AGENDA
PLANNING COMMISSION
CITY OF PORT ORANGE

Meeting Date: Thursday, March 22, 2018 **Time:** 5:30 PM

Type of Meeting: Regular **Location:** Council Chambers
City Hall, 1000 City Center Circle

A. CALL TO ORDER

1. Pledge of Allegiance
2. Silent Invocation
3. Roll Call
4. Election of Officers

B. DISCUSSION/ACTION

5. Consideration of Minutes
6. Case No. 18-70000001
   SPECIAL EXCEPTION/301 DUNLAWTON AVENUE

   A request by the applicant to approve a Special Exception to allow off-site parking for the office use located at 301 Dunlawton Avenue. If the Special Exception request is approved, the property owner of 301 Dunlawton Avenue is proposing to use the parking lot at the First United Methodist Church (708 Orange Avenue) as off-site parking to meet the parking requirements for the expanded office at 301 Dunlawton Avenue.

   Staff Contact: Penelope Cruz (386) 506-5671/pcruz@port-orange.org

7. Case No. 18-20000001
   SMALL-SCALE COMPREHENSIVE PLAN FUTURE LAND USE AMENDMENT/ANGLER'S COVE SUBDIVISION
   3626 South Peninsula Drive

   A request by the applicant to change the Comprehensive Plan Future Land Use (FLU) designation for ±1.3 acres from Urban High Density Residential (8-16 units/acre) to Suburban Residential (2-4 units/acre).

   Staff Contact: Penelope Cruz (386) 506-5671/pcruz@port-orange.org

8. Case No. 18-65000001
   PLANNED UNIT DEVELOPMENT (PUD) REZONING WITH MASTER DEVELOPMENT AGREEMENT (MDA) AND CONCEPTUAL DEVELOPMENT PLAN (CDP)/ANGLER'S COVE SUBDIVISION
   3626 South Peninsula Drive

   A request by the applicant to rezone a +/- 1.3-acre property from R-3H (multi-family) to Planned Unit Development (PUD), and approval of the Master Development Agreement (MDA) and Conceptual Development Plan (CDP) to establish the regulatory framework for a 5-lot single-family subdivision.

   Staff Contact: Penelope Cruz (386) 506-5671/pcruz@port-orange.org

9. Case No. 18-50000001
   SUBDIVISION PLAT & PLANS/ANGLER'S COVE SUBDIVISION
   3626 South Peninsula Drive

   A request by the applicant to approve the Final Plat and Subdivision Plans for the Angler's Cove Subdivision to create five (5) single-family lots, along with associated subdivision improvements.

   Staff Contact: Penelope Cruz (386) 506-5671/pcruz@port-orange.org

10. Case No. 18-25000002
    LDC TEXT AMENDMENT/PC-A WORKPLACE DISTRICT

    A request by the applicant to amend Chapter 17, Section 29(e) of the Land Development Code (LDC) to increase the percentage of the Planned Community-Agriculture (PC-A) Workplace District allowed to be developed as multi-family, amend the landscape buffer requirement for a multi-family development abutting single-family residential zoned property, and change the minimum living area requirement for a multi-family dwelling unit.

    Staff Contact: Penelope Cruz (386) 506-5671/pcruz@port-orange.org

11. Case No. 18-25000003
    LDC TEXT AMENDMENT/CHAPTER 17, SECTION 1

    Amendment to Chapter 17, Section 1, of the Land Development Code (LDC), to codify the City's Policy to allow agriculture uses on property rezoned to a non-agriculture zoning district for future development.

    Staff Contact: Penelope Cruz (386) 506-5671/pcruz@port-orange.org

12. Case No. 18-40000001
    SECOND AMENDMENT TO THE AMENDED AND RESTATED NOVA DEPOT PLANNED COMMERCIAL DEVELOPMENT (PCD) MASTER DEVELOPMENT AGREEMENT (MDA) AND CONCEPTUAL DEVELOPMENT PLAN (CDP)
    3730 Nova Road

    A request by the applicant to amend the Amended and Restated Nova Depot Planned Commercial Development (PCD) Master Development Agreement (MDA) and Conceptual Development Plan (CDP) to establish the framework to subdivide a commercial lot into two (2) commercial lots.

    Staff Contact: Gwen Perney (386) 506-5673/gperney@port-orange.org

13. Case No. 18-20000002
    ADMINISTRATIVE LARGE-SCALE COMPREHENSIVE PLAN FUTURE LAND USE AMENDMENT/WILLIAMSON BOULEVARD-WILLOW RUN BOULEVARD SITE
    South side of Willow Run Boulevard, east of Williamson Boulevard

    A proposed amendment to change the Comprehensive Plan Future Land Use (FLU) designation for ±34.5 acres from Urban High Density Residential (8-16 units/acre), Urban Medium Density Residential (4-8 units/acre), and Suburban Residential (2-4 units/acre) to Mixed-Use Center.

    Staff Contact: Tim Burman (386) 506-5675/tburman@port-orange.org

14. CASE NO. 18-60000001
    ADMINISTRATIVE REZONING/WILLIAMSON BOULEVARD-WILLOW RUN BOULEVARD SITE
    South side of Willow Run Boulevard, east of Williamson Boulevard

    A proposed amendment to rezone +/- 34.5 acres from Planned Unit Development (PUD) to Mixed-Use Center (MXC) District, and +/- 5 acres from Planned Unit Development (PUD) to Community Commercial (CC).

    Staff Contact: Tim Burman (386) 506-5675/tburman@port-orange.org

C. OTHER BUSINESS

15. Commissioner Comments
16. Staff Comments

D. PUBLIC COMMENTS

E. ADJOURNMENT

ANY PERSON WHO DECIDES TO APPEAL ANY DECISION MADE BY THE **PLANNING COMMISSION** WILL NEED A RECORD OF THE PROCEEDINGS, AND FOR SUCH PURPOSE HE OR SHE MAY NEED TO ENSURE AT HIS OR HER OWN EXPENSE FOR THE TAKING AND PREPARATION OF A VERBATIM RECORD OF ALL TESTIMONY AND EVIDENCE OF THE PROCEEDINGS UPON WHICH THE APPEAL IS TO BE BASED. NOTE: 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, TO 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 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.

PLANNING COMMISSION MEETING MINUTES
CITY OF PORT ORANGE
1000 CITY CENTER CIRCLE
COUNCIL CHAMBERS
DECEMBER 14, 2017

THE REGULAR MEETING OF THE PLANNING COMMISSION of the City of Port Orange was called to order by Chairman Lance Green at 5:30 p.m.

Pledge of Allegiance

Silent Prayer

ROLL CALL:	Present:	Lance Green John Junco Newton White Thomas Jordan Mike Arminio Maria Mills-Benat Bo Bofamy
	Also Present:	Matthew Jones, Deputy City Attorney Michelle Cusella, City Clerk's Office

B. DISCUSSION/ACTION

4. Consideration of Minutes

Motion to approve the November 16, 2017 Minutes as presented was made by Commissioner Arminio, and Seconded by Commissioner Jordan Motion carried unanimously by roll call vote.

5. Case No. 17-40000005

MASTER DEVELOPMENT AGREEMENT AND CONCEPTUAL DEVELOPMENT PLAN/IN LAND WE TRUST PLANNED UNIT DEVELOPMENT
West side of the Hidden Lake Subdivision, north of the Cornerstone Grove Subdivision

A proposal to establish the In Land We Trust Master Development Agreement (MDA) and Conceptual Development Plan (CDP) for an existing Planned Unit Development (PUD) without an active MDA and CDP.

Staff Contact: Tim Burman (386) 506-5675/tburman@port-orange.org

Tim Burman, Director of Community Development, presented an overview of the proposed Master Development Agreement and Planned Unit Development plan.

Chairman Green questioned how the drainage ditch affects this property.
Mr. Burman explained that by studying the survey, Staff has indicated the proper easements that will be required in order for maintenance to occur on the property.

Commissioners questioned the road layout to access the property.
Mr. Burman explained Yorktowne Blvd. will have to be completed in order for the owner to access this land.

Motion to approve was made by Commissioner Arminio, and Seconded by Commissioner Mills-Benat. Motion carried 6-1 with Commissioner Jordan voting no.

C. OTHER BUSINESS

6. Commissioner Comments-

Commissioners congratulated Tim Burman on the Community Development Director promotion.

Vice Chairman White asked Staff about the storage facility land behind Mellow Mushroom being available for sale on the MLS.
Mr. Burman explained what was approved 3-2 by Council was the subdivision of the property.

7. Staff Comments-

Jake Johansson, City Manager, asked the Commission to accept electronic copies of the agenda packets and materials for all future Planning Meetings starting in January 2018. Commissioners agreed on going paperless, unless it is a plat/plan that is easier to view on paper.

D. PUBLIC COMMENTS- There were none.

E. ADJOURNMENT 6:08 p.m.

_____
Chairman Lance Green

STAFF REPORT

Special Exception for Off-site Parking
at 708 Orange Avenue for 301 Dunlawton Avenue
CASE NO. 18-70000001

REQUEST:	To allow off-site parking at 708 Orange Avenue for an office at 301 Dunlawton Avenue.
PROPERTY OWNERS:	Occasioni Del Sole, LLC/Raymond M. Donadio, Jr.; First United Methodist Church
APPLICANT:	The Performance Group, Inc./Joseph Hopkins, P.E.
LOCATION:	301 Dunlawton Ave. and 708 Orange Ave. (Figure 1)
STAFF CONTACT:	Penelope Cruz, Principal Planner (386)506-5671
STAFF RECOMMENDATION:	Approval
PLANNING COMMISSION DATE:	March 22, 2018

OVERVIEW

Joseph Hopkins, applicant for the property owner, Raymond M. Donadio, Jr., has applied for a Special Exception to use a portion of the First United Methodist Church parking lot (708 Orange Avenue) to meet the parking requirement for a professional office located at 301 Dunlawton Avenue. Off-site parking is permitted in all non-residential zoning districts by Special Exception and both properties have non-residential zoning [Ch. 18, Sec. 3(b)(15) of the LDC]. According to the Land Development Code (LDC), "A special exception is a use that would not be appropriate without restriction, but which, if controlled as to number, area, location or relation to the surrounding area, would promote the public health, safety and general welfare."

