² As used in this Schedule B, words like “expand,” “fund,” “provide” or the like shall not indicate a preference for new or existing programs. Priorities will be established through the mechanisms described in the Term Sheet.

scholarships, fellowships, loan repayment programs, or other incentives for providers to work in rural or underserved areas.

12. [Intentionally Blank – to be cleaned up later for numbering]

13. Provide funding and training for clinicians to obtain a waiver under the federal Drug Addiction Treatment Act of 2000 (DATA 2000) to prescribe MAT for OUD, and provide technical assistance and professional support to clinicians who have obtained a DATA 2000 waiver.

14. Dissemination of web-based training curricula, such as the American Academy of Addiction Psychiatry's Provider Clinical Support Service-Opioids web-based training curriculum and motivational interviewing.

15. Development and dissemination of new curricula, such as the American Academy of Addiction Psychiatry's Provider Clinical Support Service for Medication-Assisted Treatment.

B. SUPPORT PEOPLE IN TREATMENT AND RECOVERY

Support people in treatment for or recovery from OUD and any co-occurring SUD/MH conditions through evidence-based or evidence-informed programs or strategies that may include, but are not limited to, the following:

1. Provide comprehensive wrap-around services to individuals with OUD and any co-occurring SUD/MH conditions, including housing, transportation, education, job placement, job training, or childcare.
2. Provide the full continuum of care of treatment and recovery services for OUD and any co-occurring SUD/MH conditions, including supportive housing, peer support services and counseling, community navigators, case management, and connections to community-based services.
3. Provide counseling, peer-support, recovery case management and residential treatment with access to medications for those who need it to persons with OUD and any co-occurring SUD/MH conditions.
4. Provide access to housing for people with OUD and any co-occurring SUD/MH conditions, including supportive housing, recovery housing, housing assistance programs, training for housing providers, or recovery housing programs that allow or integrate FDA-approved medication with other support services.
5. Provide community support services, including social and legal services, to assist in deinstitutionalizing persons with OUD and any co-occurring SUD/MH conditions.
6. Support or expand peer-recovery centers, which may include support groups, social events, computer access, or other services for persons with OUD and any co-occurring SUD/MH conditions.
7. Provide or support transportation to treatment or recovery programs or services for persons with OUD and any co-occurring SUD/MH conditions.
8. Provide employment training or educational services for persons in treatment for or recovery from OUD and any co-occurring SUD/MH conditions.

9. Identify successful recovery programs such as physician, pilot, and college recovery programs, and provide support and technical assistance to increase the number and capacity of high-quality programs to help those in recovery.
10. Engage non-profits, faith-based communities, and community coalitions to support people in treatment and recovery and to support family members in their efforts to support the person with OUD in the family.
11. Training and development of procedures for government staff to appropriately interact and provide social and other services to individuals with or in recovery from OUD, including reducing stigma.
12. Support stigma reduction efforts regarding treatment and support for persons with OUD, including reducing the stigma on effective treatment.
13. Create or support culturally appropriate services and programs for persons with OUD and any co-occurring SUD/MH conditions, including new Americans.
14. Create and/or support recovery high schools.
15. Hire or train behavioral health workers to provide or expand any of the services or supports listed above.

C. CONNECT PEOPLE WHO NEED HELP TO THE HELP THEY NEED (CONNECTIONS TO CARE)

Provide connections to care for people who have – or at risk of developing – OUD and any co-occurring SUD/MH conditions through evidence-based or evidence-informed programs or strategies that may include, but are not limited to, the following:

1. Ensure that health care providers are screening for OUD and other risk factors and know how to appropriately counsel and treat (or refer if necessary) a patient for OUD treatment.
2. Fund Screening, Brief Intervention and Referral to Treatment (SBIRT) programs to reduce the transition from use to disorders, including SBIRT services to pregnant women who are uninsured or not eligible for Medicaid.
3. Provide training and long-term implementation of SBIRT in key systems (health, schools, colleges, criminal justice, and probation), with a focus on youth and young adults when transition from misuse to opioid disorder is common.
4. Purchase automated versions of SBIRT and support ongoing costs of the technology.
5. Expand services such as navigators and on-call teams to begin MAT in hospital emergency departments.
6. Training for emergency room personnel treating opioid overdose patients on post-discharge planning, including community referrals for MAT, recovery case management or support services.
7. Support hospital programs that transition persons with OUD and any co-occurring SUD/MH conditions, or persons who have experienced an opioid overdose, into clinically-appropriate follow-up care through a bridge clinic or similar approach.

8. Support crisis stabilization centers that serve as an alternative to hospital emergency departments for persons with OUD and any co-occurring SUD/MH conditions or persons that have experienced an opioid overdose.
9. Support the work of Emergency Medical Systems, including peer support specialists, to connect individuals to treatment or other appropriate services following an opioid overdose or other opioid-related adverse event.
10. Provide funding for peer support specialists or recovery coaches in emergency departments, detox facilities, recovery centers, recovery housing, or similar settings; offer services, supports, or connections to care to persons with OUD and any co-occurring SUD/MH conditions or to persons who have experienced an opioid overdose.
11. Expand warm hand-off services to transition to recovery services.
12. Create or support school-based contacts that parents can engage with to seek immediate treatment services for their child; and support prevention, intervention, treatment, and recovery programs focused on young people.
13. Develop and support best practices on addressing OUD in the workplace.
14. Support assistance programs for health care providers with OUD.
15. Engage non-profits and the faith community as a system to support outreach for treatment.
16. Support centralized call centers that provide information and connections to appropriate services and supports for persons with OUD and any co-occurring SUD/MH conditions.

D. ADDRESS THE NEEDS OF CRIMINAL-JUSTICE-INVOLVED PERSONS

Address the needs of persons with OUD and any co-occurring SUD/MH conditions who are involved in, are at risk of becoming involved in, or are transitioning out of the criminal justice system through evidence-based or evidence-informed programs or strategies that may include, but are not limited to, the following:

1. Support pre-arrest or pre-arraignment diversion and deflection strategies for persons with OUD and any co-occurring SUD/MH conditions, including established strategies such as:
 - a. Self-referral strategies such as the Angel Programs or the Police Assisted Addiction Recovery Initiative (PAARI);
 - b. Active outreach strategies such as the Drug Abuse Response Team (DART) model;
 - c. “Naloxone Plus” strategies, which work to ensure that individuals who have received naloxone to reverse the effects of an overdose are then linked to treatment programs or other appropriate services;
 - d. Officer prevention strategies, such as the Law Enforcement Assisted Diversion (LEAD) model;
 - e. Officer intervention strategies such as the Leon County, Florida Adult Civil Citation Network or the Chicago Westside Narcotics Diversion to Treatment Initiative; or

f. Co-responder and/or alternative responder models to address OUD-related 911 calls with greater SUD expertise

2. Support pre-trial services that connect individuals with OUD and any co-occurring SUD/MH conditions to evidence-informed treatment, including MAT, and related services.
3. Support treatment and recovery courts that provide evidence-based options for persons with OUD and any co-occurring SUD/MH conditions
4. Provide evidence-informed treatment, including MAT, recovery support, harm reduction, or other appropriate services to individuals with OUD and any co-occurring SUD/MH conditions who are incarcerated in jail or prison.
5. Provide evidence-informed treatment, including MAT, recovery support, harm reduction, or other appropriate services to individuals with OUD and any co-occurring SUD/MH conditions who are leaving jail or prison have recently left jail or prison, are on probation or parole, are under community corrections supervision, or are in re-entry programs or facilities.
6. Support critical time interventions (CTI), particularly for individuals living with dual-diagnosis OUD/serious mental illness, and services for individuals who face immediate risks and service needs and risks upon release from correctional settings.
7. Provide training on best practices for addressing the needs of criminal-justice-involved persons with OUD and any co-occurring SUD/MH conditions to law enforcement, correctional, or judicial personnel or to providers of treatment, recovery, harm reduction, case management, or other services offered in connection with any of the strategies described in this section.

E. ADDRESS THE NEEDS OF PREGNANT OR PARENTING WOMEN AND THEIR FAMILIES, INCLUDING BABIES WITH NEONATAL ABSTINENCE SYNDROME

Address the needs of pregnant or parenting women with OUD and any co-occurring SUD/MH conditions, and the needs of their families, including babies with neonatal abstinence syndrome (NAS), through evidence-based or evidence-informed programs or strategies that may include, but are not limited to, the following:

1. Support evidence-based or evidence-informed treatment, including MAT, recovery services and supports, and prevention services for pregnant women – or women who could become pregnant – who have OUD and any co-occurring SUD/MH conditions, and other measures to educate and provide support to families affected by Neonatal Abstinence Syndrome.
2. Expand comprehensive evidence-based treatment and recovery services, including MAT, for uninsured women with OUD and any co-occurring SUD/MH conditions for up to 12 months postpartum.
3. Training for obstetricians or other healthcare personnel that work with pregnant women and their families regarding treatment of OUD and any co-occurring SUD/MH conditions.
4. Expand comprehensive evidence-based treatment and recovery support for NAS babies; expand services for better continuum of care with infant-need dyad; expand long-term treatment and services for medical monitoring of NAS babies and their families.

5. Provide training to health care providers who work with pregnant or parenting women on best practices for compliance with federal requirements that children born with Neonatal Abstinence Syndrome get referred to appropriate services and receive a plan of safe care.
6. Child and family supports for parenting women with OUD and any co-occurring SUD/MH conditions.
7. Enhanced family supports and child care services for parents with OUD and any co-occurring SUD/MH conditions.
8. Provide enhanced support for children and family members suffering trauma as a result of addiction in the family; and offer trauma-informed behavioral health treatment for adverse childhood events.
9. Offer home-based wrap-around services to persons with OUD and any co-occurring SUD/MH conditions, including but not limited to parent skills training.
10. Support for Children's Services – Fund additional positions and services, including supportive housing and other residential services, relating to children being removed from the home and/or placed in foster care due to custodial opioid use.

PART TWO: PREVENTION

F. PREVENT OVER-PRESCRIBING AND ENSURE APPROPRIATE PRESCRIBING AND DISPENSING OF OPIOIDS

Support efforts to prevent over-prescribing and ensure appropriate prescribing and dispensing of opioids through evidence-based or evidence-informed programs or strategies that may include, but are not limited to, the following:

1. Fund medical provider education and outreach regarding best prescribing practices for opioids consistent with Guidelines for Prescribing Opioids for Chronic Pain from the U.S. Centers for Disease Control and Prevention, including providers at hospitals (academic detailing).
2. Training for health care providers regarding safe and responsible opioid prescribing, dosing, and tapering patients off opioids.
3. Continuing Medical Education (CME) on appropriate prescribing of opioids.
4. Support for non-opioid pain treatment alternatives, including training providers to offer or refer to multi-modal, evidence-informed treatment of pain.
5. Support enhancements or improvements to Prescription Drug Monitoring Programs (PDMPs), including but not limited to improvements that:
 - a. Increase the number of prescribers using PDMPs;
 - b. Improve point-of-care decision-making by increasing the quantity, quality, or format of data available to prescribers using PDMPs, by improving the interface that prescribers use to access PDMP data, or both; or

c. Enable states to use PDMP data in support of surveillance or intervention strategies, including MAT referrals and follow-up for individuals identified within PDMP data as likely to experience OUD in a manner that complies with all relevant privacy and security laws and rules.

6. Ensuring PDMPs incorporate available overdose/naloxone deployment data, including the United States Department of Transportation's Emergency Medical Technician overdose database in a manner that complies with all relevant privacy and security laws and rules.

7. Increase electronic prescribing to prevent diversion or forgery.

8. Educate Dispensers on appropriate opioid dispensing.

G. PREVENT MISUSE OF OPIOIDS

Support efforts to discourage or prevent misuse of opioids through evidence-based or evidence-informed programs or strategies that may include, but are not limited to, the following:

1. Fund media campaigns to prevent opioid misuse.

2. Corrective advertising or affirmative public education campaigns based on evidence.

3. Public education relating to drug disposal.

4. Drug take-back disposal or destruction programs.

5. Fund community anti-drug coalitions that engage in drug prevention efforts.

6. Support community coalitions in implementing evidence-informed prevention, such as reduced social access and physical access, stigma reduction – including staffing, educational campaigns, support for people in treatment or recovery, or training of coalitions in evidence-informed implementation, including the Strategic Prevention Framework developed by the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA).

7. Engage non-profits and faith-based communities as systems to support prevention.

8. Fund evidence-based prevention programs in schools or evidence-informed school and community education programs and campaigns for students, families, school employees, school athletic programs, parent-teacher and student associations, and others.

9. School-based or youth-focused programs or strategies that have demonstrated effectiveness in preventing drug misuse and seem likely to be effective in preventing the uptake and use of opioids.

10. Create of support community-based education or intervention services for families, youth, and adolescents at risk for OUD and any co-occurring SUD/MH conditions.

11. Support evidence-informed programs or curricula to address mental health needs of young people who may be at risk of misusing opioids or other drugs, including emotional modulation and resilience skills.

12. Support greater access to mental health services and supports for young people, including services and supports provided by school nurses, behavioral health workers or other school staff, to address

mental health needs in young people that (when not properly addressed) increase the risk of opioid or other drug misuse.

H. PREVENT OVERDOSE DEATHS AND OTHER HARMS (HARM REDUCTION)

Support efforts to prevent or reduce overdose deaths or other opioid-related harms through evidence-based or evidence-informed programs or strategies that may include, but are not limited to, the following:

1. Increase availability and distribution of naloxone and other drugs that treat overdoses for first responders, overdose patients, individuals with OUD and their friends and family members, individuals at high risk of overdose, schools, community navigators and outreach workers, persons being released from jail or prison, or other members of the general public.
2. Public health entities provide free naloxone to anyone in the community
3. Training and education regarding naloxone and other drugs that treat overdoses for first responders, overdose patients, patients taking opioids, families, schools, community support groups, and other members of the general public.
4. Enable school nurses and other school staff to respond to opioid overdoses, and provide them with naloxone, training, and support.
5. Expand, improve, or develop data tracking software and applications for overdoses/naloxone revivals.
6. Public education relating to emergency responses to overdoses.
7. Public education relating to immunity and Good Samaritan laws.
8. Educate first responders regarding the existence and operation of immunity and Good Samaritan laws.
9. Syringe service programs and other evidence-informed programs to reduce harms associated with intravenous drug use, including supplies, staffing, space, peer support services, referrals to treatment, fentanyl checking, connections to care, and the full range of harm reduction and treatment services provided by these programs.
10. Expand access to testing and treatment for infectious diseases such as HIV and Hepatitis C resulting from intravenous opioid use.
11. Support mobile units that offer or provide referrals to harm reduction services, treatment, recovery supports, health care, or other appropriate services to persons that use opioids or persons with OUD and any co-occurring SUD/MH conditions.
12. Provide training in harm reduction strategies to health care providers, students, peer recovery coaches, recovery outreach specialists, or other professionals that provide care to persons who use opioids or persons with OUD and any co-occurring SUD/MH conditions.
13. Support screening for fentanyl in routine clinical toxicology testing.