According to the applicant, the off-site parking is to allow the professional office located at 301 Dunlawton Avenue to expand. A site plan to expand the existing building has been submitted and is being reviewed by staff. The proposed building expansion would increase the square-footage of the office from ±1,210 square-feet to ±2,040 square-feet and require 17 parking spaces. Due to the size and configuration of the 301 Dunlawton Avenue property, only 9 parking spaces are available on-site. The applicant's Special Exception request is to use 8 parking spaces in the First United Methodist Church parking lot to meet the parking requirement for 301 Dunlawton Avenue. The applicant states that the off-site parking spaces are about 150 feet away from the office building and would only be used by employees during typical work hours on weekdays when there is less demand for parking spaces at the church. As part of the site improvements to 301 Dunlawton Avenue, a sidewalk in the Lafayette Street right-of-way will be constructed between the off-site parking spaces and 301 Dunlawton Avenue.

Redevelopment on this site would be an improvement for the overall Dunlawton Village District area of the Port Orange Town Center Community Redevelopment Area (CRA). However, to support redevelopment on some sites in the CRA, flexibility in development regulations are typically necessary for sites with restrictions to redevelop. Redevelopment of this site will add to the number of projects that have been constructed in this area and

will enhance the aesthetics and vitality of the area (e.g. Atlantic Marine, Volusia Pediatrics, and Regions Bank).

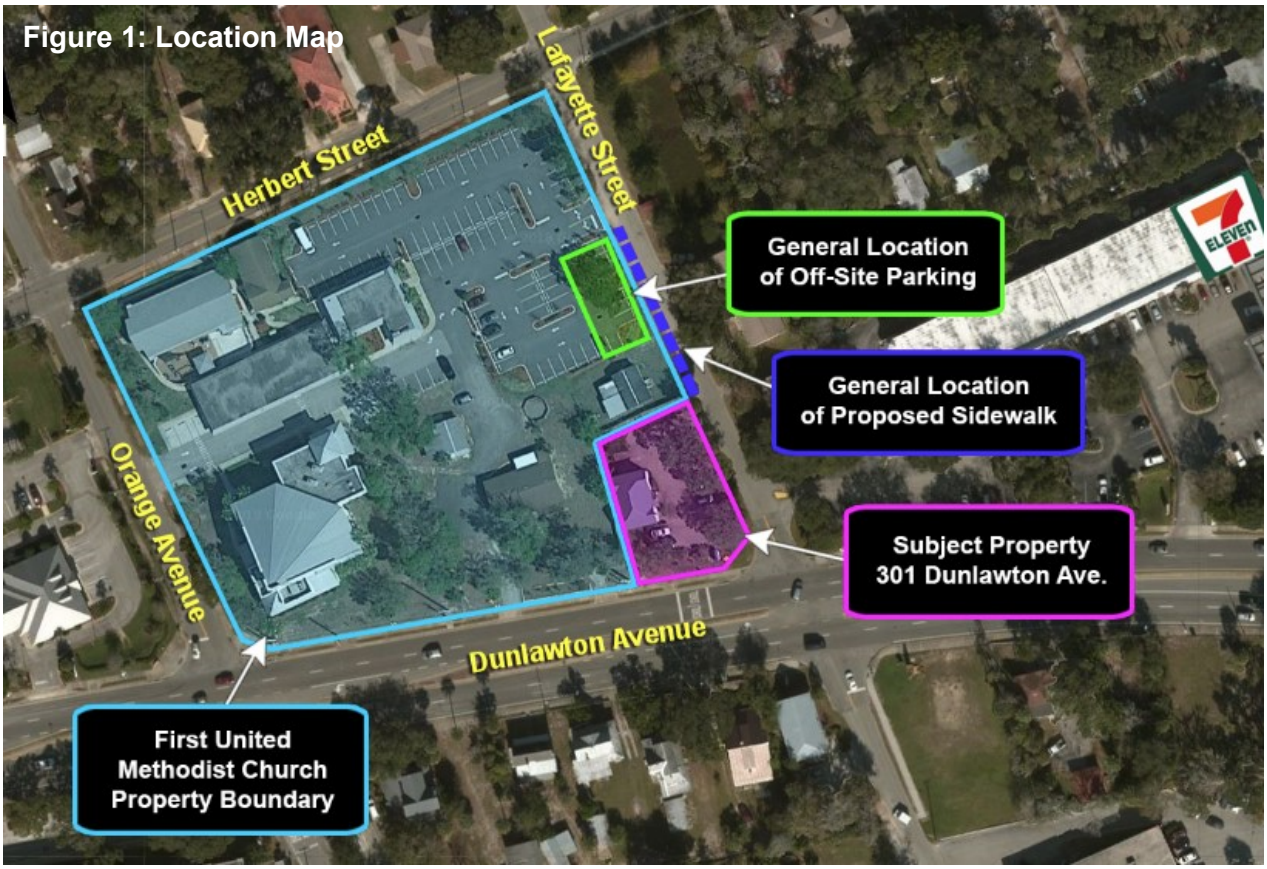


Figure 1: Location Map

SPECIAL EXCEPTION DEVELOPMENT STANDARDS

All Special Exception uses are required to meet a uniform list of development standards, encompassing traffic generation, landscaping and buffering, and others [Ch. 18, Sec. 2(d)(2) of the LDC]. The following are the development standards and how they apply to the request.

<u>Standard Special Exception Development Standards:</u>

1. *Traffic generation and access for the proposed use shall not adversely impact adjoining properties and the general public safety.*

   The off-site parking at the First United Methodist Church will be accessed by the entrance drives on Lafayette Street or Orange Avenue. The intent of the off-site parking is to have employees park off-site and clients park on-site. While some additional traffic may be added to the area due to the office expanding, the traffic pattern is not expected to impact the neighborhood beyond current conditions.

   If the Special Exception is approved, a 4-ft. sidewalk from the office building site (301 Dunlawton Avenue) to the off-site parking spaces will be built in the Lafayette Street right-of-way in conjunction with the proposed office expansion. According to the applicant, the proposed sidewalk will be located to meet the requirements of the LDC.

The Applicant has stated that the proposed off-site parking will be used specifically for employees and the hours of operation for the office and church do not conflict.

2. *Off-street parking, loading and service areas shall be provided and located such that there is no adverse impact on adjoining properties, beyond that generally experienced in the district.*

   There are no anticipated adverse impacts on adjoining properties. The subject property has historically been used as a parking lot for the First United Methodist Church. In 2015, the parking lot was converted from a grass/gravel parking lot to a paved lot with delineated parking spaces, loading areas, and driveways. As part of the site plan for 301 Dunlawton Avenue, a sidewalk will be installed in the Lafayette Street right-of-way to provide a route between the off-site parking spaces and the office building. As part of the site plan for the office expansion at 301 Dunlawton Avenue the parking lot and loading/service areas will be developed in accordance with the LDC.

3. *Required yards, screening or buffering, and landscaping shall be consistent with the district in general and the specific needs of the abutting land uses.*

   As part of the 2015 site plan, the First United Methodist Church installed all required vehicular screening hedge and landscape buffers around the perimeter of the parking lot, along with internal landscape islands. The landscaping that was required as part of the 2015 parking lot improvements has been maintained. As part of the site plan for the office expansion at 301 Dunlawton Avenue, the landscape buffers will be developed in accordance with the LDC for screening the surrounding properties and rights-of-way.

4. *Architectural and signage treatments shall comply with the general provisions applicable to permitted uses in the district, to the greatest extent possible, and be sensitive to surrounding development.*

   The addition to the existing building, accessory structures, wall/fence and site furnishings at 301 Dunlawton Avenue will meet the architectural requirements of the LDC. A formal review of the architectural design for the building addition at 301 Dunlawton Avenue will occur with the site plan to verify compliance with the LDC. Any proposed signage will have to meet the regulations set forth by the LDC. No exterior changes are proposed to the First United Methodist Church buildings.

5. *Size, location or number of special exception uses in an area shall be limited so as to maintain the overall character of the district as intended by this code.*

   The only other Special Exception use in the area is the child care center located at the First United Methodist Church. The proposed off-site parking Special Exception use would utilize existing parking not typically used on weekdays and would not change the character of the area.

In addition to the standard development requirements for all Special Exceptions, the request must also comply with additional development requirements specific to off-site

parking [Ch. 18, Sec. 3(b)(15) of the LDC]. The following are the additional development requirements for off-site parking and how they apply to the request.

Specific Off-Site Parking Development Requirements [Ch. 18, Sec. 3(b)(15) of the LDC]:
(a) The location of off-site parking spaces shall adequately serve the use for which they are intended. The following factors shall be considered:

(1) *Proximity of the off-site parking spaces to the use that they will serve*.

The off-site parking area is located approximately 150-feet from the office use at 301 Dunlawton Avenue.

(2) *Ease of pedestrian access to the off-site parking spaces*.

Pedestrians would access the off-site parking spaces from the proposed Lafayette Street sidewalk. As part of the site improvements for 301 Dunlawton Avenue, a sidewalk in the Lafayette Street right-of-way will be constructed to connect the off-site parking spaces and the office site. The sidewalk will be constructed to meet current code requirements.

(3) *Whether the off-site parking spaces are compatible with the use intended to be served, e.g., off-site parking is not ordinarily compatible with high turnover uses such as retail*.

The principal use requesting the off-site parking is a professional office. According to the Applicant, the professional office is a low intensity use and the off-site parking spaces will be used as employee parking. Clients of the professional office would park in the on-site parking spaces.

(b) *The location of off-site parking spaces shall not create unreasonable:*

(1) *Hazards to pedestrians:* Pedestrians would use the sidewalk installed in the Lafayette Street right-of-way as part of the site improvements to 301 Dunlawton Avenue that will connect the off-site parking spaces to the office site (301 Dunlawton Avenue). The sidewalk will be constructed to meet current code requirements. Hazards to pedestrians are not anticipated.

(2) *Hazards to vehicular traffic*: The First United Methodist Church parking lot has a driveway access on Lafayette Street and Orange Avenue. The off-site parking spaces will be primarily accessed from Lafayette Street. The existing parking lot is a paved lot with delineated parking spaces, loading areas, and driveways that meet current code requirements. Hazards to vehicular traffic are not anticipated.

(3) *Traffic congestion:* Traffic congestion is not anticipated to increase in this area. Traffic associated with the church is typically seen on the weekends and evenings and would not conflict with traffic associated with daily operations of the office use at 301 Dunlawton Avenue. Traffic associated with the daycare facility at the church is not anticipated to be impacted.

(4) *Interference with access to other parking spaces in the vicinity:* Interference with access to other parking in the vicinity is not anticipated.

(c) *The developer shall furnish a written agreement or attach off-site parking by deed to the parcel to which such parking is designed to serve, approved in form by the City Attorney, assuring the continued availability of the off-site parking facilities for the use they are intended to serve*.

The Applicant will be required to prepare an agreement to assure the continued availability of the off-site parking lot for the use it is intended to serve. The agreement will need to be reviewed and approved by the City Attorney prior to this request being heard by City Council.