PART THREE: OTHER STRATEGIES

I. FIRST RESPONDERS

In addition to items in sections C, D, and H relating to first responders, support the following:

1. Educate law enforcement or other first responders regarding appropriate practices and precautions when dealing with fentanyl or other drugs.
2. Provision of wellness and support services for first responders and others who experience secondary trauma associated with opioid-related emergency events.

J. LEADERSHIP, PLANNING AND COORDINATION

Support efforts to provide leadership, planning, coordination, facilitation, training and technical assistance to abate the opioid epidemic through activities, programs, or strategies that may include, but are not limited to, the following:

1. Statewide, regional, local, or community regional planning to identify root causes of addiction and overdose, goals for reducing harms related to the opioid epidemic, and areas and populations with the greatest needs for treatment intervention services; to support training and technical assistance; or to support other strategies to abate the opioid epidemic described in this opioid abatement strategy list.
2. A dashboard to share reports, recommendations, or plans to spend opioid settlement funds; to show how opioid settlement funds have been spent; to report program or strategy outcomes; or to track, share, or visualize key opioid-related or health-related indicators and supports as identified through collaborative statewide, regional, local, or community processes.
3. Invest in infrastructure or staffing at government or not-for-profit agencies to support collaborative, cross-system coordination with the purpose of preventing overprescribing, opioid misuse, or opioid overdoses, treating those with OUD and any co-occurring SUD/MH conditions, supporting them in treatment or recovery, connecting them to care, or implementing other strategies to abate the opioid epidemic described in this opioid abatement strategy list.
4. Provide resources to staff government oversight and management of opioid abatement programs.

K. TRAINING

In addition to the training referred to throughout this document, support training to abate the opioid epidemic through activities, programs, or strategies that may include, but are not limited to, the following:

1. Provide funding for staff training or networking programs and services to improve the capability of government, community, and not-for-profit entities to abate the opioid crisis.
2. Support infrastructure and staffing for collaborative cross-system coordination to prevent opioid misuse, prevent overdoses, and treat those with OUD and any co-occurring SUD/MH conditions, or implement other strategies to abate the opioid epidemic described in this opioid abatement strategy list (e.g., health care, primary care, pharmacies, PDMPs, etc.).

L. RESEARCH

Support opioid abatement research that may include, but is not limited to, the following:

1. Monitoring, surveillance, data collection, and evaluation of programs and strategies described in this opioid abatement strategy list.
2. Research non-opioid treatment of chronic pain.
3. Research on improved service delivery for modalities such as SBIRT that demonstrate promising but mixed results in populations vulnerable to opioid use disorders.
4. Research on novel harm reduction and prevention efforts such as the provision of fentanyl test strips.
5. Research on innovative supply-side enforcement efforts such as improved detection of mail-based delivery of synthetic opioids.
6. Expanded research on swift/certain/fair models to reduce and deter opioid misuse within criminal justice populations that build upon promising approaches used to address other substances (e.g. Hawaii HOPE and Dakota 24/7).
7. Epidemiological surveillance of OUD-related behaviors in critical populations including individuals entering the criminal justice system, including but not limited to approaches modeled on the Arrestee Drug Abuse Monitoring (ADAM) system.
8. Qualitative and quantitative research regarding public health risks and harm reduction opportunities within illicit drug markets, including surveys of market participants who sell or distribute illicit opioids.
9. Geospatial analysis of access barriers to MAT and their association with treatment engagement and treatment outcomes.



ASHLEY MOODY
ATTORNEY GENERAL
STATE OF FLORIDA

OFFICE OF THE ATTORNEY GENERAL

PL-01 The Capitol
Tallahassee, FL 32399-1050
Phone (850) 414-3300
Fax (850) 487-0168
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April 13, 2021

Mayor Donald Burnette
City of Port Orange
1000 City Center Circle
Port Orange, FL 32129
dburnette@port-orange.org

RE: Opioid Litigation

Dear Mayor Burnette:

My name is John Guard and I am the Chief Deputy Attorney General for the State of Florida (the "State"). Since she took office, Attorney General Moody has been heavily involved in leading both the State's ongoing opioid litigation and several different negotiations with defendants in that litigation. Those negotiations have included litigation counsel representing cities and counties.

As part of those negotiations to enable Florida to achieve the maximum amount recoverable for both the State and its subdivisions, the State has been negotiating for a lengthy time with outside counsel for nearly all litigating political subdivisions within the State. After multiple sessions and significant compromise by both sides, the attached memorandum of understanding ("MOU") has been reached. We have offered and the lawyers for the litigating subdivisions are recommending to their clients that the attached MOU be accepted. This proposal is the result of numerous meetings and includes feedback and comments from many local subdivisions. Based on the status of this litigation, the likely structure of any resolution, the potential litigation risks in the absence of such an agreement, the State believe that this proposal reflects a reasonable compromise between the State and its political subdivisions.

The purpose of this letter is to summarize the primary terms of the MOU and attempt to anticipate questions that you, your commission, and your internal and/or other legal counsel may have regarding this litigation and allocation proposal.

What cases does this MOU apply?

This allocation agreement is intended to govern the distribution of settlement proceeds obtained through the Purdue Pharma L.P. (“Purdue”) bankruptcy, the Mallinckrodt PLC (“Mallinckrodt”) bankruptcy, the distributor (Cardinal Health, Inc., McKesson Corp., and AmerisourceBergen Corp. (collectively referred to as the “Distributors”)) and Johnson & Johnson (“J&J”) potential deal, as well as any additional settlements obtained related to the opioid litigation.

Why is an allocation agreement necessary and why now?

Almost 100 political subdivisions within the State of Florida, as well as the State of Florida itself, have filed suit against numerous entities engaged in the manufacture, marketing, promotion, distribution or dispensing of opioids. Another 30 political subdivisions within the State of Florida have filed claims in the Purdue bankruptcy.

The State and the Plaintiffs’ Executive Committee for the Opioid Litigation Multi-District Litigation panel (the “PEC”) are in ongoing negotiations with Purdue, Mallinckrodt, the Distributors, and J&J with potential resolutions anticipated in the coming weeks. Under the likely settlement structure for these cases, states and their political subdivisions are strongly incentivized to reach a joint resolution of all State and political subdivision claims. Under the Distributor and J&J deal, the State and its subdivisions receive a substantially larger settlement amount the higher the number of subdivisions sign on to the deal. Therefore, it is in the best interest of all political subdivisions and the State of Florida to reach an allocation agreement which will permit the joint resolution of all claims within the state.

The deals contemplate the need for relatively quick buy in by subdivisions in order to maximize recovery. The pace of negotiations is accelerating, and Purdue has filed its plan of reorganization. Given this accelerating pace, there is a greater sense of urgency among all counsel to come to agreement and resolve how monies are going to be allocated, so that we can move Purdue, Mallinckrodt, and other potential settlements toward finality. Given the Sunshine law, the likely need for public notice and comment, and the complexity of the deals, we need to agree to an allocation plan now to ensure that Florida maximizes recovery.

How can funds be utilized?

You will see as you review the MOU that the State and its subdivisions, who execute this MOU, are agreeing that almost all the funds from any settlement will go to abatement activities. In other words, funds must be utilized for strategies, programming and services used to expand the availability of treatment for individuals impacted by Opioid Use Disorder or co-occurring Substance Use Disorder and Mental Health disorders (“Approved Purposes”). A non-exclusive list of potential abatement programs and uses are included in Exhibits A and B to the agreement. The list was developed nationally consulting with public health officials in multiple states, experts for the states and subdivisions, and officials within the United States Department of Health and Human Services. These uses are intended to best serve the overall purpose and

intention of this litigation, which is to abate the continuing public health crisis of opioid addiction within our communities.

While supported by the State, this requirement was imposed the defendants for tax and other reasons. It is also necessary to militate against the United States seeking substantial amounts of settlement funds from both the State and subdivisions as recoupment.

How are the funds allocated amongst the States?

While not part of the MOU, the States have been negotiating the national allocation for almost two years with an agreement reached in late 2019. Florida's interstate allocation is 7.03%. That allocation is the second largest allocation in the nation ahead of Texas, which is the second largest state. Florida is one of a handful of states whose allocation is greater and greater by a significant percentage above its population (Florida has 6.54% of the United States' population). The only states that have larger gains over their population are the opioid belt states: West Virginia, Kentucky, etc. The interstate allocation is the product of two measures. One calculated by the PEC and the other calculated by the States. The data sets chosen are slightly different (including different years and what measures were selected), but the main difference is that some states demanded that population play a more significant factor in the state allocation and it is not a factor in the PEC calculation. Given how much Florida's allocation percentage is above its population, the need in these settlements to maximize the number of states settling, and the potential litigation risks in the absence of such an agreement, it would be our recommendation that cities and counties accept the interstate allocation.

How much money does the State expect for it and its subdivisions?

It depends. Each of the current or proposed settlements are for different lengths of time and each contain different variability. In Purdue, payments are paid over a ten-year period and vary with the performance of the ongoing business of the new company and payments from third parties. In Mallinckrodt, payment amounts are still being negotiated, but will be paid over seven years and will vary depending on the value of the emerging company seven years later as part of the recovery is warrants in the re-emerged company. In the Distributor and J&J proposed deal, the proposed deal is over eighteen years and the amount paid varies depending on subdivision participation and whether other subdivisions file opioid related litigation in the future. As part of the MOU, the State is willing to seek judicial or legislative action to reduce the variability of the monies, especially in connection with the Distributor and J&J deal. Our current best guess based on projections and assuming total participation is \$120-140M a year for the first few years, \$90-110M a year for the middle years, and then \$60-70M a year for the later years of the deal for the State and its subdivisions. Again, these numbers can and will vary and hopefully will increase if additional settlements are reached.

How are the funds allocated amongst the State and its subdivisions?

This Proposal divides all settlement funds between three funds: (1) the City/County Fund; (2) the Regional Fund; and (3) the State Fund.

The **City/County Fund** consists of 15% of the total settlement amounts allocable to the State of Florida. These funds are distributed to all counties and qualifying municipalities in the State of Florida.

The allocation of the City/County Fund between counties and municipalities is based on a model referred to as the “Negotiation Class Metrics.” This model was developed in the National Prescription Opiate MDL by the PEC, and considers: (1) the amount of opioids shipped to the county; (2) the number of opioid deaths that occurred in that county; and (3) the number of people who suffer opioid use disorder in that county. Allocations between counties and municipalities within each county use historical federal data showing how the specific county and the cities within it have made opioids-related expenditures in the past.

We have attached a spreadsheet to this letter that provides you an estimated amount per year for an amount within each range in the previous question.

The **Regional Fund** consists of a sliding scale between 30% and 40% of the total settlement amounts allocable to the State of Florida, with the largest percentages occurring in the immediate years after settlement and decreasing over time.

These funds are allocated to counties in accordance with the “Negotiating Class Metrics” described above. In the case of counties with a population of over 300,000, and which satisfy other criteria regarding abatement infrastructure, (termed “Qualified Counties”) these funds are provided directly to the county. For the remainder of counties within the State, these funds are provided to the Managing Entity (the entity that the State has contracted with to provide substance abuse treatment) for that county, to be spent on approved purposes within the region that the county is a part.

For Counties with populations greater than 300,000: We encourage you to review the definition of Qualified County in the MOU, so that you can understand the other requirements that you will have to meet. Importantly, the definition of Qualified County requires that you reach an agreement with at least some municipalities (at least 50% of the population) within your county as to how these funds are spent. The requirements of such agreements are subject to further discussion and negotiation.

We have attached a spreadsheet to this letter that provides you an estimated amount per year for an amount within each range in the previous question. The amount will vary for qualified counties depending on how many municipalities in that County: (1) join a settlement; and (2) enter an agreement with a County.

For Counties with populations less than 300,000 or that do not qualify as a Qualified County: Currently, a majority of the monies being utilized to respond to the opioid epidemic in the State flow through Managing Entities located regionally who provide service in each community. When we traveled the state before COVID and had discussions with many of you, most (outside a couple large counties) indicated that they

had a good working relationship with their Managing Entity. Indeed, several indicated that they were already involved with their Managing Entity. The actual dollar amounts annually paid to smaller counties under the contemplated settlement agreements are not substantial enough to support standalone programs. Given that reality, but wanting to maximize services locally, it made sense to have the monies flow through the existing structure to expand services in each county. If there are issues or problems with Managing Entities, we are happy to engage. We are also happy to try and help communities get involved in or engage with their Managing Entity.

We have attached a spreadsheet to this letter that demonstrates the amounts attributable to each county per year for an amount within each range in the previous question.

The **State Fund** consists of the remaining 45% to 55% of the total settlement amounts allocable to the State of Florida, depending on the amount of the Regional Fund above. As with the City/County Fund and Regional Fund, these funds must be spent on Approved Purposes

Why should we agree to this allocation?

The proposed allocation in the MOU is better than the alternative that subdivisions will receive if they do not enter an agreement with the State. Two of the defendants who we have negotiated with, Purdue and Mallinckrodt are now in bankruptcy. In advance of and in connection with those bankruptcies, the states, the PEC, and city and county representatives negotiated a default intrastate allocation and agreed that it will apply unless a state and its cities and counties agree to something else. A Deputy County Attorney for Broward County, Florida, was involved in the negotiations related to Purdue. Something like the Purdue default allocation is currently in the draft connected to the Distributor and J&J deal.