RECOMMENDATION

Staff recommends approval of the Special Exception to allow off-site parking at 708 Orange Avenue for 301 Dunlawton Avenue, subject to:

1. An agreement to assure the continued availability of the off-site parking lot for the use it is intended to serve being reviewed and approved by the City Attorney prior to this request being heard by City Council; and
2. The sidewalk between the off-site parking spaces and 301 Dunlawton Avenue being installed and approved by the City.

STAFF REPORT

Small-Scale Comprehensive Plan Future Land Use Amendment/Angler's Cove
CASE NO. 18-20000001

REQUEST:	Change the Comprehensive Plan Future Land Use (FLU) designation for ±1.3 acres from *Urban High Density Residential (8-16 units/acre)* to *Suburban Residential (2-4 units/acre)*.
LOCATION:	3626 S. Peninsula Drive (Figure 1 - Location Map)
APPLICANT/OWNER:	Robert C. Hellermann, Jr.
STAFF CONTACT:	Penelope Cruz, Principal Planner (386) 506-5671
STAFF RECOMMENDATION:	Approval
PLANNING COMMISSION DATE:	March 22, 2018

INTRODUCTION

The subject property is ±1.3-acres. The proposed amendment is to change the Future Land Use (FLU) designation from *Urban High Density Residential (8-16 units/acre)* to *Suburban Residential (2-4 units/acre)*. The subject property is located at 3626 S. Peninsula Drive, south of the Admiralty Club condominium.

Figure 1 – Location Map

If the proposed FLU Amendment is approved, the applicant intends to rezone the property from R-3H (multi-family residential) to Planned Unit Development (PUD) and establish a Master Development Agreement (MDA) and Conceptual Development Plan

(CDP) to develop a 5-lot single-family subdivision with a gross density of 3.8 units per acre. The proposed 5-lot single-family subdivision and density is consistent with the proposed *Suburban Residential (2-4 units/acre)* Future Land Use designation which allows for the development of single-family lots at 4 units per acre or less.

DISCUSSION

The following discussion will examine the proposed amendment, the impacts of the proposed amendment, and the existing environmental conditions.

PROPERTY OVERVIEW

The subject property is currently developed with two non-conforming single-family homes. As part of the proposed subdivision, the two existing single-family homes will be demolished.

The surrounding existing land uses, Future Land Use designations, and Zoning classifications are identified in Table 1. The current adopted and proposed FLU designation for the subject property and the current FLU designation of the adjacent properties is identified on Exhibit A. The current and proposed zoning classification of the subject property and adjacent properties is identified on Exhibit B.

Table 1. Surrounding Land Uses and Zoning

Direction	Existing Land Use	FLU Designation	Zoning District
North	Multi-family condominium	Urban High Density (8-16 units/acre)	PUD
South	Single-family home	Volusia County Urban Low Impact (0.2-4 units/acre)	Volusia County R-3 Urban Single-family Residential
East	Single-family home	Urban High Density (8-16 units/acre)	R-3H Multi-Family Residential
West	Halifax River	N/A	N/A

PROPOSED AMENDMENT

The proposed amendment is to change the FLU designation for ±1.3 acres from *Urban High Density Residential (8-16 units/acre)* to *Suburban Residential (2-4 units/acre)*. The following tables identify the current adopted and proposed FLU designations by acreage (Table 2) and maximum allowable intensity (Table 3).

Table 2. Current & Proposed Future Land Uses – Acreage by Category

	Current FLU (acres)	Proposed FLU (acres)	Net Change in FLU (acres)
Urban High Density Residential (8-16 units/acre)	1.3	0	- 1.3
Suburban Residential (2-4 units/acre)	0	1.3	+1.3
TOTAL ACREAGE	1.3	1.3	0

Table 3. Current & Proposed Future Land Uses – Maximum Density/Intensity by Category

	Current FLU	Proposed FLU	Net Change in FLU
	[Theoretical Maximum Dwelling Units]		
Urban High Density Residential (8-16 units/acre)	21	0	-21
Suburban Residential (2-4 units/acre)	0	5	+5
TOTAL	21	5	-16

INFRASTRUCTURE IMPACT ASSESSMENT

In accordance with standard practice from the Florida Department of Economic Opportunity (DEO) and other review agencies, an impact comparison analysis of the proposed amendment has been completed based upon the theoretical maximum development potential under the currently adopted future land use designation versus the proposed designation. The following seven public facilities and services were examined (Table 4).

1. Transportation
2. Sanitary Sewer
3. Potable Water
4. Solid Waste
5. Stormwater Drainage
6. Recreation
7. Schools

Table 4. Impact Analysis (Theoretical Max.)

Development Variable	Current Future Land Use	Proposed Future Land Use	Net Change
	Theoretical Maximum		
Dwelling Units	21	5	-16
P.M. Peak Hour Trips/Daily Trips[2]	14/140	5/48	-9/-92
Sanitary Sewer (gallons/day)[3]	3,360	800	-2,560
Potable Water (gallons/day)[4]	3,780	900	-2,880
Solid Waste (lbs./day)[5]	151	35	-116
Recreation/Open Space (acres/person)[7]	0.33	0.08	-0.25

Notes:

1. Population: 2.25 persons per household (per 2010 Census)
2. Transportation: ITE Trip Generation Manual, 9th Edition: 1.02 PM peak hour trips per unit and 9.52 daily trips per unit, Single-family (210); 0.67 PM peak hour trips per unit and 6.65 daily trips per unit, apartments (220)
3. Sanitary Sewer: 160 gallons per day per Equivalent Residential Unit
4. Potable Water: 180 gallons per day per Equivalent Residential
5. Solid Waste 3.21 pounds per person per day
6. Stormwater Drainage: LOS standard = 25-year, 24-hour event. Drainage system is required to be designed to meet the requirements of the Land Development Code during subdivision or site plan review.
7. Rec. & Open Space: 7 acres/1,000 persons (0.007 acres/person)

The proposed amendment results in decreased impacts to public infrastructure and services based on the theoretical maximum impact analysis.

TRANSPORTATION

A decrease in the number of daily trips and P.M. peak hour trips is likely as a result of the proposed FLU amendment. Based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition, the proposed *Suburban Residential* FLU designation could generate ±5 P.M. peak hour trips and ±48 daily trips based on the theoretical maximum development of 5 single-family homes.

According to the latest traffic counts for the area, there is sufficient roadway capacity for the traffic that could be generated by the proposed development of the subject property.

Table 1. Roadway Capacity

Roadway Segment:	Adopted Level-of-Service Standard	Maximum Capacity	Vehicles per Day	Remaining Capacity	Volume to Capacity Ratio
Dunlawton Ave. (Peninsula Dr. to Ridgewood Ave.)	D	39,800	30,500	9,300	76.63%
Demotte Ave. (Peninsula Dr. to Cardinal Blvd.)	E	13,640	6,270	7,370	46%

Source: Volusia County 2016 Traffic Counts (most current available data)

No deficiencies have been identified on the existing and future roadway network in this area in the short term (2020) or the long-term (2030).

In addition, the Comprehensive Plan Coastal Zone Management Element (Policy 4.5.2) requires that amendments to the Future Land Use Map for areas within the Coastal High Hazard Area (CHHA) not increase the clearance time for evacuation of the population above 12 hours. The proposed amendment decreases density in the CHHA and would not negatively impact evacuation time.

SANITARY SEWER

The City has available sewer capacity to accommodate the proposed land use change. The City's adopted level-of-service (LOS) standard for sanitary sewer is 160 gallons per day per Equivalent Residential Unit. Using this standard, the proposed FLU designation would generate a net decrease of 2,560 gallons of waste water per day based on the theoretical maximum development analysis.

POTABLE WATER

The City has available well and Consumptive Use Permit (CUP) capacity to serve the proposed land use change (Exhibit C). The City's adopted LOS standard for potable water is 180 gallons per day per Equivalent Residential Unit. Using this standard, the proposed FLU designation would demand a net decrease of 2,880 gallons of potable water per day based on the theoretical maximum development analysis.

SOLID WASTE COLLECTION

There is available capacity at the landfill to address the City's solid waste disposal needs. Solid waste generated within the City of Port Orange is delivered to the Volusia County landfill, a 3,000-acre Class I landfill with a projected life span to the year 2050. The City's adopted LOS standard for solid waste is 3.21 pounds per person per day. Using this standard, the proposed FLU designation would generate a net decrease of 116 pounds per day of solid waste based on the theoretical maximum development analysis.

STORMWATER DRAINAGE

There is no anticipated impact to the City's drainage system from the proposed land use change. Stormwater management in the City of Port Orange deals with both quality and quantity. The City's adopted LOS standard for stormwater is the 25-year, 24-hour storm event. More specifically, the stormwater facilities must be capable of treating and conveying the runoff from such a storm without causing flooding of adjacent properties or polluting any receiving water bodies. In addition, the Comprehensive Plan and Land Development Code require that there be no net loss of stormwater retention function as a result of development. In other words, a given parcel must have the same ability to store and discharge water after development as it does before development occurs. Any future development of the property will be required to address stormwater retention on the property in accordance with these City standards.

RECREATION AND OPEN SPACE

According to the City's 2017 Concurrency Management Report, the City has an excess of 68 acres of parkland beyond the currently adopted level-of-service requirement for

parkland. There is available capacity at existing park facilities to accommodate the proposed land use change.

SCHOOLS

The Volusia County School District determined that the proposed development of 5-lot single-family subdivision is exempt from School Concurrency and that capacity exists in the schools for the estimated students anticipated to be generated by the proposed FLU amendment (Exhibit D).

ENVIRONMENTAL CONDITIONS

According to the project engineer, there are no wetlands or surface waters, or critical habitats within the subject property. No listed species were observed on the property. No previously recorded cultural resources have been found on the property either. Any subsequent development will be required to comply with all federal, state, regional and local regulations pertaining to the protection and preservation of valuable environmental resources.

REVIEW CRITERIA AND STAFF FINDINGS

1. *Consistency with the City's Comprehensive Plan.*

   Staff finding: The proposed FLU amendment is generally consistent with the pertinent Goals, Objectives, and Policies of the City's Comprehensive Plan. The proposed FLU category is compatible with adjacent parcels and reduces the allowable density in the Coastal High Hazard Area. All public facilities have adequate capacity to accommodate the proposed amendment.

2. *Compatibility with land use designations for adjacent parcels and neighborhoods.*

   Staff finding: The proposed FLU amendment is compatible with the adjacent properties. Compatibility is defined in the Comprehensive Plan as a condition in which dissimilar land uses can co-exist in relative proximity to one another in a stable fashion over time, such that neither use is unduly negatively impacted by the other. The subject property is located at the end of South Peninsula Drive and adjacent to a multi-family condominium to the north, single-family homes to the east and south, and the Halifax River to the west (see Table 1 – page 2).