The allocation above is superior for Florida's subdivisions than that default allocation. Indeed, the State offered substantial improvements over those terms from the beginning of the negotiations that led to this MOU. We have attached a copy of the Purdue abatement term sheet for your review. Under that default allocation, there is no city/county fund. Only subdivisions with populations greater than 400,000 people are eligible to receive any monies directly. Almost all the monies will flow through the Managing Entities who are regionally supplying services. The allocation percentages for the regional bucket are dollar based and decrease to half, far more quickly than in the MOU. In other words, the allocation in this MOU allows a far greater recovery directly to each Florida city and county than the alternative and greater recoveries regionally for all subdivisions.

The allocation is also better than the cities and counties would achieve if damages were proportionally allocated. In the Purdue bankruptcy, over one hundred twenty-five Florida subdivisions filed proofs of claims. When the size of those claims is compared to that of the State's claim, the State's claim was more than four, almost five times larger than all the subdivisions' claims combined. Subdivisions are getting substantially more than what their proportional share would be. The State is willing to agree to the larger because it frankly reflects the reality of how monies are currently being spent and is consistent with how the legislature has been appropriating monies to combat this crisis.

If individual subdivisions do not agree to a settlement, what will happen?

If there are hold outs or subdivisions that do not respond, the MOU contemplates that the State will either file a new suit or sever its claims against settling defendants from its existing opioid lawsuit and add political subdivisions and through either a class action mechanism or declaratory relief seek to bar future subdivision claims. Such action is necessary to ensure that the State and any subdivisions that agree to a settlement maximize their recoveries. This not a novel position and there is a substantial body of Florida law that exists that the State may resolve and release public claims including subdivision claims.¹ That being said, the State would prefer that we reach agreement on the allocation under the proposed MOU and handle things consensually. But, if there are holdouts, the State is prepared to litigate or seek legislation from the legislature to ensure that cities and counties that agree to this MOU are protected and will receive the recovery contemplated under the allocation.

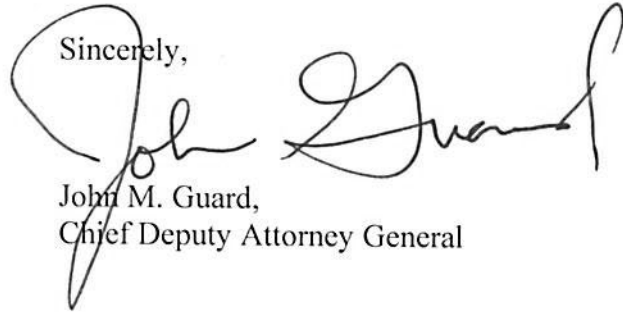
What are the next steps and the timeline?

We would ask that you review the attached MOU and proposed model resolution supporting an agreement on the MOU terms. We will be scheduling calls to answer questions about the MOU. We would ask each subdivision to think about who is attending each session and ensure that any of those discussions will not violate Florida's government-in-the-sunshine law. If you will contact my administrator, Janna Barineau, by e-mail (Janna.Barineau@myfloridalegal.com), we will include you in those discussions. After those discussions, we would then ask that you follow Florida law for approving such a resolution by your commission and in due course, pass it, and return a copy to me at the address on the first page of the letter. Potential settlements are anticipated in the coming weeks or months, but I cannot tell you exactly when a settlement will be finalized. These proposed settlements are

¹ See Fla. Stat. §501.207(1)(c)(authorizing the Attorney General to bring “[a]n action on behalf of one or more consumers or **government entities** for actual damages...” under Florida’s Deceptive and Unfair Trade Practices Act); e.g., *Engle v. Liggett Group, Inc.*, 945 So. 2d 1246, 1258-62 (Fla. 2006); *Young v. Miami Beach Improvement Co.*, 46 So. 2d 26, 30 (Fla. 1950); *Castro v. Sun Bank of Bal Harbour*, 370 So. 2d 392, 393 (Fla. 3d DCA1979); *City of New Port Richey v. State ex rel. O’Malley*, 145 So. 903, 905 (Fla. 2d DCA 1962); also *State of Florida ex rel. Shevin v. Exxon Corp.*, 526 F.2d 266, 275 (5th Cir. 1976) (holding that the Attorney General could file suit seeking damages for injuries sustained by government entities who had not specifically authorized the Attorney General to do so); *Eggers v. City of Key West*, 2007 WL 9702450, at *3 (S.D. Fla. Feb. 26, 2007) (concluding “[a]pplicable Florida law states that a judgment in an action brought against a public entity that adjudicates matters of general interest to the citizens of the jurisdiction is binding on all citizens of that jurisdiction.”); *Aerojet-General Corp. v. Askew*, 366 F. Supp. 901, 908-11 (N.D. Fla. 1973).

anticipated to include provisions which establish time limits on agreements between states and political subdivisions. As a result, we would request that you pass a resolution in the next 60-90 days, if possible.

Sincerely,

A handwritten signature in black ink, appearing to read "John M. Guard". The signature is fluid and cursive, with a large initial "J" and a long, sweeping underline.

John M. Guard,
Chief Deputy Attorney General

cc: Matthew J. Jones
City of Port Orange
1000 City Center Circle
Port Orange, FL 32129-4144
mjones@port-orange.org

Enc. Proposal with Ex. A and B
Recovery Spreadsheet
Purdue Abatement Term Sheet



CITY COUNCIL AGENDA ITEM

REQUESTED COUNCIL MEETING DATE 6/15/2021

Consent item: Yes

SUBJECT: (C10) Approval of Major Special Event Request for Port Orange Family YMCA Aunt Catfish Triathlon sponsored by Halifax Health

DEPARTMENT: Community Development

GOAL: 3 - Quality of Life

RECOMMENDED MOTION: Move to approve the Major Special Event Request for the Port Orange Family YMCA Aunt Catfish Triathlon at 4009 Halifax Drive, and La Cantina Cocina Mexicana at 4085 Ridgewood Ave and 4108 Halifax Drive, subject to attached conditions.

SUMMARY: The applicant Mica Lill, Special Event Director for Halifax Health, who is coordinating the event on behalf of Volusia Flagler Family YMCA who is a beneficiary for the event, requests approval for a Major Special Event, for the Port Orange Family YMCA Aunt Catfish Triathlon. The event will be held on July 17, 2021 from 7:00 AM to 9:30 AM. The map for each portion of the triathlon is attached (Exhibit A). The triathlon race route will follow the same general race route as past races in 2015-2019 (The event was cancelled in 2020 due to COVID-19.). The triathlon events start and finish in Port Orange, but the bike race goes through Daytona Beach Shores, unincorporated Volusia County, and Ponce Inlet. The applicant has received approval from Daytona Beach Shores, Volusia County, and Ponce Inlet for the portion of the bike race that uses the roadways in their jurisdictions.

The triathlon begins at 7:00 AM with the swimming portion at the small boat launch at the southwest end of the Port Orange Causeway Park. The route is a 1/4 -mile, open water. Lifeguards will be available on paddleboards for racer safety. The finish/start line is at the southwest end of the Port Orange Causeway Park.

The triathlon will continue with a 12-mile bike route that goes through Port Orange, Daytona Beach Shores, Volusia County, and Ponce Inlet. The 12-mile bike route starts on the north side of the bridge and travels east, then right under the bridge, then right onto the south side of the Dunlawton Avenue bridge heading east to Peninsula Drive. Riders will then turn right onto Peninsula Drive, then a left onto Demotte Avenue, then right onto Cardinal Boulevard, then right on Marcelle Avenue and proceed south on Peninsula Drive to Inlet Harbor Road, then turn left onto Inlet Harbor Road, then left onto S. Atlantic Avenue. Riders will then head north on S. Atlantic Avenue, then turn left on to Marcelle Avenue, then a right onto Cardinal Boulevard and follow Cardinal Boulevard to North to Demotte Avenue, turning left on Demotte Avenue then right on Peninsula Drive. Riders will then turn left and cross the Dunlawton Bridge on the South side of the

eastbound lane, then left onto the access drive to the finish/start line under the bridge.

The triathlon will continue with a 4-mile run beginning on the north side of the Dunlawton Avenue bridge and head east on the access road under the bridge then a coned-off lane of the eastbound Dunlawton Avenue Bridge. Runners will then turn left at Aunt Catfish's and head south on Halifax Drive to the turnaround point at Niver Street. Runners will then head back North along Halifax Drive to the finish line in the parking lot located at 4085 Ridgewood Avenue (La Cantina Cocina Mexicana).

The race will not have an awards ceremony or post-race celebration. Awards may be picked up at awards table. Parking for the event will be in the City's unpaved lot across from Aunt Catfish, and the parking lots utilized by Aunt Catfish and La Cantina Cocina Mexicana. Portable restrooms will be stationed at the transition area and at the finish line in the La Cantina Cocina Mexicana parking lot. Clean up for the race will occur immediately after.

The proposed event has been reviewed and approved by Police, Fire, Public Works, Parks and Recreation, Code Enforcement, and Community Development staff. According to the application, the required FDOT-compliant safety equipment (barricades, cones, etc.) for traffic control will be provided and set-up by the event coordinator. The applicant has a Special Detail Contract with the Police Department to ensure the event has sufficient officers and mobile units to assist with lane closures and traffic.

The event coordinator is aware that the previously required COVID-19 protocols for special events are no longer required but has chosen to have a social distancing and sanitization plan for racer safety.

Project No.: N/a

Funding Account No.: 0

Presenter: Penelope Cruz, Tim Burman

ATTACHMENTS:

1.	Exhibit A - race_map_2021 (1)	Exhibit A - race_map_2021 (1).pdf
2.	2021 Aunt Catfish Triathlon Conditions	2021 Aunt Catfish Triathlon Conditions.docx
3.	Aunt Catfish Triathlon_COVID19_protocols	Aunt Catfish Triathlon_COVID19_protocols.pdf
4.	Approvals from DBS_PI_VC	Approvals from DBS_PI_VC.pdf

Penelope Cruz

Tim Burman

Thomas Grimaldi

Ronny Buttrum

Wayne Clark

Robin Fenwick

Created/Initiated - 5/27/2021

Approved - 5/27/2021

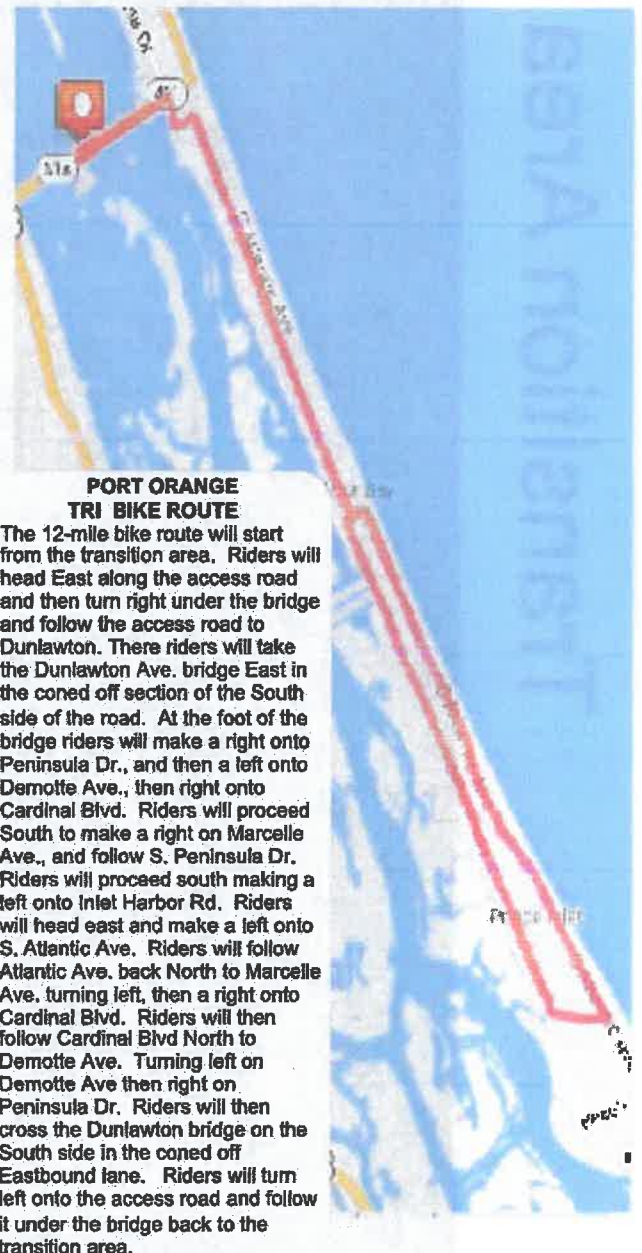
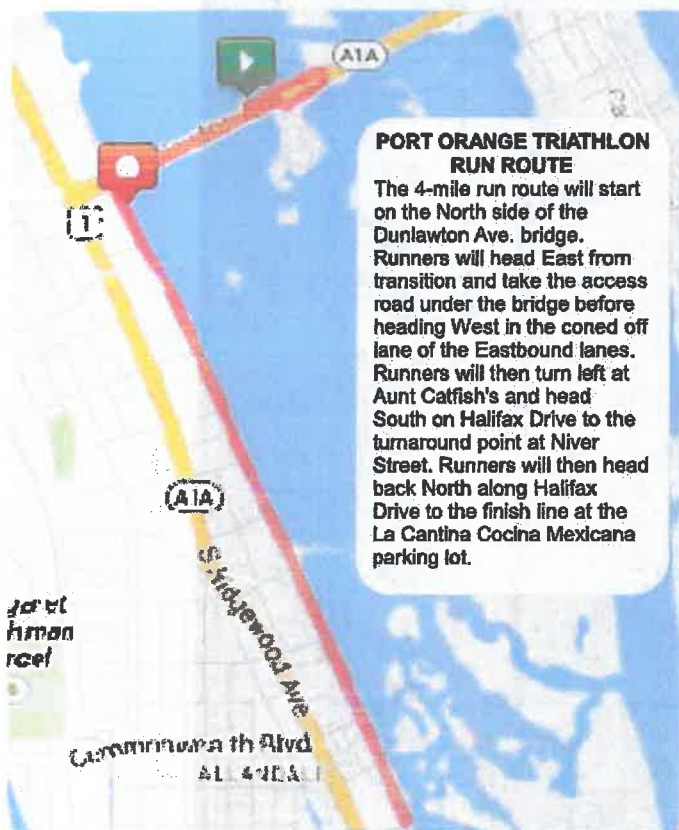
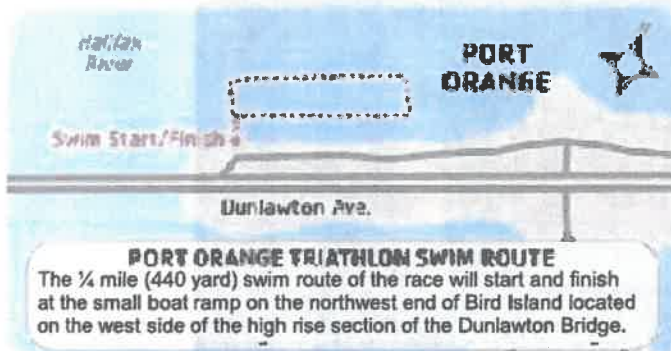
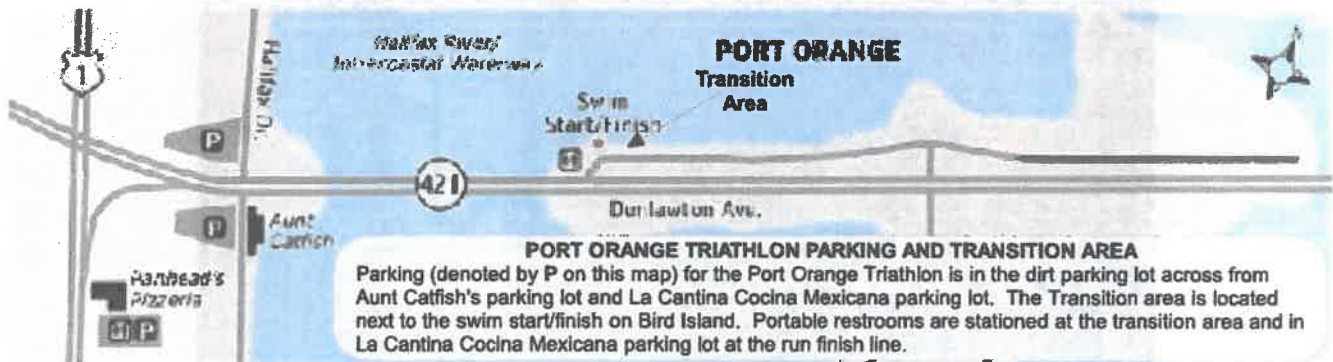
Approved - 6/1/2021