3. *Impacts on public facilities/infrastructure/services.*

   Staff finding: The proposed amendment results in decreased impacts to public infrastructure and is not anticipated to have any negative impacts on public infrastructure, facilities or services.

4. *Whether the amendment increases the clearance time for evacuation of the population in the Hurricane Vulnerability Zone above twelve hours.*

   Staff finding: The subject property is located within the Hurricane Vulnerability Zone. The proposed amendment reduces the allowable density in the Coastal High Hazard Area and will not have any negative impact the clearance time for evacuation of the population in the Hurricane Vulnerability Zone.

5. *Whether the amendment discourages the proliferation of urban sprawl.*

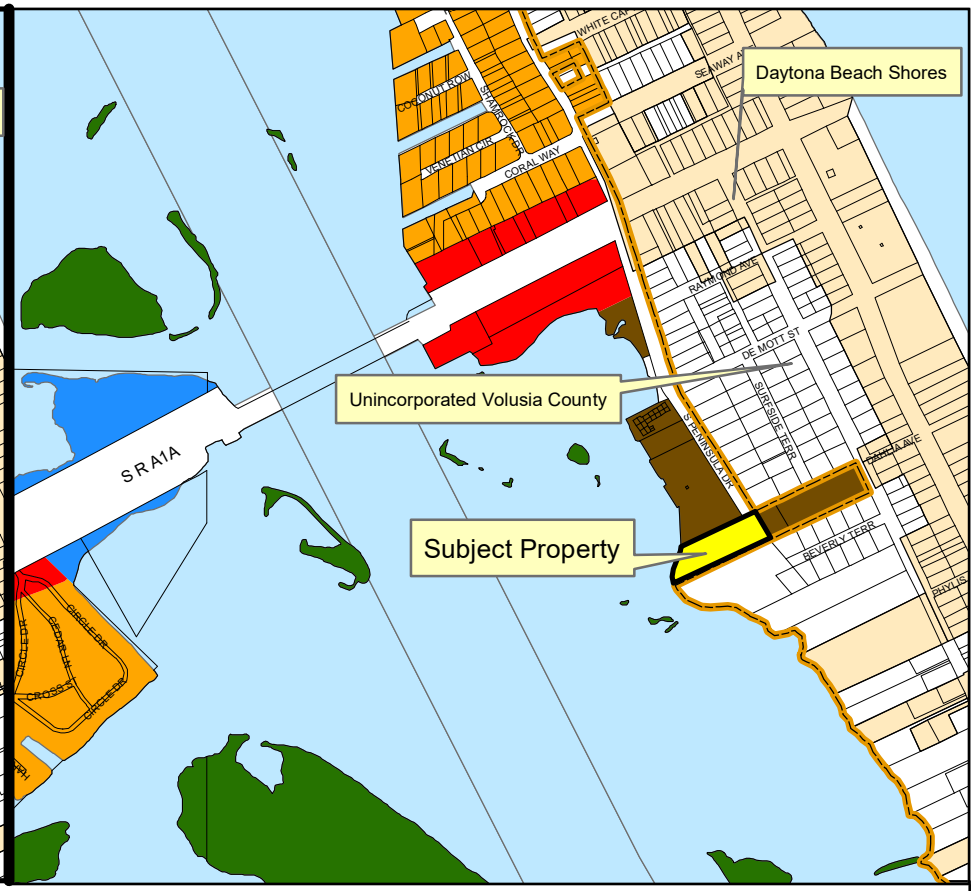
   Staff finding: The proposed amendment will not encourage sprawl. The amendment area is adjacent to existing development, with access to existing infrastructure.

PUBLIC NOTICE
In February 2018, staff posted the property notifying the public of the proposed amendment. The proposed amendment has also been advertised in the *New-Journal* pursuant to Florida Statues.

STAFF RECOMMENDATION
Staff recommends **approval** of the request to change the FLU designation of ±1.3 acres from *Urban High Density Residential (8-16 units/acre)* to *Suburban Residential (2-4 units/acre)*, and authorization for staff to send the amendment to the required review agencies.

ATTACHMENTS
Exhibit A – Current and Proposed Future Land Use
Exhibit B – Current and Proposed Zoning
Exhibit C – SJRWMD Potable Water Availability Worksheet
Exhibit D – School District Review Letter

Current Future Land Use



Proposed Future Land Use

- Public/Institutional
- Conservation
- Suburban Residential (2-4 Units/Acre)
- Urban Medium Density Residential (4-8 Units/Acre)
- Urban High Density Residential (8-16 Units/Acre)
- Commercial

CITY OF PORT ORANGE 1867 FLORIDA

EXHIBIT A

CASE NO. 18-20000001 and 18-65000001

DEPARTMENT OF COMMUNITY DEVELOPMENT

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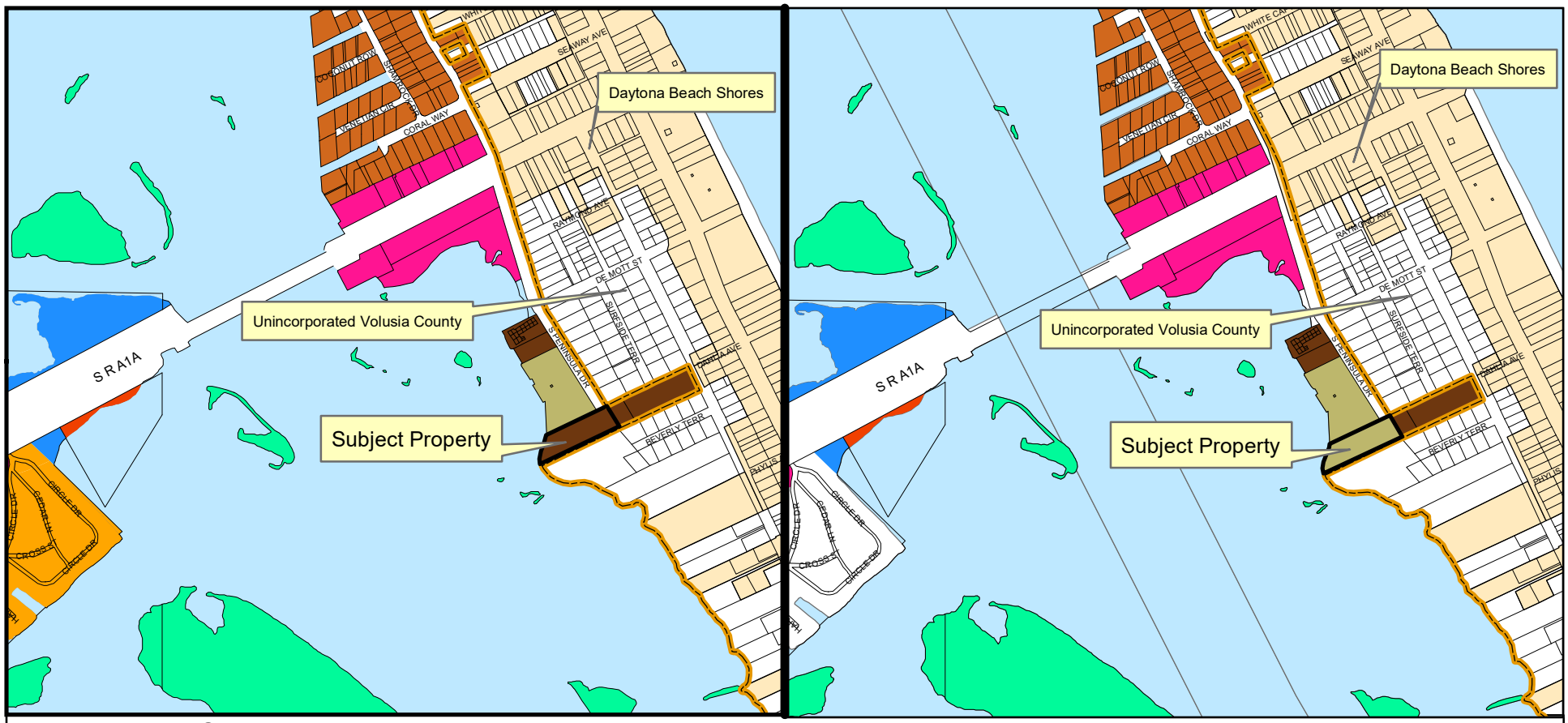

Current Zoning

- GPU Government/Public Use
- F-C Flood Plain-Conservation
- R-8SF Single Family Residential
- R-3H Multi-Family Residential

Proposed Zoning

- PUD Planned Unit Development
- PCD Planned Commercial Development
- CC Community Commercial
- Daytona-Beach_Shores

EXHIBIT B

CASE NO. 18-20000001 and 18-65000001

DEPARTMENT OF COMMUNITY DEVELOPMENT

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EXHIBIT C

St. Johns River Water Management District
Potable Water Availability Worksheet

This worksheet is for use by local governments submitting comprehensive plan amendments to determine the availability of potable water resources to serve proposed development. Instructions and St. Johns River Water Management District (SJRWMD) staff contact information are attached.

1. General Information

Date: March 8, 2018 Case No. 18-20000001(Angler's Cove)
Contact name: Penelelope Cruz/ Kenny Ho, P.E. Phone: 386-506-5671 E-mail: pcruz@port-orange.org
Local government: City of Port Orange
Potable water supplier: City of Port Orange

2. Infrastructure Information

Water treatment plant permit number: 3641044 Permitting agency: FDEP
Permitted capacity of the water treatment plant(s): 15 million gallons a day (mgd)
Total design capacity of the water treatment plant(s): 15 mgd
Are distribution lines available to serve the property? Yes ☒ No ☐
If not, indicate how and when the lines will be provided: _____

Are reuse distribution lines available to serve the property? Yes ☒ No ☐
If not, indicate if, how and when the lines will be provided: _____

3. SJRWMD Consumptive Use Permit (CUP) Information

CUP number: 8595 Expiration date: 6/1/22
Total CUP duration (years): 20
CUP allocation in last year of permit: 8.97 MGD (annual average)
Current status of CUP: In compliance ☒ Not in compliance ☐
Allocations to other local governments: Ponce Inlet as a whole sale customer; Daytona Beach Shores & Volusia County are partially served as retail customers; No specific water usage amount has been recorded or agreed for these local goverments
Reserved capacity: 0.12 MGD (Based on a estimated 666 ELUs that are permitted but unbuilt at 180 GPD/ELU.) Total committed capacity built and unbuilt is 7.24 MGD - based on 40,239 ELUs at 180 GPD/ELU.