Approved - 6/1/2021

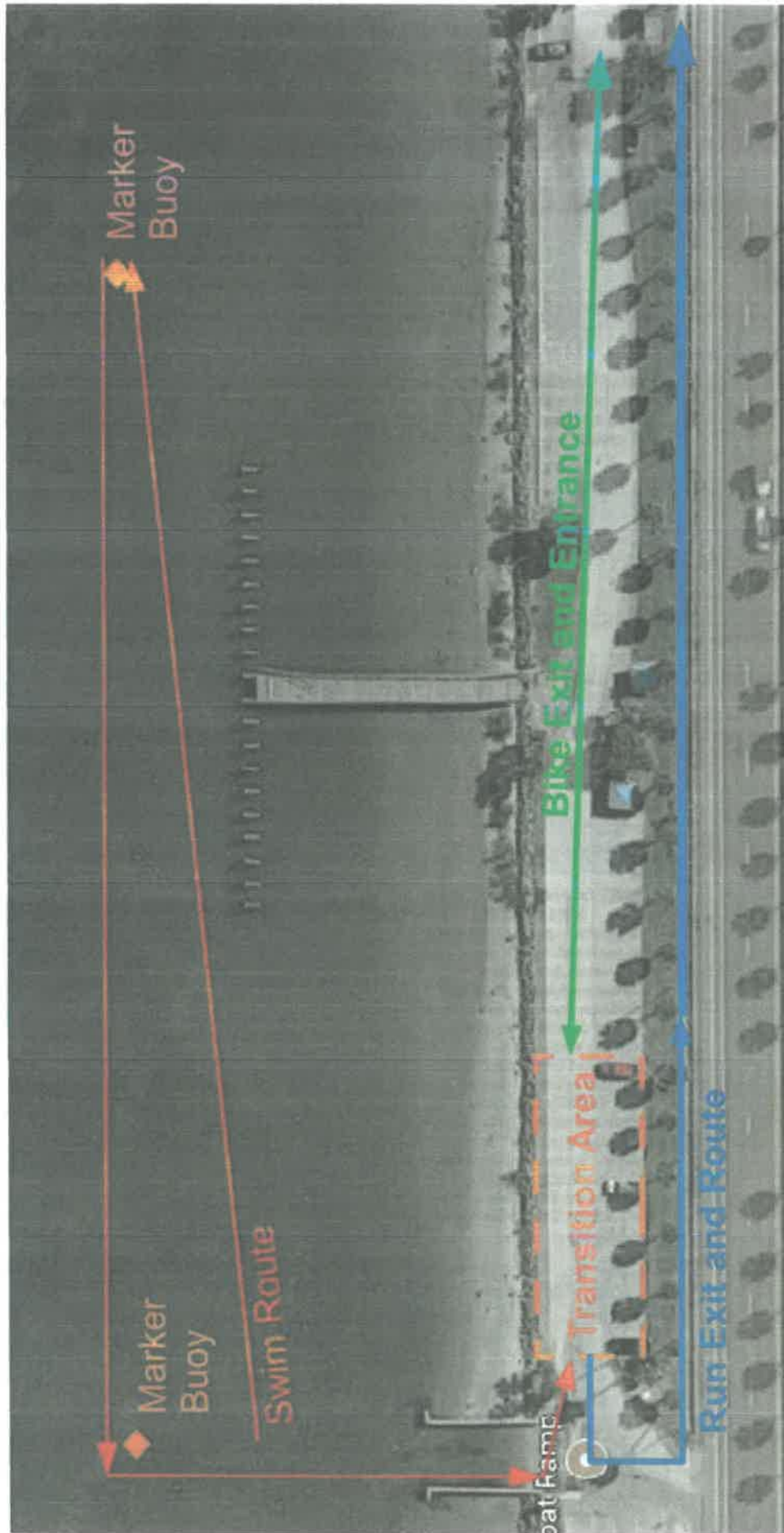
Approved - 6/3/2021

Final Approval - 6/3/2021

WELCOME TO THE PORT ORANGE FAMILY YMCA TRIATHLON



Transition Area



RECOMMENDATION:

Staff recommends approval of the Aunt Catfish Triathlon subject to the following conditions:

1. **Applicant shall be responsible for coordination with the City of Port Orange Public Works Department for Public Works services and all charges for equipment (barricades, lights, etc.) used for this event for traffic control.**
2. **Applicant shall be responsible for any charges for City of Port Orange Police services related to this event and coordinate with the Police Department for all vehicular traffic patterns and pedestrian concerns.**
3. **Rates for this event for staff time and equipment are per Resolution 19-2.**
4. Hours of the event shall be from 7:00 a.m. until 9:30 A.M.
5. Access shall be maintained for all emergency vehicles.
6. All public restroom facilities must remain open to the public.
7. A \$250 surety bond is required as outlined in chapter 58, Article III, of the City of Port Orange Code of Ordinances.
8. All areas used for this function shall be handicapped-accessible. Handicapped parking is to remain open and accessible for the event.
9. Event organizers are required to delineate the event area from vehicular driving and parking area with cones, ropes and/or barricades where necessary.
10. All trash generated for the duration of the event must be picked up and disposed of at the end of the event along with any debris at the event sites.
11. No off-site signs, signs in the right-of-way, pennants, feather flags, inflatables, balloons, or any signs prohibited in the Port Orange Land Development Code Ch. 15, Sec. 3(b).
12. A temporary sign permit shall be required for event signage. Please contact Planning at 386-506-5601 for information regarding sign permits.
13. A post-event inspection will be completed the first scheduled workday after the event to ensure all trash and debris generated in the parking lot where the event is taking place was removed.

Covid Protocol 2021

1. Day of race packet pickup will be limited. Please adhere to the 6-foot spacing guideline and wear a mask when picking up your packet. We encourage you to pick up your packet prior to race day.
2. Please wear a mask when you cannot adhere to the 6-foot spacing guideline. We encourage everyone to wear a mask until you have started the run/walk.
3. Race will be started in waves of 25 people. You must choose your starting wave during registration. Potential award winners should try to run in the early starting waves. Waves will start 5 min apart.
4. Once you have finished the race please respect the 6-foot social distancing spacing and wear a face covering.
5. The race will not have an awards ceremony or post-race celebration. Awards may be picked up at awards tent.
6. Bring your own water if you need it on the course. We will have water in bottles at the start and finish, but will not have a water station on the course. If you take a water bottle with you, be sure to hold on to it until you finish the race or drop off in trash cans at designated drop location.
7. Hand sanitizers will be available at the Sanitation tent near the start/finish.
8. If you feel ill or have a fever, do not come to packet pickup or to the race.
9. To maximize social distance, we recommend that you not arrive at the race more than 30 minutes prior to your start time.

Special Event Road Closure Permit

Permit must be submitted 45 days prior to event
This Permit is for County Road Jurisdiction Only



Date: 5/24/21
Halifax Health
Name of Organization /Contractor
4009 Halifax Dr
Street Address
Port Orange, FL 32127
City, State, Zip
386-425-5210
Telephone Number
afreer@vymca.org
Applicant's e-mail address
Amy Freer
Signature of Applicant

Aunt Catfish Triathlon
Event Title
07 / 17 / 21
Date of Special Use or Road Closure
7:00 am
Start Time (Event)
10:00 am
Finish Time (Event)
250
Expected # of Participants
Amy Freer
Applicant, Please Print Name

Names of Agency Responsible for Traffic Control (Sheriff's Office, City Police, Highway Patrol)

Agency: City Police Contact: Kelly Williams Phone # 386/506-5812
Agency: _____ Contact: _____ Phone # /

None - See attached map
Road(s) to be closed with Detour (Attach map)
Attached map
Route (Maintenance of traffic map required)
Attached map
Road(s) that will be used for event (not closed)

To be completed by County and Law Enforcement

Permit # 21-001
David Padgett - PWSS
Printed Name/Title of Public Works Official

David Padgett
Signature of Public Works Official
6-10-21
Date

N/A
Printed Name/Rank of Law Enforcement Rep.

Signature of Law Enforcement Rep. Date

Number of Law Enforcement required

Special Conditions:

Port Orange city Police for Traffic Control

Fwd: Port Orange Triathlon

Amy Freer <afreer@vfymca.org>

Wed 4/21/2021 6:04 PM

To: Mica Lill <MLill@vfymca.org>

Sent from my iPhone

Begin forwarded message:

From: "Fowler, Michael" <MFowler@cityofdbbs.org>**Date:** April 21, 2021 at 3:10:39 PM EDT**To:** Amy Freer <afreer@vfymca.org>**Cc:** "Schwab, Cheri" <cschwab@cityofdbbs.org>, "Dembinsky, Stephan" <SDembinsky@cityofdbbs.org>**Subject: RE: Port Orange Triathlon**

We are awaiting a reply from POPD. Assuming our personnel are unneeded (I don't see a need), you are cleared to proceed with your event.

Captain Michael Fowler, M.P.A.
Daytona Beach Shores Department of Public Safety
3050 South Atlantic Avenue
Daytona Beach Shores, FL 32118
Office: 386-763-7586 FBINA 239

<image002.png>

From: Amy Freer <afreer@vfymca.org>**Sent:** Wednesday, April 21, 2021 12:34 PM**To:** Fowler, Michael <MFowler@cityofdbbs.org>**Subject:** Port Orange Triathlon

Good afternoon Mr. Fowler,

We are happy to say that live races are slowly coming back! We are going to be doing the Port Orange Triathlon this year on July 17, 2021. We will be passing through Daytona Beach Shores for a small portion of the race. I have attached the map so you can see the route that they will be taking. Please let me know the next steps that I need to take to have permission for this race to take place through the Shores. I look forward to working with you. Have a great day!

Amy Freer

Health Promotions Coordinator/Membership Director

afreer@vfymca.org

VOLUSIA FLAGLER FAMILY YMCA

761 E. International Speedway Blvd. DeLand, FL 32724

P 386-673-9622

www.vfymca.org

www.facebook.com/vfymca

<image003.jpg>

The information contained in this e-mail may be privileged and confidential and protected from disclosure. If the reader of this e-mail is not the intended recipient, you are hereby notified that any reading, dissemination, distribution, copying, or other use of this e-mail is strictly prohibited. If you have received this e-mail in error, please notify the sender immediately and delete this e-mail



Town of Ponce Inlet

4300 South Atlantic Avenue
Ponce Inlet, Florida 32127
Phone: (386) 236-2150
Fax: (386) 322-6717
www.ponce-inlet.org

May 10, 2021

Ms. Amy Freer
Live Your Life Well Race Series- Halifax Health
311 N. Clyde Morris Blvd.
Daytona Beach Fl, 32114

Dear Ms. Freer,

I am writing to you on behalf of the Town of Ponce Inlet to inform you that the Ponce Inlet Special Event Committee has determined that the Port Orange YMCA Triathlon does not meet the requirements of a Special Event in Ponce Inlet. Please continue to apply for a permit each year as this event will be reevaluated to ensure no changes are needed to be made which would then qualify this event as a special event. Thank you for continuing to apply each year. Please let me know if you have any questions.

Sincerely,

Jackie French
Cultural Services Manager
Special Events Coordinator
Town of Ponce Inlet
4300 South Atlantic Ave.
Ponce Inlet, FL 32127
(386) 236-2163

The Town of Ponce Inlet staff shall be professional, caring, and fair in delivering community excellence while ensuring Ponce Inlet citizens the greatest value for their dollar.



CITY COUNCIL AGENDA ITEM

REQUESTED COUNCIL MEETING DATE 6/15/2021

Consent item: No

SUBJECT: (F13) Volusia Growth Management Commission Member Appointment

DEPARTMENT: City Manager

GOAL: 4 - Economic Development

RECOMMENDED MOTION: Move to appoint Debbie Connors to serve on the Volusia Growth Management Commission.

SUMMARY: Debbie Connors currently represents the City on the Volusia Growth Management Commission (VGMC). Ms. Connors' term is scheduled to expire effective June 30, 2021. Ms. Connors has expressed an interest to continue serving the City in this capacity. Ms. Connors was originally appointed by the City Council on August 25, 2009. She is presently the Vice Chair and serves as the Chair of the Commission's Personnel, Operations & Procedures Committee. Ms. Connors has held many leadership roles throughout her tenure, including the office of Chair.