4. Consumptive Use Analysis

Designate mgd ☒ or mgy ☐

A. Current year CUP allocation:	8.74
B. Consumption in the previous calendar year:	6.01
C. Reserved capacity ☐ or growth projection ☒ (check the one used):	0.18
D. Projected consumption by proposed comprehensive plan amendment areas	0.00
E. Amount available for all other future uses (A – B – C – D = E):	2.55

If the amount in E is zero or a negative number, explain how potable water will be made available for future uses: Please note for "C" - the growth projection is based a historical growth rate of 0.15 MGD - 0.18 MGD calculated from monthly operating reports data (MORs, DEP form 17.1.122 (40)) of the City's Garnsey Water Plant.

This worksheet is available electronically at ***http://www.sjrwmd.com/programs/outreach/local_gov/***

EXHIBIT D

FACILITIES SERVICES

3750 Olson Drive, Daytona Beach, Florida 32124
PHONE: 386/734-7190 FAX: 386/506-5056

James T. Russell
Superintendent of Schools

School Board of Volusia County

Mrs. Linda Cuthbert, Chairman
Dr. John Hill, Vice-Chairman
Mrs. Melody Johnson
Mr. Carl Persis
Mrs. Ida D. Wright

February 12, 2018

Robert C. Hellerman, Jr.
Intracoastal Lots, LLC
855 Old Sugarmill Rd.
Port Orange, FL 32129

Agent: Brad Bauknecht
Newkirk Engineering Inc.
1230 N. US Highway 1, Suite 3
Ormond Beach, FL 32174

RE: Angler's Cove Subdivision – Port Orange
School Concurrency Case #18-01-22-001-X

Dear Mr. Robert C. Hellerman:

The School District has reviewed the project information for the 1.3+/- acre parcel located off Peninsula Dr. near the intersection of Dunlawton Boulevard and Peninsula Drive in the City of Port Orange. The information provided in the school concurrency application and site plan indicates a subdivision of five (5) single family lots.

Please be advised that pursuant to the executed First Amendment to Interlocal Agreement for Public School Facility Planning, a subdivision of less than ten (10) lots receives an exemption status from school concurrency. Regardless of the exemption status, all residential projects are required to be reported to the school district for inclusion in the School Concurrency Management System. Thank you for submitting as required.

If you should have additional questions or require more information, please feel free to contact me at extension 50810.

Sincerely,

Eric A. Kozielski 12 FEB 2018

Eric A. Kozielski
Planning & GIS Specialist

Cc: James Russell, Superintendent of Schools
Penelope Cruz, City of Port Orange
Project File

STAFF REPORT

PUD Rezoning and Angler's Cove Master Development Agreement and Conceptual Development Plan
CASE NO. 18-65000001

REQUEST:	Rezone ±1.3 acres from R-3H to Planned Unit Development (PUD) and approve the Angler's Cove Master Development Agreement (MDA) and Conceptual Development Plan (CDP).
LOCATION:	3626 S. Peninsula Drive (Figure 1 - Location Map)
APPLICANT/OWNER:	Robert C. Hellermann, Jr.
STAFF CONTACT:	Penelope Cruz, Principal Planner (386) 506-5671
STAFF RECOMMENDATION:	Approval
PLANNING COMMISSION DATE:	March 22, 2018

INTRODUCTION

The applicant requests to rezone ±1.3-acres from R-3H (multi-family residential) to Planned Unit Development (PUD) and approval of the Angler's Cove Master Development Agreement (MDA) and Conceptual Development Plan (CDP). If approved, the applicant intends to develop the subject property as a 5-lot single-family lot residential development along with associated subdivision improvements. The subject property is located at 3626 S. Peninsula Drive, south of the Admiralty Club condominium (Figure 1 - Location Map).

Figure 1 – Location Map

According to the Land Development Code (LDC), the proposed MDA constitutes a zoning document for the subject property, establishing permitted uses and certain development requirements. A MDA and CDP does not grant approval of any specific development itself, but rather establishes parameters for how the property can be developed. Some flexibility from the standard code requirements is offered with the goal of creating a better quality project. The CDP is an exhibit to the proposed MDA that includes the general location and size of the residential lots, parking, landscape buffers, screening, utilities, and drainage areas.

Specific subdivision development requirements listed in the MDA and LDC, such as the type and location of trees and shrubs in the landscape buffers, location and size of the stormwater pipes, and water, sewer, and reclaim lines, roadway design, and other subdivision requirements are finalized with the subdivision plans. The subdivision plan is typically a 30 to 50-page set of technical documents that are signed and sealed by a licensed engineer and contain extensive engineering and construction details. The subdivision plans for the Angler's Cove Subdivision are required to be designed to meet the requirements of the LDC and the proposed MDA.

CONSISTENCY WITH COMPREHENSIVE PLAN

The applicant has applied to change the Future Land Use (FLU) designation of the property from *Urban High Density Residential (8-16 units/acre)* to *Suburban Residential (2-4 units/acre)*. The proposed rezoning to PUD and the MDA and CDP are consistent with the type of land use and density allowed by the *Suburban Residential* FLU designation. The proposed FLU amendment will reduce the maximum density from 21 units to 5 units. General infrastructure capacity for the proposed FLU amendment of the ±1.3 acres is evaluated in the staff report for the FLU amendment (Case No. 18-20000001).

The overall density of the project is consistent with the *Suburban Residential* FLU designation. The proposed MDA to allow 5 single-family lots (3.8 units/acre) is consistent with the intent of the proposed future land use designation.

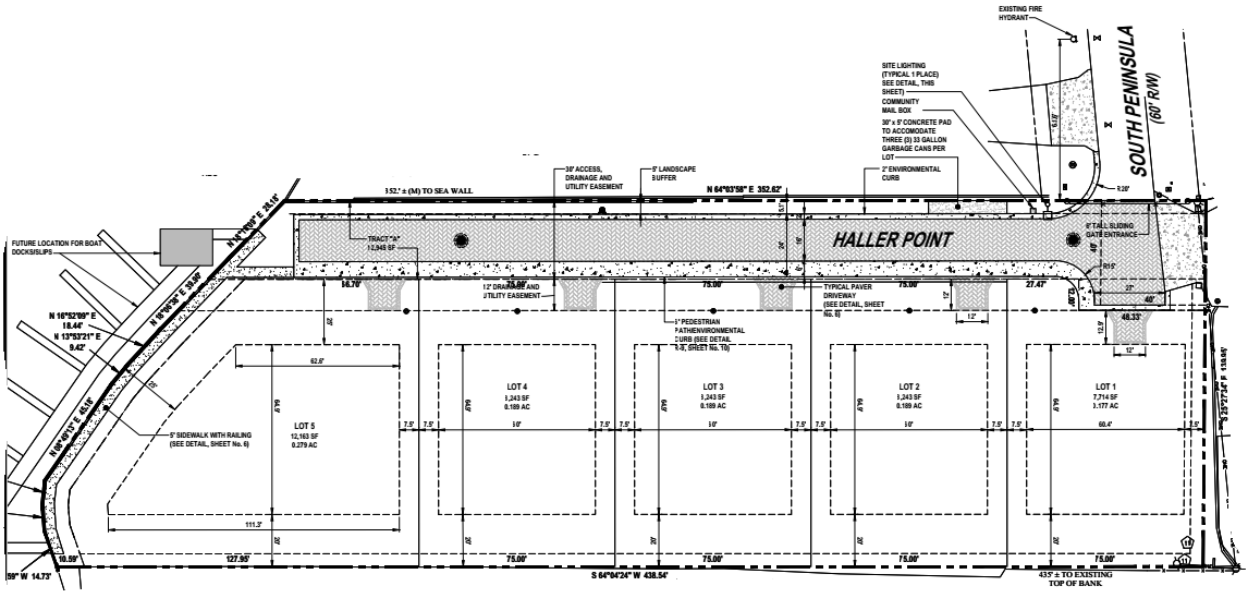
DEVELOPMENT PROPOSAL

If approved, the Angler's Cove MDA and the CDP (Exhibit C) will provide the regulatory framework for the development of the subject property with a maximum of 5 single-family lots. The following discussion will focus on the significant aspects of the proposed MDA and CDP such as general site layout, access, setbacks, lot dimensions, landscape buffers, traffic and other infrastructure capacity.

<u>General Layout</u>

The Conceptual Development Plan (CDP) shows the general lot layout for the proposed 5-lot single-family home subdivision (Figure 2 of the Staff Report and Exhibit B of the MDA). The general layout and improvements associated with this development will comply with the requirements of the Land Development Code (LDC) and the MDA.

Figure 2. Angler's Cove Conceptual Development Plan



Dimensional Building and Lot Requirements

The proposed MDA provides the dimensional requirements for the proposed residential lots for the subdivision. The proposed building setback and lot requirements in the MDA are generally consistent with City's standard R-7SF zoning district that permit single-family homes on a minimum 7,500 SF lots (Table 1). The proposed development provides the majority of its open space on the individual lots instead of in common areas. The overall amount of open space for the PUD is generally consistent with other developments, but it is allocated differently.

Table 1. Dimensional Requirements Comparison

Zoning	Minimum Lot Area	Minimum Lot Width	Maximum Building Coverage	Minimum Open Space	Front Setback	Side Setback	Rear Setback	Maximum Building Height
Angler's Cove (Proposed PUD)	7,500 SF	75'	40%	40%	25'	7.5'	20'	45'
R-7SF Single-Family Residential	7,500 SF	75'	35%	30%	25'	7.5'	20% of lot depth or 20 feet, whichever is greater	35'

Roadway and Access

The road within the development will be private and constructed to a standard on the CDP. Access to the development will be provided from Peninsula Drive via a gated entrance at the end of Peninsula Drive. A pedestrian path within the development will also be private and constructed to a standard on the CDP. There are currently no public sidewalks in the Peninsula Drive right-of-way to connect to the private pedestrian path.

Traffic

The proposed subdivision will be required to comply with the City's Concurrency Management requirements in the LDC. According to the Institute of Transportation

Engineers (ITE) Trip Generation Manual, 9th Edition, the proposed 5-lot single-family subdivision could generate ±5 P.M. peak hour trips and ±48 daily trips. The ITE Trip Generation Manual is nationally recognized for conducting site impact studies, determining on-site circulation patterns, performing management studies, and determining traffic signal timing.

Based to the daily trip generation for the proposed subdivision, the project is de minimus as it relates to transportation facilities because the trips do not affect more than one percent of the maximum volume at the adopted level-of-service for the adjacent roadways and would not cause the maximum volume on a non-hurricane evacuation route to exceed 110 percent. According to the latest traffic counts for the area, there is sufficient roadway capacity for traffic that could be generated by the proposed development.

Table 2. Roadway Capacity

Roadway Segment:	Adopted Level-of-Service Standard	Maximum Capacity	Vehicles per Day	Remaining Capacity	Volume to Capacity Ratio
Dunlawton Ave. (Peninsula Dr. to Ridgewood Ave.)	D	39,800	30,500	9,300	76.6%
Demotte Ave. (Peninsula Dr. to Cardinal Blvd.)	E	13,640	6,270	7,370	46%

Source: Volusia County 2016 Traffic Counts (most current available data)

No deficiencies have been identified on the existing and future roadway network in this area in the short term (2020) or the long-term (2030).

Open Space

The proposed MDA requires 40% private open space on each individual lot and 20% of the subject property to be developed as common open space (Tract “A” on the CDP). The proposed common open space includes the north and west landscape buffers, the paver private road and pedestrian path, and a common boat dock area.

The R-7SF zoning category, which is the most comparable conventional City zoning category to what is proposed in the PUD, requires a minimum of 30% open space for a lot and does not require common open space. The proposed PUD requires a minimum 40% of open space for each lot and provides for 20% common open space.

Tree Preservation, Landscaping, and Wetland

The proposed development will comply with the landscape and tree preservation requirements of the City's LDC. A formal review of the landscaping and tree preservation will occur with the review of the subdivision plat and plans to verify compliance with the MDA and the LDC.

The proposed MDA requires any proposed development to comply with the existing City regulations pertaining to protected wildlife species, wetlands and tree preservation. Any wetland impacts identified during subdivision plan review will require permitting and appropriate mitigation through St. Johns River Water Management District (SJRWMD).

Potable Water and Sanitary Sewer
The proposed subdivision will be served by potable water and sanitary sewer. All lots will be provided with stub-outs for utilities. The developer will construct potable water and sanitary sewer lines in accordance with the utility plan for this subdivision. Irrigation for the lots and common area will be provided by a private well.

Stormwater Management
Stormwater will be retained as generally depicted on the CDP through a stormwater conveyance system that is interconnected to a dry retention swale in the rear of the lots. The City's Comprehensive Plan and Land Development Code require that there be no net loss of stormwater retention function as a result of development. A given parcel must have the same ability to store and discharge water after development as it does before development occurs. The future development will be required to address stormwater retention on the property in accordance with City standards.

Schools
The Volusia County School District determined that the proposed development of 5-lot single-family subdivision is exempt from School Concurrency and that capacity exists in the schools for the estimated students anticipated to be generated by the PUD rezoning.

POLICY ISSUES
PUD zoning allows the developer to request flexibility from the standard code requirements. The only specific criteria in the LDC to assess the requested deviations are that that they provide for innovative site and building design and a greater public benefit. Staff recommendations on zoning matters are generally based on considerations of compatibility with adjacent uses, similar conventional City zoning districts, and consistency with the adopted Comprehensive Plan. As part of the review of this proposal, the Planning Commission and City Council will need to consider the following deviations from the LDC requested by the applicant:

1. **Open Space:** For a PUD, the LDC requires a minimum forty percent (40%) of the total project area be dedicated as open space and a minimum of twenty percent (20%) of the total project area to be established and maintained as common open space or common facilities [LDC, Ch. 17, Sec. 17(d)]. The proposed MDA provides for 40% private open space on individual lots, similar to conventional zoning, as well as the required 20% common open space.

   Instead of providing overall project area open space on a separate tract of land in the subdivision, the developer is providing the open space on the individual lots for the individual property owner to enjoy and maintain. According to the LDC, open space is defined as land within a lot retained in its natural condition or improved in a manner for the enjoyment of the person owning the lot. The R-7SF conventional zoning category, which is the most comparable conventional zoning category to what is proposed in the PUD, requires a minimum of 30% open space for a lot and does not require common open space. The proposed PUD requires a minimum 40% of open space for each lot and for 20% of the project area to be developed as common open space.

The required minimum 60% overall PUD open space (open space + common open space) does not take into account the required private open space on individual lots. This overall project area open space requirement is only required when property is rezoned to PUD and is typically only feasible on large scale phased residential PUDs (e.g. Water's Edge, Cypress Head, Royal Palm). All of the City's conventional residential zoning districts only require a minimum per lot private open space. According to the applicant, the focus was to provide additional open space on the lots for the lot owners to have larger private yards, while still providing the required 20% common open space in a context appropriate format with the boat dock facilities.

2. **Sidewalks:** The LDC requires minimum four-foot-wide concrete sidewalks be constructed along both sides of all streets [LDC, Ch. 5, Sec. 4(a)(3)(c)]. The proposed MDA provides for a private street that includes a six-foot-wide pedestrian path on one side of the street.

   According to the applicant, sidewalks do not exist along Peninsula Drive and there are no anticipated projects to construct sidewalks in this right-of-way or surrounding rights-of-way. The proposed design provides a six-foot-wide pedestrian path for the residence of Angler's Cove to access the boat dock area.

3. **Building Height:** The LDC has a 35' maximum building height for the PUD zoning district with a notation that the City may consider modifications to the dimensional requirements as part of the PUD rezoning process in order to achieve a greater public benefit [LDC, Ch. 17, Sec. 27].

   The applicant has requested a maximum building height of 45' to accommodate the 3-story custom home designs that are intended to be built in the Angler's Cove subdivision.

   According to the applicant, the existing zoning of the subject property (R-3H) allows a maximum building height of 45', so the requested maximum building height would not change from what is currently allowed. The applicant has stated that there is a public benefit in reducing the allowable density of the property from 21 multi-family units to 5 single-family homes in the Coastal High Hazard Area (CHHA), as well as allowing for custom homes with architecturally appealing designs that will provide for higher property values. In addition, the applicant states that the surrounding zoning supports building heights generally consistent with the requested 45' building height.

Table 3. Surrounding Uses and Building Height

Direction	Existing Land Use	Zoning District	Maximum Building Height
North	Multi-family condominium	PUD	70'
South	Single-family home	Volusia County R-3 Urban Single-family Residential	35'
East	Single-family home	R-3H Multi-Family Residential	45'
West	Halifax River	n/a	n/a

REMAINING COMMENTS TO BE ADDRESSED
The Staff Development Review Committee (SDRC) has reviewed this project and there are some remaining comments or policy issues that will need to be addressed prior to scheduling for City Council.

SUMMARY OF POLICY ISSUES
As part of its review of the amendment proposal, the Planning Commission and City Council will need to consider the following deviations from the LDC:

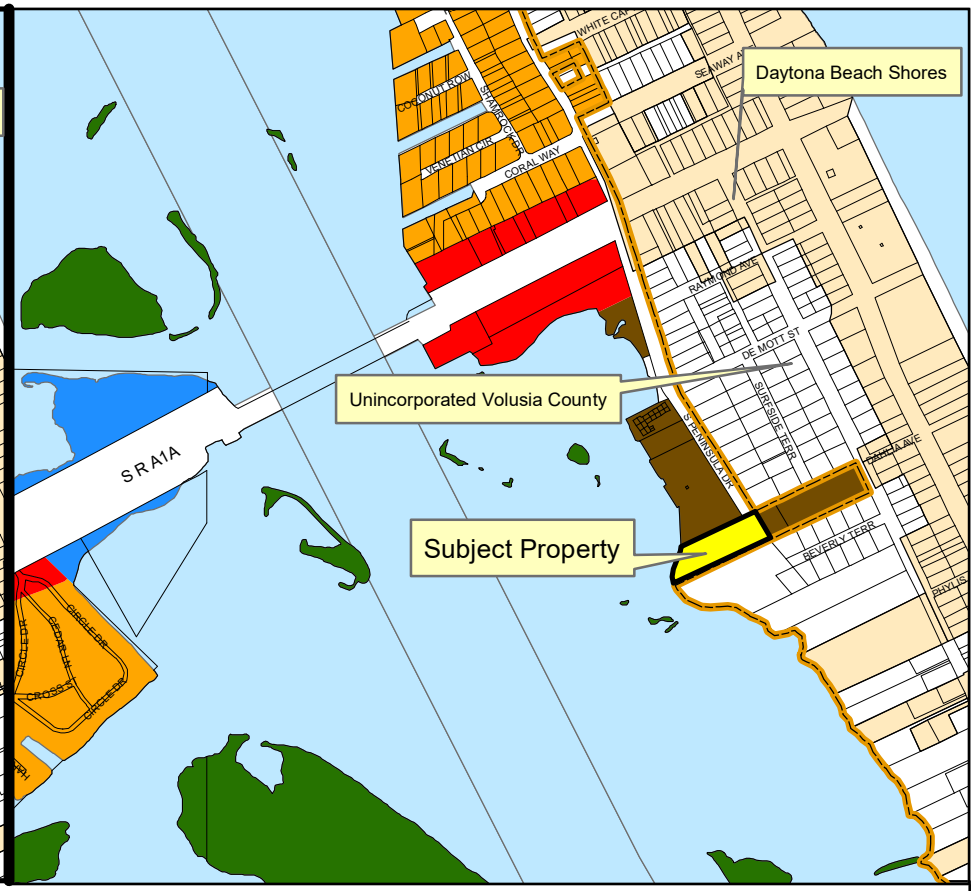
1. Allow 40% private open space on individual lots, rather than in a separate tract of land in the subdivision;
2. Allow a six-foot-wide pedestrian path on one side of the street, rather than a minimum four-foot-wide concrete sidewalk on both sides of the street; and
3. Allow a maximum building height of 45'.

RECOMMENDATION
Staff recommends **approval** of the rezoning for the Angler's Cove PUD and the Master Development Agreement and Conceptual Development Plan, subject to the following:

1. Approval of the Future Land Use amendment (Case No. 18-20000001);
2. City Council direction on the policy considerations;
3. Review and approval of the MDA and CDP by the City Attorney's Office for legal form and content; and
4. Resolution of all remaining comments prior to City Council.