Project No.: N/A

Funding Account No.: 0

Presenter: Wayne Clark

ATTACHMENTS:

1.	VGMC Letter	VGMC Letter.pdf
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Cindy Betts
Wayne Clark
Robin Fenwick

Created/Initiated - 5/26/2021
Approved - 6/3/2021
Final Approval - 6/3/2021



Volusia Growth Management Commission

May 17, 2021

Mayor Donald Burnette
City of Port Orange
1000 City Center Circle
Port Orange, FL 32129

RE: Volusia Growth Management Commission (VGMC) Member Appointment

Dear Mayor Burnette:

On behalf of the Volusia Growth Management Commission (VGMC), I am writing to inform the City of Port Orange that Debbie Connors' member term is scheduled to expire effective June 30, 2021.

Ms. Connors has been a key member of the Commission since originally appointed by the City on August 25, 2009. She presently is the Vice Chair of the VGMC and also serves as the Chair of the Commission's Personnel, Operations & Procedures Committee. Ms. Connors has held many leadership roles throughout her tenure, including the office of Chair.

Please notify the VGMC office if it is the City's desire to reappoint Ms. Connors to represent the City for the four year term beginning July 1, 2021.

Thank you in advance for your assistance.

Sincerely,

Merry C. Smith
Operations Manager

CC: Debbie Connors, VGMC Vice Chair
Sid Vihlen, Jr., VGMC Chairman



CITY COUNCIL AGENDA ITEM

REQUESTED COUNCIL MEETING DATE 6/15/2021

Consent item: No

SUBJECT: (G14) Second Reading - Ordinance No. 2021-14 - Dental Amalgam

DEPARTMENT: Public Utilities

GOAL: 1 - Public Safety

RECOMMENDED MOTION: Move to approve Ordinance 2021-14.

SUMMARY: In 2017, the Florida Department of Environmental Protection (FDEP) and the United States Environmental Protection Agency (USEPA) under the Clean Water Act modified Code of Federal Regulation section 40, part 441 (40 CFR part 441) regarding the disposal of dental amalgam into sanitary sewer systems and mandating a compliance deadline of 2020.

Dental amalgam is a dental filling material used to fill cavities caused by tooth decay. It is a mixture of metals, consisting of liquid mercury and a powdered alloy composed of silver, tin, and copper. About 50% of amalgam is mercury. Mercury containing amalgam waste finds its way into the sewage treatment plants and ultimately into the environment.

This ordinance provides the City of Port Orange the ability to enforce the new regulation by amending Chapter 74, Article I of the Code of Ordinances and establish a new Section 74-83 related to requirements for dental facilities that remove or place amalgam fillings in compliance with rule 40 CFR Part 441-Dental office Category Rule.

Project No.: N/A

Funding Account No.: N/A

Presenter: Lynn Stevens

ATTACHMENTS:

1.	Department Justification Memo - Dental Amalgam Ord 2021-14	Department Justification Memo - Dental Amalgam ordinance (1).docx
2.	Ordinance No. 2021-14	Dental Amalgam Ord 2021 6.3.21.pdf

Robin Fenwick

Created/Initiated - 5/28/2021



City of Port Orange Public Works & Utilities Department

TO: Wayne Clark, City Manager

THRU: Jamie Miller, Interim Assistant City Manager

FROM: Lynn Stevens, Public Works and Utilities Director

DATE: May 7, 2021

SUBJECT: Ordinance 2021-14 Dental Amalgam

REQUEST:

The Public Works & Utilities Department is requesting City Council to approve Ordinance 2021-14 amending Chapter 74, Article 1 of the Code of Ordinances to establish new Section 74-83 related to dental amalgam.

PURPOSE:

In 2017, the Florida Department of Environmental Protection (FDEP) and the United States Environmental Protection Agency (USEPA) under the Clean Water Act modified Code of Federal Regulation section 40, part 441 (40 CFR part 441) regarding compliance with the disposal of dental amalgam into sanitary sewer systems mandating a compliance deadline of 2020. This ordinance provides the City of Port Orange control to enforce the new regulation.

CONSIDERATION:

Dental amalgam is a dental filling material used to fill cavities caused by tooth decay. It is a mixture of metals, consisting of liquid mercury and a powdered alloy composed of silver, tin, and copper. About 50% of amalgam is mercury. Mercury containing amalgam waste finds its way into the sewage treatment plants when a filling is removed because the amalgam material is often flushed into the chair-side drains. Once the mercury enters the treatment plant, it ends up in the sludge, the solid material that remains after the wastewater is treated. The mercury then makes its way into the environment through incineration, landfilling, land application of sludge, or through surface water discharge.

FDEP and USEPA enacted a new rule regarding disposal of dental amalgam into sanitary sewer systems in 2017. The rule requires all dental offices, under the Clean Water Act, to reduce discharges of mercury into municipal sewage treatment plants. The goal is to reduce the discharge of mercury by 5.1 tons, as well as, reduce 5.3 tons of other metals

found in waste dental amalgam to the municipal sewage treatment plants. This is accomplished by requiring all dental facilities that place or remove amalgam regularly to install amalgam separators at their chairs. If the dental office does not place amalgam and does not remove amalgam except on a limited emergency or unplanned circumstances, they are exempt from having to install an amalgam separator.

The rule required dental offices to comply by July 2020. A one-time compliance report had to be completed by all dental offices and submitted to the sanitary sewer provider (City of Port Orange Central Laboratory) by October 2020. The City has received these compliance reports as required.

This ordinance allows the City of Port Orange to enforce the requirements of the Dental Amalgam rule.

FUNDING:

There is no funding associated with this request.

RECOMMENDATION:

The Public Utilities Department recommends City Council to approve Ordinance 2021-14 amending Chapter 74, Article 1 of the Code of Ordinances to establish new Section 74-83 related to dental amalgam.

ANTICIPATED SCHEDULE:

- a) Council Meeting – First Reading June 1, 2021
- b) Council Meeting – Second Reading June 15, 2021

ATTACHMENTS:

Ordinance 2021-14 Draft

ORDINANCE NO. 2021-14

AN ORDINANCE OF THE CITY OF PORT ORANGE,
VOLUSIA COUNTY, FLORIDA AMENDING CHAPTER 74,
ARTICLE I OF THE CODE OF ORDINANCES TO
ESTABLISH A NEW SECTION 74-83 RELATED TO
REQUIREMENTS FOR DENTAL FACILITIES THAT
REMOVE OR PLACE AMALGAM FILLINGS; PROVIDING
FOR DEFINITIONS; ESTABLISHING REPORTING AND
WASTE MANAGEMENT PRACTICES FOR AMALGAM;
PROVIDING FOR APPLICABILITY AND EXEMPTIONS;
PROVIDING FOR REPEAL OF CONFLICTING
ORDINANCES; PROVIDING FOR CODIFICATION;
PROVIDING FOR SEVERABILITY AND PROVIDING AN
EFFECTIVE DATE.

WHEREAS, the City of Port Orange owns and operates a municipal sanitary sewer system; and

WHEREAS, the Florida Department of Environmental Protection (FDEP) has proposed additions to local regulations consistent with Rule 40 CFR Part 441 - Dental Office Category Rule; and

WHEREAS, the City Council has determined that such local regulations enhance the health, safety, and welfare of the citizens of Port Orange.

NOW, THEREFORE, BE IT ENACTED BY THE CITY COUNCIL OF THE CITY OF PORT ORANGE, FLORIDA, as follows:

SECTION 1: The City Council of the City of Port Orange, Florida hereby amends Chapter 74, Article I, to establish a new Section 74-83 which shall read as follows:

Section 74-83. - Requirements for dental facilities that remove or place amalgam fillings.

(a) Definitions. For the purposes of this section the following words and phrases shall be as defined herein.

- (1) "Amalgam separator" is a device that employs filtration, settlement, centrifugation, or ion exchange to remove amalgam and its metal constituents from a dental office vacuum system before it discharges to the sewer.
- (2) "Amalgam waste" means and includes non-contact amalgam (amalgam scrap that has not been in contact with the patient); contact amalgam

(including, but not limited to, extracted teeth containing amalgam); amalgam sludge captured by chairside traps, vacuum pump filters, screens, and other amalgam trapping devices; used amalgam capsules; and leaking or unusable amalgam capsules.

- (3) "ANSI/ADA Standard No. 108" is the American National Standards Institute and American Dentistry association standard for amalgam separators.
 - (4) "Existing Source" is any any facility subject to this Section whose first discharge to the sewer collection system occurred on or before July 14, 2017.
 - (5) "ISO 11143" is the International Organization for Standardization's standard for amalgam separators.
 - (6) "New Source" is any facility subject to this Section whose first discharge to the sewer system occurs after July 14, 2017 and must comply immediately upon commencement of discharge.
- (b) All owners and operators of dental facilities that remove or place amalgam fillings shall comply with the following reporting and waste management practices:
- (1) For existing sources, the One-Time Compliance Report is due no later than October 12, 2020 or no later than 90 days after transfer of ownership.
 - (2) For new sources, the One-Time Compliance Report is due within 90 days of the start of discharge to the sewer collection system.
 - (3) No person shall rinse chairside traps, vacuum screens, or amalgam separators equipment in a sink or other connection to the sanitary sewer.
 - (4) Owners and operators of dental facilities shall ensure that all staff members who handle amalgam waste are trained in the proper handling, management and disposal of mercury-containing material and fixer-containing solutions and shall maintain training records that shall be available for inspection by the superintendent or designee during normal business hours.
 - (5) Amalgam waste shall be stored and managed in accordance with the instructions of the recycler or hauler of such materials.
 - (6) Bleach and other chlorine-containing disinfectants shall not be used to disinfect the vacuum line system.

- (7) The use of bulk mercury is prohibited. Only pre-capsulated dental amalgam is permitted.
- (c) All owners and operators of dental vacuum suction systems, except as set forth in subsections (d) and (e) of this section, shall comply with the following:
- (1) An ISO 11143 or ANSI/ADA Standard No. 108 certified amalgam separator or equivalent device shall be installed for each dental vacuum suction system on or before July 14, 2020; provided, however, that all dental facilities that are newly constructed on and after the effective date of this ordinance shall include an installed ISO 11143 or ANSI/ADA Standard No. 108 certified amalgam separator device. The installed device must be ISO 11143 or ANSI/ADA Standard No. 108 certified as capable of removing a minimum of 95 percent of amalgam. The amalgam separator system shall be certified at flow rates comparable to the flow rate of the actual vacuum suction system operation. Neither the separator device nor the related plumbing shall include an automatic flow bypass. For facilities that require an amalgam separator that exceeds the practical capacity of ISO 11143 test methodology, a non-certified separator will be accepted, provided that smaller units from the same manufacturer and of the same technology are ISO-certified.
 - (2) Proof of certification and installation records shall be submitted to the superintendent within 30 days of installation.
 - (3) Amalgam separators shall be maintained in accordance with manufacturer recommendations. Installation, certification, and maintenance records shall be available for immediate inspection upon request therefor by the superintendent or designee during normal business hours. Records shall be maintained for a minimum of three years.
- (d) Facilities with vacuum suction systems that meet all the following conditions may apply to the superintendent for an exemption to the requirements of subsection (c) of this section:
- (1) The system is a dry vacuum pump system with an air-water separator.
 - (2) The sedimentation tank is non-bottom draining, with the drain above the anticipated maximum level of accumulated sludge.
 - (3) Evidence of regular pump outs by a licensed hauler (a minimum of once a year, or more often if either directed by the manufacturer or necessary to keep solids from exiting through the drain) is maintained and open to inspection by the superintendent during normal business hours.

- (4) The system has no direct discharge pipe to the sewer on the bottom of the sedimentation tank.

An owner or operator whose facility meets conditions (1) through (4) may apply for this exemption by written letter to the superintendent. The superintendent or designee will review the system and, if the exemption is approved, shall provide a written letter of exemption.

An exemption obtained pursuant to this subsection (d) shall expire upon installation of a new vacuum system. Upon expiration of the exemption, the facility shall comply with subsection (c) of this section before commencing further operation.

- (e) Dental dischargers that exclusively practice one or more of the following specialties are not subject to the requirements of this section: (1) Orthodontics; (2) Periodontics; (3) Oral and maxillofacial surgery; (4) Radiology; (5) Oral pathology or oral medicine; (6) Endodontistry and prosthodontistry.
- (f) Dental practices that do not place dental amalgam, and do not remove amalgam except in limited emergency or unplanned, unanticipated circumstances, are exempt from the requirements of this part, provided the dental practice:
- (1) Submits the following statement to the city, signed by a responsible corporate officer, general partner, proprietor, or a duly authorized representative by the applicable compliance deadline identified in subsection (b):

"This facility is a dental discharger subject to this rule and does not place or remove dental amalgam except in limited emergency or unplanned, unanticipated circumstances. I am a responsible corporate officer, a general partner or proprietor (if the facility is a partnership or sole proprietorship), or a duly authorized representative in accordance with the requirements of § 403.12(l) of the above named dental facility, and certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- (2) Removes dental amalgam for limited emergency or unplanned, unanticipated circumstances, less than 12 times per year and as no more than 20% of dental procedures; and
- (3) The dental practice notifies the city of any changes affecting the applicability of this certification.
- (g) Disposal of hauled waste from dental facilities to the sanitary sewer is prohibited in accordance with Sections 74-103 and 74-106.
- (h) Dental dischargers that fail to comply with this section shall be considered significant industrial users, and will be subject to the requirements herein, including the compliance monitoring in accordance with Section 74-115, reporting requirements in accordance with Section 74-116, and enforcement remedies identified in Sections 74-118 & 74-119, respectively.

SECTION 2: 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 3: CODIFICATION.

The provisions of this Ordinance shall become and be made a part of the Code of Ordinances of the City of Port Orange 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 4: 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.

[REMAINDER OF PAGE LEFT BLANK]

SECTION 5: 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: _____
Matthew J. Jones, City Attorney



CITY COUNCIL AGENDA ITEM

REQUESTED COUNCIL MEETING DATE 6/15/2021

Consent item: No

SUBJECT: (G15) First Reading - Ordinance No. 2021-15 - Land Development Code (LDC) Clean-up Amendment 2021-2/Chapters 3, 13, 16 and 17 (Case No. 21-25000003)

DEPARTMENT: Community Development

GOAL: 3 - Quality of Life 4 - Economic Development

RECOMMENDED MOTION: Move to approve Ordinance No. 2021-15, amending Chapters 2, 5, 6, 8, 9, and 17 of the Land Development Code.

SUMMARY: Planning Commission Action: Recommended Approval 6-0 (May 27, 2021)

The proposed amendments to Chapters 3, 13, 16 and 17 of the Land Development Code (LDC) are intended to improve and update the content of the existing code, as part of an on-going maintenance effort. The proposed amendments include clarifications and minor changes that are simple clean-up items that make the code more efficient to use, support the City's redevelopment efforts, or address problems or issues encountered when applying the code.

Amendment #1: The proposed amendment would allow for the approval of a building addition less than or equal to 500 square-feet to a non-residential building through a building permit instead of requiring a site development plan and building permit. As part of the building permit review, compliance with all requirements in the City's Land Development Code, Florida Building Code, Florida Fire Prevention Code, and other applicable codes would be reviewed and required to be met.

Amendment #2: The proposed amendment adds a provision that the requirement for a berm, or opaque fence or wall adjacent to a collector or arterial roadway for a new residential subdivision may be reduced or waived by the Administrative Official in situations where the code required buffer and grade difference between the roadway and the rear yard of a lot provides sufficient screening of the rear yards.

In 2012, the LDC was amended to add a requirement for new residential subdivisions to install an opaque vinyl fence, masonry wall or landscape berm along all perimeter boundaries abutting arterial and collector roadways in addition to the required right-of-way landscape buffer planting, unless there is a minimum of 100 feet of common area between the platted rear lot lines and the abutting roadway. The intent was to create a uniform buffer or wall/fence that would be visible from an abutting roadway and screen

the rear yards of the residential lots abutting a roadway. However, in some cases the grade elevation between the roadway and a residential lot along with the code required landscape buffer will provide sufficient screening, without the addition of a berm or an opaque fence or wall.

Amendment #3: The proposed amendment adds a provision to allow commercial outdoor storage areas to be established through a building permit instead of a site plan prepared by a licensed engineer as currently required by the LDC. The LDC currently allows areas for outdoor storage/display of garden supplies, outdoor recreational equipment (e.g. bicycles, kayaks, paddle boards, etc.), lawn equipment, motor vehicles, boats, recreational vehicles, and mobile homes on a commercial site when associated with a permitted commercial use. The requirement to designate an outdoor storage/display area on a commercial site with a site plan prepared by a licensed engineer can be costly for a business to prepare, especially smaller businesses located along Ridgewood Avenue.

Amendment #4: The proposed amendment establishes dimensional requirements (setbacks, height, open space, building coverage, etc.) for the Government/Public Use (GPU) zoning district. Currently, there are no dimensional requirements listed in the LDC for the GPU zoning district as there are for other city standard zoning districts. The proposed dimensional requirements for the GPU zoning district are comparable to the dimensional requirements for the Professional Office (PO), Commercial Industrial (CI), and Light Industrial (LI) zoning districts, which are comparable zoning districts with regards to permitted uses and development intensity allowed and currently developed on properties zoned GPU.

The staff report is attached for additional information.

Project No.: N/A

Funding Account No.: N/A

Presenter: Penelope Cruz, Tim Burman

ATTACHMENTS:

1.	Ordinance 2021-15	Ord 2021-15.pdf
2.	Staff Report - 2021-2_LDC Clean-up Amendments	Staff Report - 2021-2_LDC Clean-up Amendments.pdf

Penelope Cruz

Created/Initiated - 5/27/2021

Tim Burman

Approved - 5/27/2021

Shannon Balmer

Approved - 6/2/2021

Wayne Clark

Approved - 6/3/2021

Robin Fenwick

Final Approval - 6/3/2021

ORDINANCE NO. 2021-15

AN ORDINANCE OF THE CITY OF PORT ORANGE,
VOLUSIA COUNTY, FLORIDA AMENDING THE LAND
DEVELOPMENT CODE CHAPTER 3 UPDATING
EXEMPTIONS TO REQUIRED DEVELOPMENT ORDER;
CHAPTER 13 CLARIFYING SUBDIVISION ROADWAY
LANDSCAPE BUFFER REQUIREMENTS; CHAPTER 16
AMENDING COMMERCIAL OUTDOOR STORAGE
REQUIREMENTS; AND CHAPTER 17 ESTABLISHING
DIMENSIONAL REQUIREMENTS FOR THE
GOVERNMENT/PUBLIC USE ZONING DISTRICT;
PROVIDING FOR REPEAL OF CONFLICTING
ORDINANCES; PROVIDING FOR SEVERABILITY; AND
PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Planning Commission has recommended amendments to the
Land Development Code; and

WHEREAS, the proposed amendments are necessary to improve the content of
the existing Land Development Code ("Code") as part of an ongoing maintenance effort
to make the Code and the development review process more efficient and consistent in
its application.

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 3, Section 2 of the Land Development Code, to read as follows:

Chapter 3 - ADMINISTRATION

[No changes to Section 1]

Section 2: - Development order and development permit required.

- (a) *In general.* No development activity shall be undertaken unless the activity is authorized by a development permit. A development permit may not be issued unless authorized by a development order reflecting conformance with the requirements of this code.
- (b) *Exceptions to the requirement of a development order.* A development permit may be issued in the absence of a development order for the following activities, when the proposed development conforms to the standards and permitting requirements of this code:
 - (1) The construction, alteration, or enlargement of a one- or two-family dwelling on a lot of record as of November 1, 1990, or lot created under the terms of this code.
 - (2) The construction of an accessory structure on a previously developed single-family lot.
 - (3) The alteration of an existing non-residential structure which does not enlarge the effective size or capacity of the structure less than or equal to 500 square feet, ~~with the exception of alterations to a one- or two-family dwelling.~~
 - (4) Demolition of a structure.
 - (5) Erection of signs or fences on a previously developed site and when independent of other development activity on the site.
 - (6) The clearing of trees or vegetation or changing of grade when independent of other development activity on the site.
 - (7) The construction of agricultural accessory structures.
 - (8) The resurfacing of a vehicle use area.
 - (9) The installation of an antenna on a communication tower or alternative support structure in compliance with the requirements of section 9 of chapter 16 of this code.

[No changes to Sections 3 thru 7.3]

SECTION 2: The City Council of the City of Port Orange hereby amends Section 3.5, Chapter 13 of the Land Development Code, to read as follows:

Chapter 13 – LANDSCAPING AND BUFFERS

Section 3.5: - Opaque fence or wall requirements.

[No changes to subsection (a)]

- (b) New single-family, duplex, and multi-family subdivisions shall be required to install an opaque vinyl fence, masonry wall or landscape berm along all perimeter boundaries abutting arterial and collector roadways. The fence, wall or berm shall be required in addition to any landscape buffer planting required by this chapter. However, the fence, wall or berm shall not be required if there is a minimum of 100 feet of common area between the platted rear lot lines and the abutting roadway. This requirement may also be waived or reduced by the Administrative Official in situations where the grade difference between an arterial or collector roadway and the rear yard of a lot and the required right-of-way landscape buffer provides sufficient screening for the rear yard.
- (1) The opaque fence, masonry wall or landscape berm shall be installed by the developer prior to the issuance of the first certificate of occupancy.
 - (2) The opaque fence, masonry wall or landscape berm shall be located in common area. The opaque fence, masonry wall or landscape berm shall be installed and set back a minimum of three feet from the platted rear lot lines to provide sufficient space for installation and maintenance. The three-foot setback may be reduced if justification is provided for the use of alternative materials or construction methods that do not require a three-foot setback for installation or maintenance. The alternative materials and construction methods shall comply with all other requirements of this code.
 - (3) If an opaque fence or masonry wall is required, then it shall be installed behind the required landscape buffer so that the landscaping fronts onto the adjacent roadway.
 - (4) If a landscape berm is utilized in lieu of an opaque fence or masonry wall, then the berm shall be designed to provide equivalent opaque screening as would a masonry wall or opaque fence.
 - (5) The homeowners' association for the development or phase of the development shall be primarily responsible for maintaining the fence, wall or landscaped berm.

[No changes to subsections (c) through (g)]

SECTION 3: The City Council of the City of Port Orange hereby amends Section

1, Chapter 16 of the Land Development Code, to read as follows:

Chapter 16 - MISCELLANEOUS REGULATIONS
Section 1: - Accessory uses and structures.

[No changes to subsections (a) through (d)]

- (e) *Outside storage.* Outside storage of new and used equipment and materials shall be regulated as follows.

[No changes to subsection (1) or (2)]

- (3) *Commercial uses.* Outside storage of equipment and materials shall be permitted only when associated with a commercial use and located in designated areas approved for such display as part of a development plan, or as part of a building permit, if the required right-of-way landscape buffer is provided. Additional restrictions are specified below.

- ~~(a) Display of landscape or garden supplies, outdoor recreational equipment, and lawn equipment shall be located in designated areas approved for such display as part of a development plan.~~
- ~~(b) Display of new and used motor vehicles, boats, recreational vehicles, mobile homes and other such vehicles shall be located in designated areas approved for such display as part of a development plan.~~
- (ae) Storage of licensed and operable motor vehicles, boats, recreational vehicles, tractor trailers, storage trailers and other such vehicles shall be located in designated areas approved for such storage as part of a development plan and out of view from any abutting rights-of-way, private streets, waterways and residential uses. For sites without an approved development plan otherwise operating in compliance with this code, storage of such vehicles shall be located on a part of the site out of view from any abutting rights-of-way, private streets, waterways and residential uses.
- ~~(d) Display setups of products customarily used outdoors such as pools, spas, lawn furniture, concrete fixtures and other similar items shall be limited to one of any one product or model.~~
- (be) Outdoor display and/or storage may be permitted in conjunction with special sales events such as those permitted under ~~section 18-77~~ Chapter 58, Article III, Code of Ordinances, and other uses when permitted by special exception or approved as part of a development plan.
- (cf) Licensed and inoperable motor vehicles awaiting repair may be stored within screened areas on the site of motor vehicle repair facilities and motor vehicle service centers, provided that no such vehicle shall be stored for more than 28 consecutive days.

[No changes to subsection (4) or (f)]

SECTION 4: The City Council of the City of Port Orange hereby amends Sections 1 and 27, Chapter 17 of the Land Development Code, to read as follows:

Chapter 17 - ZONING DISTRICT REGULATIONS

Section 1: - In general.

- (a) Dimensional requirements for each zoning district, except ~~the NP and GPU~~ districts, are specified in the table in section 27 of this chapter, entitled "schedule of dimensional requirements."

[No changes to subsections (b) through (h)]

[No changes to Sections (2) through (26.5)]

Section 27: - Schedule of dimensional requirements.

District	Minimum Living Area/D.U. (Sq. Ft.)	Minimum Lot Area/D.U.	Minimum Lot Width (Ft.)	Maximum Building Coverage	Minimum Open Space	Minimum Building Setback (Ft.)			Maximum Height
						Front	Side	Rear	
<u>GPU</u>	<u>-</u>	<u>10,000</u>	<u>125</u>	<u>40%</u>	<u>20%</u>	<u>D</u>	<u>10*</u>	<u>25*A</u>	<u>60***</u>

Notes to schedule of dimensional requirements:

A = Rear and side yard setbacks on GPU and industrial lots abutting railroad right-of-way may be reduced to zero feet, where approved as part of an overall site development plan.

[No changes to B through J]

* ~~Commercial-Non-residential~~ building setbacks adjoining residential zoning shall be equal to or greater than building height.

**Multifamily buildings of greater than 25 feet in height shall have a building setback equal to or greater than the building height.

***Maximum height is limited to 35 feet if the property abuts single-family or mobile home zoning districts.

SECTION 5: All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed to the extent of such conflict.

SECTION 6: The provisions of this Ordinance shall become and be made a part of the Land Development Code of the City of Port Orange and the Sections of this

Ordinance may be renumbered or re-lettered to accomplish such intention. The Code codifier is granted liberal authority to codify the provisions of this Ordinance.

SECTION 7: 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 8: 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: _____
Shannon K. Balmer, Assistant City Attorney



STAFF REPORT

CASE NO. 21-25000003

LDC Amendment/ Chapters 3, 13, 16 and 17

REQUEST:	Amendments to Chapters 3, 13, 16 and 17 of the Land Development Code (LDC) that include clarifications and minor changes that are simple clean-up items that make the code more efficient to use.
APPLICANT:	City of Port Orange
STAFF CONTACT:	Penelope Cruz, Planning Manager (386) 506-5671
STAFF RECOMMENDATION:	Approval
PLANNING COMMISSION:	Recommended Approval 6-0 (May 27, 2021)
CITY COUNCIL:	June 15, 2021

Introduction

Staff has been updating the Land Development Code (LDC) in phases over the past several years. Prior amendments included updates to sign regulations, the “green” building initiative, erosion control, floodplain management, updates to Building Code references, county-wide Traffic Impact Analysis standards, school concurrency, Construction Standards modifications, fire impact fees, site plan and subdivision regulations, removal of select uses from the Ridgewood Corridor zoning district, zero lot line homes in the R-2D zoning district, microbreweries, architecture requirements, economic development – Ridgewood targeted businesses, tree preservation and others.

Proposed Amendments

The proposed amendments to Chapters 3, 13, 16 and 17 of the Land Development Code (LDC) are intended to improve and update the content of the existing code, as part of an on-going maintenance effort. The proposed amendments include clarifications and minor changes that are simple clean-up items that make the code more efficient to use, support the City’s redevelopment efforts, or address problems or issues encountered when applying the code.

Amendment #1: Exemptions to Required Development Order [Chapters 3]:

The proposed amendment would allow for the approval of a building addition less than or equal to 500 square-feet to a non-residential building through a building permit instead of requiring a site development plan and building permit. The proposed exemption would only apply if the building addition is less than or equal to 500 square-feet and the site has sufficient existing site improvements (parking, stormwater, irrigation, utilities, etc.). As part of the building permit review, compliance with all requirements in the City’s Land Development Code, Florida Building Code, Florida Fire Prevention Code, and other applicable codes would be reviewed and required to be met.