ATTACHMENTS
Exhibit A – Current and Proposed Future Land Use
Exhibit B – Current and Proposed Zoning
Exhibit C – Angler's Cove PUD Master Development Agreement and Conceptual Development Plan

Current Future Land Use



Proposed Future Land Use

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- Suburban Residential (2-4 Units/Acre)
- Urban Medium Density Residential (4-8 Units/Acre)
- Urban High Density Residential (8-16 Units/Acre)
- Commercial

CITY OF PORT ORANGE 1867 FLORIDA

EXHIBIT A

CASE NO. 18-20000001 and 18-65000001

DEPARTMENT OF COMMUNITY DEVELOPMENT

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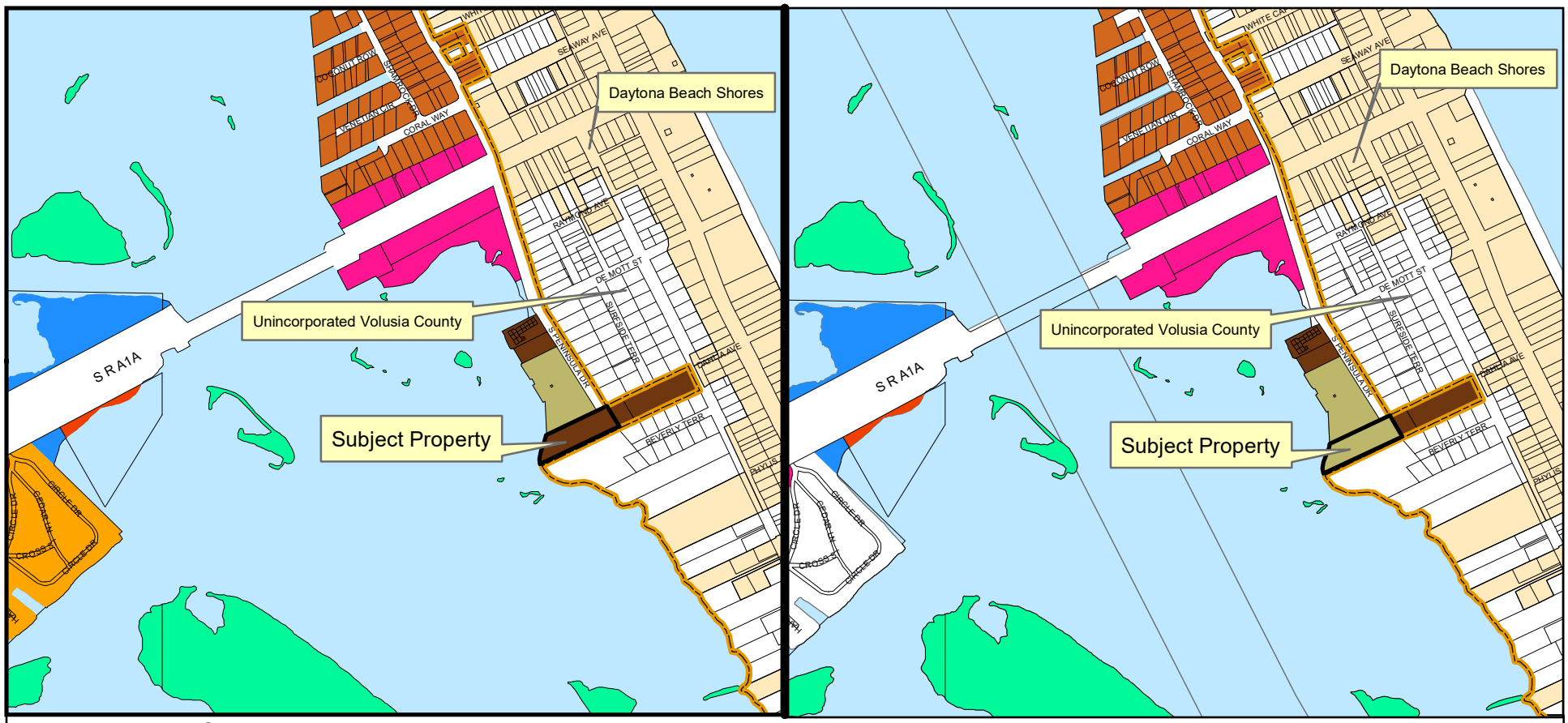

Current Zoning

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- F-C Flood Plain-Conservation
- R-8SF Single Family Residential
- R-3H Multi-Family Residential

Proposed Zoning

- PUD Planned Unit Development
- PCD Planned Commercial Development
- CC Community Commercial
- Daytona-Beach_Shores

EXHIBIT B

CASE NO. 18-20000001 and 18-65000001

DEPARTMENT OF COMMUNITY DEVELOPMENT

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ANGLER'S COVE PLANNED UNIT DEVELOPMENT

A RESIDENTIAL PUD

MASTER DEVELOPMENT AGREEMENT

City of Port Orange, a Florida municipal corporation (the "City"), and **Intracoastal Lots, LLC**, a Florida Limited Liability Corporation (the "Developer"), hereby covenant and agree, and bind their successors and assigns as follows

1. OWNERSHIP OF THE PROPERTY

This Planned Unit Development (PUD), commonly known as "Angler's Cove", involves approximately 1.318+/- acres of land which is legally described on Exhibit "A" attached hereto, and shall henceforth be referred to as the "Property". The Property is under unified ownership of Intracoastal Lots, LLC, signatory to this Agreement. Developer shall deliver to the City a certified copy in recordable form of the Statement of Authority for Intracoastal Lots, LLC. Delivery shall occur prior to approval by the City. This Agreement between the City and Developer shall revoke any and all prior development agreements applicable to the Property.

2. DEVELOPMENT CONCEPT

The Angler's Cove PUD provides for a detached, single-family residential development that protects the low to moderate-density character of the Peninsula Road area. The project provides five lots, landscape buffers and ensures that the project is compatible with the surrounding, existing neighborhoods.

3. DEVELOPMENT AGREEMENT AND CONCEPTUAL DEVELOPMENT PLAN

Development of the Property shall be controlled by the terms and provisions of this Master Development Agreement (the "Agreement") and the Conceptual Development Plan, attached hereto as Exhibit "B", for the Property which generally depicts the planned layout of private access road, lots, and other planned features or improvements to the Property and

demonstrates the lot coverage requirements available to lot owners within the PUD. Collectively, this Master Development Agreement and the Conceptual Development Plan for the Property may be referred to as the "Plan". In the event of a conflict between the terms and provisions of the Master Development Agreement and the graphic illustrations of the Conceptual Development Plan, the Master Development Agreement shall control. If the Master Development Agreement is silent regarding a particular subject or requirement, such silence shall not be construed as a conflict with the Conceptual Development Plan. Unless otherwise specifically described within the master development agreement, final development, and development permits for uses/structures within the PUD shall comply with regulations, ordinances, and resolutions in effect at the time of plan approval or permit application. The parties acknowledge that compliance with the City's Land Development Code (LDC) may necessitate modification of the Conceptual Development Plan. In the event modification to comply with the LDC is required, and the modifications to the Conceptual Development Plan are not in conflict with the textual provisions of this Agreement and any City ordinances not superseded by this Agreement, the modifications shall be deemed "minor" and may be approved without formal amendment of this Agreement. Minor modifications shall require the City Administrative Official's written approval. If the Developer is not satisfied with the suggested resolution of any problem or the decision by the City Administrative Official categorizing the modification as minor or major, the Developer may appeal the decision to the Planning Commission. Appeals from the Planning Commission may be made to the City Council.

The developer shall provide a written notice in the covenants and restrictions and in each contract for sale and purchase of lots in the Angler's Cove PUD stating as follows: Accessory structures shall not be permitted to be located in the perimeter landscape buffers established in

Section 10 of the MDA. Buildings on the lots shall not be permitted to exceed the total building lot coverage requirements established in Section 4C of the Master Development Agreement."

4. USAGE OF THE PROPERTY

A. Permitted Uses

The property shall be used for residential purposes and developed as a residential community with common open space and other buffers as specified herein. The project shall be developed for a maximum of 5 single-family, detached dwelling units for a maximum density of 3.8 dwelling units per acre. When considered in light of other housing and community choices in the vicinity, the Angler's Cove PUD will provide for a compatible residential development that is consistent with surrounding land use pattern and will protect the character of the existing residential subdivisions in the vicinity to the Angler's Cove PUD by only permitting custom-built, single-family detached dwellings.

The property has one land use classifications shown on the adopted Future Land Use Map and Official Zoning Map. A small scale Comprehensive Land Use Amendment shall be applied to reduce the density from "Urban High Density Residential" (8-16 units/acre) to "Suburban Residential" (2 – 4 units/acre). The project overall density of 3.8 dwelling units shall be consistent with the density requirements assigned to the "Suburban Residential" land uses as contained on the adopted Future Land Use Map. The design also provides for a compatible transition between the varying densities of the surrounding properties.

There are stormwater swales shown on the Conceptual Development Plan that will require approval by the City and Florida Department of Environmental Protection. The developer is allowed to use the fill material resulting from the excavation of these swales in the development of the subject property; however, the property cannot be used for commercial mining and excavation uses (also known as a "borrow-pit"), but the Developer is authorized to

remove excess soil from the property after the site has been filled and graded in accordance with the engineering plans approved by the City for the final subdivision plat. Stockpiling of fill material excavated from the site may be allowed on the site subject to the provisions of the City of Port Orange Land Development Code and Standard Construction Details.

B. Dimensional Requirements

Lot dimensions and configurations within the PUD are generally depicted on the Conceptual Development Plan. The lot sizes and configurations shall comply with the minimum dimensional requirements attached hereto as Exhibit "C". The lot dimensions and areas shown on Exhibits "B" may be adjusted during the final subdivision process.

The total number of residential units in the development shall not exceed five (5) dwelling units or a gross project density of 3.8 dwelling units per acre. The existing zoning R-3H allows a maximum building height of 45 feet. The maximum building height for these custom homes within Angler's Cove PUD shall not exceed 45 feet.

1. Minimum Building Setbacks (principal structure):
    a. Exhibit "C" provides the minimum lot area, lot width, front, side, corner-side yard and rear setbacks established for all lots.
2. Minimum Air-Conditioned Floor Area 2,500 sq. ft.
3. Minimum Enclosed Garage Floor Area: 500 sq. ft.
4. Maximum Building Coverage: 40%
5. Maximum Impervious Coverage: 60%
6. Minimum Open Space: 40%
7. Lot width shall be measured at the front building setback line.

C. Open Space

Lots within the Angler's Cove PUD shall have a minimum open space of forty (40%) percent of each lot and twenty (20%) percent of the project area shall be common open space. The Angler's Cove PUD shall reflect common open space within the following:

i. Perimeter landscape buffers: 5 feet along the north, south east, and west property boundary, as shown on the CDP;

ii. Stormwater swale areas;

iii. Front, rear, side and corner-side yard setbacks of the individual lots;

iv. Boat dock and slips;

v. Tract "A", shown on the Plat.

5. PHASING

The construction of all subdivision infrastructure and the northern landscape buffer shall be completed in Phase I. The installation of the western landscape buffer, and the construction of the common area boat docks and individual homes will occur in future phases. The western landscape buffer shall be install prior to the completion of the common area boat docks.