Allowing for a building addition less than or equal to 500 square-feet on a site with sufficient site improvements (parking, stormwater, irrigation, utilities, etc.) to be approved through a building permit is anticipated to assist in the redevelopment of existing buildings by removing a financial barrier to redevelopment. Recently, there have been inquiries to redevelop existing buildings and sites within the City, but one of the deterrents is if an existing building needs additional space to support a new use or existing use and the necessary site improvements are in place but the LDC requires a full site development plan. As Port Orange continues to shift toward the redevelopment of existing non-residential buildings and sites, the proposed amendment would assist, specifically the area of the City east of Nova Road including the Ridgewood corridor.

The LDC currently provides a list of development activities that can be completed with an approved building permit and do not require a site development plan to be prepared. The development activities that are allowed through just a building permit include: addition to a dwelling unit, construction of an accessory structure on a residential lot, demolishing of a structure, alteration of an existing non-residential structure that does not enlarge the effective size or capacity of the structure, construction of a fence, wall, or sign on a developed lot, construction of agricultural accessory structures, resurfacing of a parking lot, removal of trees or vegetation or changing of grade, and installation of an antenna on a communication tower. The proposal is to include a building addition less than or equal to 500 square-feet to the list of development activities exempt from a site plan and can be approved through the building permit review process to verify compliance with all applicable codes.

Amendment #2: Clarification of Subdivision Roadway Landscape Buffer Requirements [Chapter 13]:

In 2012, the LDC was amended (ORD. 2012-16) to add a requirement for new residential subdivisions to install an opaque vinyl fence, masonry wall or landscape berm along all perimeter boundaries abutting arterial and collector roadways in addition to the required landscape buffer planting, unless there is a minimum of 100 feet of common area between the platted rear lot lines and the abutting roadway.

The intent of the 2012 amendment was to create a uniform buffer or wall/fence that would be visible from an adjacent roadway and screen the rear yards of the residential lots abutting a roadway. However, in some cases the grade elevation between the roadway and a residential lot along with the LDC required landscape buffer will provide sufficient screening, without the addition of a berm or an opaque fence or wall. The proposed amendment adds a provision that the requirement for a berm, or opaque fence or wall adjacent to a collector or arterial roadway for a new residential subdivision may be reduced or waived by the Administrative Official in situations where the LDC required buffer and grade difference between an arterial or collector roadway and the rear yard of a lot provides sufficient screening of the rear yards.

Amendment #3: Amendment to Commercial Outdoor Storage Requirements [Chapter 16]:

The LDC currently allows areas for outdoor storage of garden supplies, outdoor recreational equipment (e.g. bicycles, kayaks, paddle boards, etc.), lawn equipment, motor vehicles, boats, recreational vehicles, and mobile homes on a commercial site when associated with a permitted commercial use. However, the designated outdoor storage area on a commercial site for the items listed above is required to be identified on an approved site plan. The

requirement to prepare and process a site plan can be costly for a business, especially smaller mom and pop businesses located along Ridgewood Avenue. The proposed amendment adds a provision to allow commercial outdoor storage areas to be established through a building permit subject to the required right-of-way landscape buffer existing on the subject property or installation of the landscape buffer is part of the proposed improvements associated with establishing the outdoor storage area.

The current commercial outdoor storage area location requirements in the LDC that would apply to reviewing a site plan would not change. If the proposed amendment is approved, the same requirements would apply when reviewing a building permit for an outdoor storage area on a commercial site, such as the screening requirement and that outdoor storage be, “out of view from any abutting rights-of-way, private streets, waterways and residential uses.” Requests received typically pertain to outdoor storage areas being located on existing paved or gravel areas on a site and do not typically require additional pavement. Requests that involved adding pavement may still require a site plan to address stormwater requirements.

Allowing an outdoor storage area for a commercial use to be established through a building permit will allow staff to verify compliance with the LDC without adding the additional expense for a property owner or tenant to have an engineer prepare an site plan to identify the area on a commercial site where outdoor storage can be located. The proposed amendment does not change the allowed items associated with commercial uses that can be stored outdoor along with the locational and screening requirements for commercial outdoor storage areas in the LDC

Amendment #4: Dimensional Requirements for the Government/Public Use (GPU) Zoning District [Chapter 17]:

The proposed amendment would establish dimensional requirements (setbacks, height, open space, building coverage, etc.) for the Government/Public Use (GPU) zoning district. Currently, there are no dimensional requirements listed in the LDC for the GPU zoning district as there are for other city standard zoning districts. Therefore, when a development is proposed on property zoned GPU, staff has historically applied the dimensional requirements from a compatible or nearby zoning category. The GPU zoning district is typically utilized for government facilities, schools, parks, and houses of worship and currently makes up about +/- 1,300 acres or about 7.2% of land within the city limits. The proposed dimensional requirements for the GPU zoning district are comparable to the dimensional requirements for the Professional Office (PO), Commercial Industrial (CI), and Light Industrial (LI) zoning districts, which are comparable zoning districts with regards to permitted uses and development intensity allowed and currently developed within the GPU zoning district.

Figure 1. Dimensional Requirements Comparison

District	Minimum Living Area/D.U. (Sq. Ft.)	Minimum Lot Area/D.U. (Sq. Ft.)	Minimum Lot Width (Ft.)	Maximum Building Coverage (%)	Minimum Open Space (%)	Minimum Building Setback (Ft.)			Maximum Height
						Front	Side	Rear	
PO	-	10,000	125	30	30	D	10*	25*	35
CI	-	22,500	150	40	20	D	15*	25*A	45
LI	-	20,000	150	50	15	D	25*	25*A	60

GPU	-	10,000	125	40	20	D	10*	25*A	60***
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* Non-residential building setbacks adjoining residential zoning shall be equal to or greater than building height

***Maximum height is limited to 35 feet if the property abuts single-family or mobile home zoning districts.

A = Rear and side yard setbacks on GPU and industrial lots abutting railroad right-of-way may be reduced to zero feet, where approved as part of an overall site development plan.

D = The required front yard setback is equal to the right-of-way landscape buffer.

Providing listed dimensional requirements for the GPU zoning district will provide transparency and clarity to property owners and residents as it relates to the dimensional requirements (setbacks, height, open space, building coverage, etc.) for property zoned GPU or being rezoned to GPU and reduce possible inconsistency in applying dimensional requirements for property zoned GPU.

Recommendation

Staff recommends approval of the amendments to Chapters 3, 13, 16 and 17 of the Land Development Code (LDC).

Attachments

Exhibit 1 - Proposed LDC Amendments to Chapters 3, 13, 16 and 17 (see Ordinance Exhibit)



CITY COUNCIL AGENDA ITEM

REQUESTED COUNCIL MEETING DATE 6/15/2021

Consent item: No

SUBJECT: (G16) First Reading – Ordinance No. 2021-16 – Rezoning/3704 Nova Rd.
(Case No. 21-60000001)

DEPARTMENT: Community Development

GOAL: 3 - Quality of Life 4 - Economic Development

RECOMMENDED MOTION: Move to approve Ordinance No. 2021-16, rezoning approximately ±5.55 acres from Planned Unit Development (PUD) to Highway Commercial (HC).

SUMMARY: Planning Commission Action: Recommended Approval 6-0 (May 27, 2021)

The McCarthy Family, LLC, property owner/applicant, is requesting to rezone the ± 5.55-acre subject property from Planned Unit Development (PUD) to Highway Commercial (HC). The property is located along the west side of Nova Road, south of Herbert Street and north of Samms Avenue. The rezoning request is a shift from the negotiated PUD zoning district to a conventional zoning district that uses the Land Development Code (LDC) to provide development regulations.

The requested HC zoning district designation is compatible with the current Commercial Future Land Use on the subject property and consistent with the adjacent properties. Until 2007, the subject property was zoned Highway Commercial (HC) and Community Commercial (CC). In 2007, the Nova Bella Piazza PUD was approved by the City and the MDA established the framework to develop a mixed-use project with a maximum of 40,000 square feet of commercial tenant space and a maximum of 20 residential dwelling units. In 2009, the MDA for the Nova Bella Piazza PUD expired and currently the subject property does not have an active MDA to provide permitted uses or dimensional and development regulations. Therefore, in order for the property owner to develop the subject property, it must first be rezoned to a conventional zoning category listed in the LDC, or a new MDA needs to be adopted.

If approved, the property owner intends to develop the subject property as a motor vehicle, recreational vehicle, and boat storage facility. The property owner does not anticipate deviating from the requirements in the LDC, therefore, the property owner selected to use a standard zoning district and meet the requirements in the LDC including landscape buffers, parking, building setbacks, tree preservation, infrastructure, compatibility with adjoining commercial and multi-family properties, and traffic concurrency. The property owner believes that following the list of permitted uses in the HC zoning district and the development requirements in the LDC is a more efficient and

transparent process to develop the site.

As part of any future site development, site plans and/or building permits will be required to be submitted for staff review to verify all LDC and Florida Building Code requirements are met, such as landscape buffers, parking, building setbacks, tree preservation, and infrastructure, to ensure compatibility with adjoining properties, and that adequate public facilities and services are available.

The staff report is attached for more information.

Project No.: N/A

Funding Account No.: N/A

Presenter: Penelope Cruz, Tim Burman

ATTACHMENTS:

1.	Ordinance 2021-16 with exhibits	Ord 2021-16.pdf
2.	Staff Report -3704 Nova - HC Rezoning Revised	Staff Report -3704 Nova - HC Rezoning Revised.pdf

Penelope Cruz

Created/Initiated - 5/27/2021

Tim Burman

Approved - 5/27/2021

Shannon Balmer

Approved - 6/2/2021

Wayne Clark

Approved - 6/3/2021

Robin Fenwick

Final Approval - 6/3/2021

ORDINANCE NO. 2021-16

AN ORDINANCE OF THE CITY OF PORT ORANGE,
VOLUSIA COUNTY, FLORIDA, REZONING PROPERTY
CONSISTING OF APPROXIMATELY ±5.55 ACRES FROM
PLANNED UNIT DEVELOPMENT (PUD) TO HIGHWAY
COMMERCIAL (HC); AUTHORIZING REVISION OF THE
OFFICIAL ZONING ATLAS; AND PROVIDING AN
EFFECTIVE DATE.

WHEREAS, ±5.55 acres of the property located at 3704 Nova Road to be rezoned from Planned Unit Development (PUD) to Highway Commercial (HC); and

WHEREAS, a public hearing was held following public notice as prescribed by ordinance; and

WHEREAS, the Planning Commission has by a majority vote recommended approval of the proposed rezoning; and

WHEREAS, the City Council has approved by a majority vote of the members present the rezoning of the described property; and

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 does hereby rezone ±5.55 acres of the property located at 3704 Nova Road to be rezoned from Planned Unit Development (PUD) to Highway Commercial (HC), more particularly described in **Exhibit “1”**, attached hereto.

Section 2. The City Council of the City of Port Orange does hereby approve, authorize and direct the revision of the City's Official Zoning Atlas to show the classification for the areas as hereby rezoned as shown on **Exhibit “2”**, attached hereto.

Section 4. This ordinance shall become effective 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: _____
Shannon K. Balmer, Assistant City Attorney

Exhibit 1

PARCEL 1:

The Easterly 200 feet, West of Truck Route, SR #415, of Lot 4, Block 24, excepting the Southerly 325.5 feet thereof and except portion deeded to the State of Florida Department of Transportation, Map of Dun-Lawton, according to the map or plat thereof as recorded in Deed Book M, Page 187, Public Records of Volusia County, Florida.

PARCEL 2:

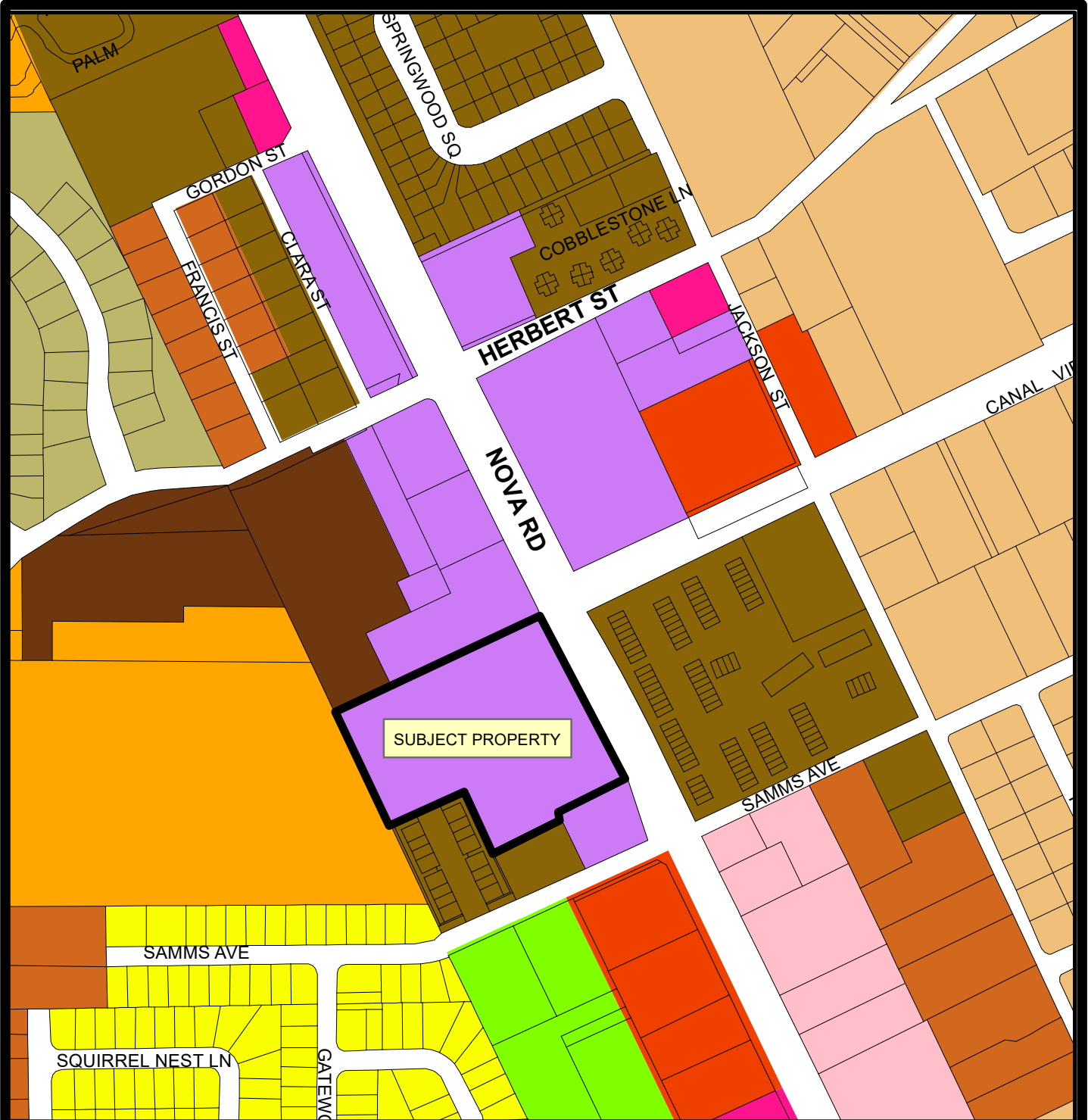
Lot 4, Block 24, except the Southerly 325.5 feet and except the Easterly 200 feet, Westerly of Nova Road (Truck Route), Map of Dun-Lawton, according to the map or plat thereof as recorded in Deed Book M, Page 187, Public Records of Volusia County, Florida, excepting a 20 foot easement along the North side of Lot 4.

PARCEL 3:

Lot 1, except the East 5.97 feet as measured on the North Line, Stoudt Subdivision, according to the map or plat thereof as recorded in Plat Book 42, Page 165, Public Records of Volusia County, Florida.

Along with:

The Northerly 17.5 feet of the Southerly 335 feet of the Westerly 200 feet of Lot 4, Block 24, Dunlawton Subdivision, per the map or plat thereof recorded in Deed Book "M", Page 298, Public Records of Volusia County, Florida.



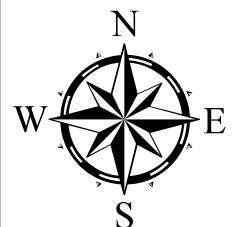
ZONING

- | | |
|--------------------------------|----------------------------------|
| Agriculture | R-10SF Single Family Residential |
| Community Commercial | R-2D Two Family Residential |
| Highway Commercial | R-3H Multi-Family Residential |
| Planned Commercial Development | R-3M Multi-Family Residential |
| Planned Unit Development | R-8SF Single Family Residential |
| Professional Office | Residential Mobile Home |



CITY OF PORT ORANGE

DEPARTMENT OF COMMUNITY DEVELOPMENT





REVISED STAFF REPORT

CONVENTIONAL REZONING / 3704 NOVA ROAD
CASE NO. 21-60000001

REQUEST:	Rezone ±5.55 acres from Planned Unit Development (PUD) to Highway Commercial (HC)
LOCATION:	3704 Nova Rd. (Figure 1 – Location Map)
PROPERTY OWNER/APPLICANT:	The McCarthy Family, LLP
STAFF CONTACT:	Gwen Perney, Principal Planner (386) 506-5673
STAFF RECOMMENDATION:	Approval
PLANNING COMMISSION:	Recommended Approval 6-0 (May 27, 2021)
CITY COUNCIL:	June 15, 2021

Property Overview

The subject property is currently zoned Planned Unit Development (PUD) but does not have an active Master Development Agreement (MDA) or Conceptual Development Plan (CDP). The property owner, The McCarthy Family, LLP, is requesting to rezone the subject property from PUD to Highway Commercial (HC). The rezoning request is a shift from the negotiated PUD zoning district to a conventional zoning district that uses the Land Development Code (LDC) to provide specific development regulations. If approved, development of the property will need to follow the requirements of the HC zoning district and the regulations for site plan development provided in the Land Development Code (LDC). (Figure 1 – Location Map).

Figure 1. Location Map



Discussion

The subject property is currently vacant. Prior to 2007, a gas station/convenience store was located along Nova Road and a single-family house occupied the rear portion of the property. The convenience store and single-family house were both demolished in 2007.

From 1974 to 1995, the subject property had split zoning with a majority of the property zoned commercial and the remaining portion of the property zoned multi-family. From 1995 until 2007, the subject property was zoned Highway Commercial (HC) and Community Commercial (CC). In 2007, the Nova Bella Piazza PUD was approved by the City and the MDA established the framework to develop a mixed-use project with a maximum of 40,000 square feet of commercial tenant space and a maximum of 20 residential dwelling units. In 2009, the MDA for the Nova Bella Piazza PUD expired and currently the subject property does not have an active MDA to provide permitted uses or dimensional and development regulations. Therefore, in order for the property owner to develop the subject property, it must first be rezoned to a conventional zoning category listed in the LDC, or a new MDA needs to be adopted.

According to the property owner, the request to rezone the subject property to the HC zoning category is to assist in the development of the subject site. If the rezoning is approved, the property owner intends to develop the subject property as a motor vehicle, recreational vehicle, and boat storage facility. The property owner does not anticipate deviating from the requirements in the LDC, therefore, the property owner selected to use a standard zoning district and meet the requirements in the LDC including landscape buffers, parking, building setbacks, tree preservation, infrastructure, compatibility with adjoining commercial and multi-family properties, and traffic concurrency. The property owner believes that following the list of permitted uses in the HC zoning district and the development requirements in the LDC is a more efficient and transparent process to develop the site.

Access to the property is available along Nova Road. Any proposed access drives off Nova Road must be reviewed and approved by FDOT during the site plan review process. Water and sewer are available to service the property. As part of any future site development, the applicant will be required to submit a site plan for staff review, to meet all architecture, landscaping, traffic generation, site development and infrastructure requirements of the City's LDC.

The HC zoning district permits typical commercial uses commonly found along an arterial roadway and not adjacent to single-family residential areas such as: retail stores, restaurants, personal services (hair salon, barber shop, nail salon, retail dry cleaning, etc.) bars, boat and motor vehicle sales, truck, trailer and automobile rental, game/recreation facilities, hotels/motels, and motor vehicle and boat storage, offices, health/exercise clubs, convenience store/gas station, banks, and similar uses. If the property is rezoned to HC and the current property owner does not develop the site as a motor vehicle, recreational vehicle, and boat storage facility, the proposed use of the subject property will need to be a permitted use in the HC zoning district.

Compatibility with Surrounding Uses and Zoning

The rezoning request was reviewed according to the criteria established in Chapter 3, Section 7 of the Land Development Code (LDC) in terms of consistency with the Comprehensive Plan and the surrounding land uses and zoning.

The proposed HC zoning district is appropriate for this location and is compatible with the surrounding properties. Table 1 summarizes the land use and zoning of the adjacent properties. The subject property is located along a major arterial roadway and adjacent to existing

commercial properties currently zoned HC, properties with higher-density multi-family zoning designations, and an RV campground (Figure 2 – Current and Proposed Zoning Map).

Table 1. Surrounding Land Uses and Zoning

Direction	Existing Land Use	FLU Designation	Zoning District
North	Commercial (Boulevard Tire)	<i>Commercial</i>	Highway Commercial (HC)
	Vacant Residential	<i>Urban High Density Residential (8-16 u/a)</i>	High-Density Multi-Family Residential (R-3H)
South	Commercial (Auto Service Center)	<i>Commercial</i>	Highway Commercial (HC)
	Single-Family Residential house	<i>Urban High Density Residential (8-16 u/a)</i>	Medium-Density Multi-Family Residential (R-3M)
	Multi-Family Residential (Oak Cove Villas)	<i>Urban High Density Residential (8-16 u/a)</i>	Medium-Density Multi-Family Residential (R-3M)
East	Multi-Family Residential (Canal View Condos)	<i>Urban High Density Residential (8-16 u/a)</i>	Medium-Density Multi-Family Residential (R-3M)
West	Nova Family Campground	<i>Urban High Density Residential (8-16 u/a)</i>	Residential Mobile Home (RMH)

Figure 2. Current and Proposed Zoning Map



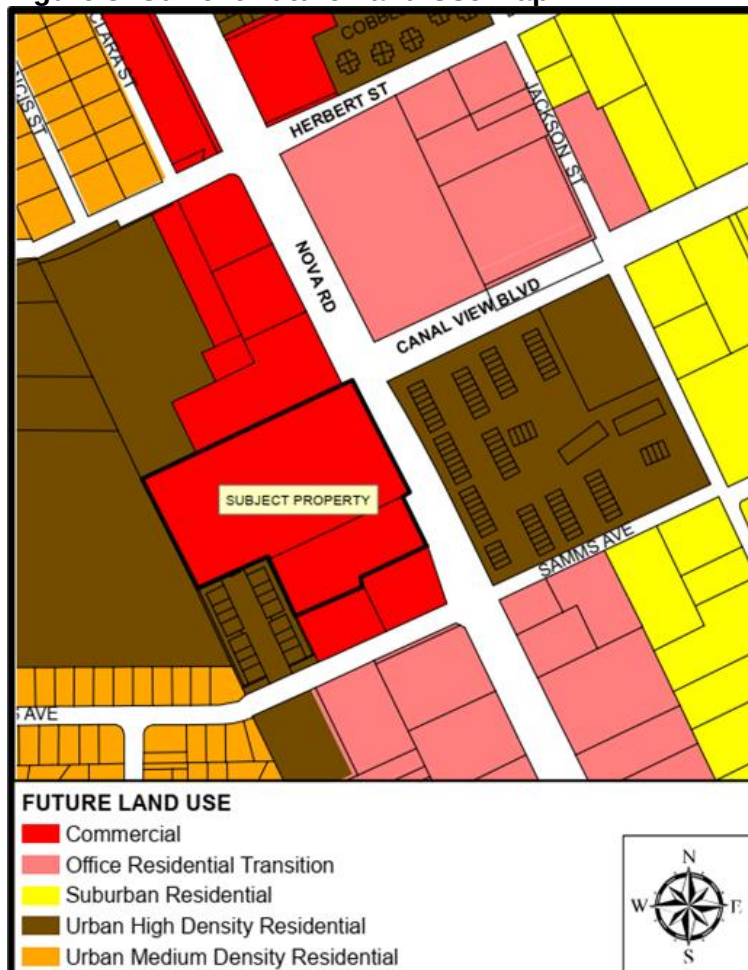
The current PUD zoning district is intended to provide a flexible approach for unique and innovative land development proposals, which would otherwise not be permitted by this code. Because the property owner intends to develop the site in compliance with the LDC and does not anticipate deviating from the requirements in the LDC, the property owner selected to use the standard HC zoning district and meet the requirements in the LDC. All future development plans (site plan or subdivision) submitted will require a detailed technical review by the Development Review Committee (DRC) to determine all requirements in the LDC are met.

Consistency with Comprehensive Plan

The proposed rezoning is generally consistent with the pertinent Goals, Objectives, and Policies of the City's Comprehensive Plan and is compatible with adjacent properties. The subject property is currently designated with the Future Land Use Category *Commercial*, along with the adjacent properties along Nova Road.

The proposed HC zoning district is consistent with the subject property's current *Commercial* Future Land Use (FLU) designation. (Figure 3 – Future Land Use Map). The *Commercial* FLU designation is generally characterized by uses that provide for the retail sale of items and provision of services to the general public. Based on compatibility with adjacent uses and availability of infrastructure, the requested zoning is appropriate for this location and it is consistent with the existing FLU designation.

Figure 3. Current Future Land Use Map



Public Notice

On April 30, 2021, staff posted the property notifying the public of the proposed rezoning. As of May 28, 2021, there have been no phone calls or other inquiries on the proposed rezoning. According to the LDC, a neighborhood meeting was not required for the proposed rezoning as the property does not abut any single-family zoning districts.

Staff Recommendation

Staff recommends **approval** of the request to rezone ±5.55 acres from Planned Unit Development (PUD) to Highway Commercial (HC).

Attachments:

Exhibit 1 – List of Permitted Uses for the HC zoning district

Exhibit 1

Highway Commercial (LDC, Chapter 17, Section 22)

Permitted uses.

- (1) Adult/vocational education.
- (2) Appliance/electronic repair shops.
- (3) Athletic/sports facilities.
- (4) Auction houses.
- (5) Banks.
- (6) Bars, lounges, and night clubs.
- (7) Boat sales.
- (8) Business services.
- (9) Commercial/industrial equipment and supplies.
- (10) Convenience stores with or without fuel operations.
- (11) Equipment rental.
- (12) Financial services.
- (13) Fleet-based services.
- (14) Fortune tellers, astrologers, and palm readers.
- (15) Furniture and appliance stores.
- (16) Game/recreation facilities.
- (17) Health/exercise clubs.
- (18) Hotels/motels.
- (19) Maintenance contractors.
- (20) Medical offices/clinics.
- (21) Mobile home sales.
- (22) Motor vehicle and boat storage facilities.
- (23) Motor vehicle sales.
- (24) Motor vehicle service centers.
- (25) Motor vehicle service stations.
- (26) Offices.
- (27) Office supplies.
- (28) Pawn shops.
- (29) Personal services.
- (30) Restaurants.
- (31) Retail home building materials.
- (32) Retail sales and services.
- (33) Tattoo establishment.
- (34) Theaters.
- (35) Truck/trailer/automobile rental.

Permitted uses with special development requirements (chapter 18, section 4).

- (1) Brewery (subsection 3.7).
- (2) Community gardens (subsection 1.5).
- (3) Craft food and beverage producer (subsection 5.15).
- (4) Laundry/dry cleaning plants (subsection 9).
- (5) Microbrewery (subsection 9.57).
- (6) Taxidermy (subsection 16).

Special exception uses (chapter 18, section 3).

- (1) Mini-warehouses (subsection 10).
- (2) Motor vehicle repair facilities (subsection 13).



CITY COUNCIL AGENDA ITEM

REQUESTED COUNCIL MEETING DATE 6/15/2021

Consent item: No

SUBJECT: (H17a) City Attorney Annual Evaluation

DEPARTMENT: City Attorney

GOAL: 6 - Organizational Excellence

RECOMMENDED MOTION: N/a

SUMMARY: The City Attorney is evaluated annually in June per his employment contract. Evaluation forms have been provided to City Council and should be submitted to the City Clerk once completed.

Project No.: N/A

Funding Account No.: 0

Presenter: Matthew Jones

ATTACHMENTS:

Matthew Jones

Created/Initiated - 5/28/2021

Matthew Jones

Approved - 6/4/2021

Robin Fenwick

Final Approval - 6/4/2021