6. SANITARY WASTE, STORMWATER, AND POTABLE WATER

The Developer will extend water and sewer lines to serve the PUD Property and the development authorized herein and the water and sewer lines shall be public utilities. If the City desires to extend the water and sewer lines prior to the Developer's need for installation of the Developer's lines, the Developer shall grant the necessary utility easements to the City and the City shall install and pay for such lines, at the City's sole cost, consistent with the Utility Plan, and all lines and other necessary infrastructure shall be sized adequately to serve both the adjoining property and the lots within the PUD. Stormwater shall retain one inch over each lot as generally depicted on the Conceptual Development Plan. A twelve (12) foot Drainage and

Utility Easement and a thirty (30) foot Access, Drainage and Utility easement shall be provided to the City. The Developer shall comply with the City's LDC and the rules and regulations of the Florida Department of Environmental Protection concerning stormwater drainage.

7. DRIVEWAY AND CONNECTIVITY

The twenty (20) foot wide roadway within the Development shall be private and have a thirty (30) foot Access, Drainage and Utility easement provided to the City. The developer acknowledges that the owner/resident at 3633 South Peninsula Drive has full access through Angler's Cove property per OR Book 2215, Pages 1342-1343. An additional easement agreement for pedestrian and vehicular access, ingress, and egress: above ground and underground drainage; and storm water retention and maintenance shall be entered into by and between the owner of 3633 South Peninsula Drive residence and Intracoastal Lots, LLC, owner of the "Property".

An entrance gate shall be constructed and only allow access to each of the five lot owners and the owner/resident 3633 South Peninsula Drive. City of Port Orange and emergency vehicles and government services will also be granted access via, a knock box or pad lock device on the gate.

8. IMPACT FEE CREDIT

The development of the Angler's Cove PUD shall comply with the transportation concurrency management requirements established in the City of Port Orange Comprehensive Plan and LDC. Nothing in this Agreement shall be construed as a waiver by the Developer of its right to pursue impact fee credits for any and all work performed by the Developer for which impact fee credits can be awarded.

9. MAINTENANCE OF COMMON OPEN SPACE AND COMMON FACILITIES

The Developer will form and incorporate a non-profit homeowners' association (the "HOA") which will operate, maintain and control, subject to other documents of record, the common areas, and common facilities, including but not limited to all roads, gate entry, docks and storm water drainage systems within the PUD and the entrance features and areas to the PUD. The Admiralty Club Association located at 3606 South Peninsula Drive, shall be provided access through the 30-foot access easement for maintenance of their concrete masonry wall that extends on the north property line of the "Property". The maintenance for the gate entry shall be shared by all five lots and not 3633 South Peninsula Drive residence.

The general scope and format of the homeowners' association documents, and the covenants and restrictions, will be similar in concept to the documents of similar property owners' associations in Port Orange. In addition, there shall be architectural and development standards incorporated within the covenants and restrictions to ensure that only custom homes are constructed within the PUD. The covenants and restrictions governing the Property and association responsibilities shall be executed and recorded in the Public records of Volusia County, Florida. The HOA will have a board of directors to legislate and govern the rules and orders of the HOA. The HOA board will have the means and authority to carry out and regulate the by-laws and restrictions governing the maintenance, operation and repairs of all common areas and facilities. Not only will the board of directors be able to regulate and govern the common area; the board will also regulate each member requiring the maintenance and service of his own individual building site. The HOA rules may be enforced by fines and liens upon the individual building sites and any other remedy available at law. The HOA may charge and collect dues to maintain operate and service all common facilities on the Property. The HOA will have authority to place a lien against individual building sites to collect unpaid HOA dues.

The owner of each lot within the Property will automatically become a member of the HOA by virtue of purchasing a building site subject to the rules, covenants, and restrictions of the HOA. The HOA will have the authority and means to hire, supervise, and regulate persons employed by them for the maintenance, repair and operation of common areas and facilities. If the association fails to perform the maintenance, repair or replacement, as necessary, of the stormwater drainage facility, the City shall have the right to enter upon the common area of the PUD and to provide the maintenance, repair, or replacement of the stormwater drainage facility and shall have the right to lien all owners of record in the PUD for the cost of such maintenance, repair, and replacement as the City may deem necessary. Developer reserves for itself, its successors and assigns, the right to maintain and operate separate facilities within the PUD which shall not be construed to be common facilities owned by the homeowner's association. The facilities which may be separately maintained and operated by Developer include but are not limited to the docks as may be created or offered by the Developer consistent with the terms and provisions of this Agreement. If requested by the City and as otherwise needed for plat improvements, the Developer will provide easements and grants for the installation, maintenance and upkeep of the public utilities including water, sewer, and electricity. The Developer may from time to time add additional covenants and restrictions or make changes in the Association by-laws as may be required to guarantee that the project will be developed in accordance with the policies outlined in this Agreement. The HOA shall be responsible for enforcing the requirement for "custom-built" homes.

10. PROJECT BUFFERS AND LANDSCAPING

In order to comply with the requirements of Chapter 13, Section 3 and 3.5 of the Port Orange LDC, a perimeter buffer shall be provided as shown on the Conceptual Development Plan and shall comply with the following standards and requirements. The intent of the

landscape buffer is to provide a protected green space separation between the project and surrounding neighborhoods. There shall be a perimeter buffer with a width of five (5') feet along the north, south, east and west property boundaries of the Angler's Cove PUD, as shown in the CDP. Landscaping within the perimeter buffers shall have at a minimum two (2) shade trees, two (2) understory trees and twenty (20) shrubs per 100-linear feet only on the Northern and Western perimeter boundary, all other borders will remain as existing conditions or at time of each lot build out shall be required to the minimum landscape requirements of the Port Orange LDC. Existing vegetation in the perimeter buffer that may remain undisturbed shall count towards the landscaping requirements for the buffer. Existing vegetation that is determined by the City to be invasive exotics, diseased/dying and/or interfering with required extension of utilities may be removed, provided that any viable protected or specimen trees shall be mitigated in accordance with the City of Port Orange LDC, as amended. The landscape plans required for the final plat shall account for the removal and mitigation of trees within the perimeter buffers. No structures, primary or accessory, will be allowed within the 5' perimeter buffer, except for fencing, installed as depicted in the CDP. Individual lot owners shall be responsible for the maintenance of all landscaping within the buffer that is located on their property. Maintenance of the landscape buffer/easement areas shall be the responsibility of the individual lot owners. The Angler's Cove HOA shall establish maintenance standards in the covenants and restrictions for the landscape/buffer easements. The covenants and restrictions shall provide for procedures to allow the HOA to notice individual lot owners that the landscape is not being maintained in accordance with the standards established in the covenants and restrictions. There also shall be provisions within the covenants and restrictions that allow the HOA to enter the individual lots to conduct maintenance within the landscape buffer to ensure that the minimum maintenance standards are

being upheld. The covenants and restrictions shall include provisions for the HOA to charge the individual lot owners for the costs of the HOA maintaining the landscape buffer.

12. ENVIRONMENTAL CONSIDERATIONS

Both during and after construction, the Developer will use reasonable efforts to preserve trees and natural vegetation within the Property and maximize protection of natural drainage pathways. The PUD shall comply with the tree preservation requirements of the City's LDC. The Developer shall comply with all rules, statutes, laws and regulations pertaining to protected wildlife species, including but not limited to the rules and permitting requirements of the Florida Game and Freshwater Fish Commission concerning gopher tortoises. Compliance with the City Environmental Preservation Code may necessitate modification of the Conceptual Development Plan.

13. EXPIRATION

The duration of this Agreement shall not exceed ten (10) years from the date of its execution. This Agreement may be extended for an additional five (5) year term by mutual consent of the Developer and the City subject to a public hearing. Development of the Angler's Cove PUD shall commence within three (3) years from the date of execution of this Agreement. Failure to comply with the schedule set out above shall cause this Agreement to lapse unless the schedule is modified by mutual agreement of the Developer and the City. Development shall be as defined by the LDC.

14. EFFECTIVE DATE

This agreement shall become effective upon recording in the public records of Volusia County, Florida.

15. AMENDMENTS

Amendments to this Agreement and Conceptual Development Plan shall comply with the requirements established in Chapter 3, Article 1 and Chapter 17, Section 17 of the City of Port Orange Land Development Code. The City may grant administrative variance from the dimensional requirements of this PUD when deemed appropriate by the administrative official. Application for administrative variances from the dimensional requirements of this PUD shall be made on the appropriate forms provided by the City for that purpose and shall be accompanied by the appropriate review fee. In no case shall an administrative variance be granted when such variance exceeds ten percent of the required dimension.

16. CONFORMANCE WITH THE LAWS

The developer agrees:

A. To develop the property according to all PUD regulations of the City to the extent those regulations are not inconsistent with the Plan for the property.

B. To provide agreements, contracts, deed restrictions, and sureties and other documents required by the City Legal Department for completion of the development or approved development phases, and for the continuing operation and maintenance of such areas, functions and facilities as are not to be provided, operated or maintained at public expense, and that the Developer's successors in title will be bound by the Developer's commitments made in this Agreement.

C. To be bound by all City codes and ordinances that are not in conflict with the provisions of this Agreement.

17. ENFORCEABILITY

If any provision of this Agreement is held by a court of competent jurisdiction to be invalid or otherwise unenforceable, such holding shall not affect the validity of enforceability of any other provision of this Agreement unless the holding so states.

18. PRIOR AGREEMENTS

This Agreement represents the complete understandings by and between the parties with respect to the development and continued use of the subject property. Any and all prior agreements between the parties with respect to any subject comprehended by this Agreement is hereby voided and superseded by this Agreement.

IN WITNESS WHEREOF, the parties hereto attached their hands and seals this _____ day of

_____ , 2018.

Signed, sealed and delivered
in the presence of

_____
Witness 1 Signature

_____
Print Name of Witness 1

_____
Witness 2 Signature

_____
Print Name of Witness 2

THE CITY OF PORT ORANGE, FLORIDA
a Florida municipal corporation

_____
By: Allen Green, Mayor

Attest:

_____
By: Robin Fenwick, City Clerk

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me this _____ day of __, 2018, by Allen Green and Robin Fenwick, Mayor and City Clerk, respectively, of The City of Port Orange, Florida, a Florida Municipal Corporation, on behalf of the City. They are personally known to me and did not take an oath.

_____

Notary Type, Print or Stamp Name

My commission expires _____

DEVELOPER:

Intracoastal Lots, LLC, a Florida Limited Liability Company

By: Intracoastal Lots, LLC, a Florida Limited Liability Company, Manager

By: _____
Robert C. Hellermann, Jr.,
Managing Member
Intracoastal Lots, LLC

STATE OF FLORIDA

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 2018, by Robert C. Hellermann, Jr., Managing Member of Intracoastal Lots, LLC, a Florida Limited Liability Company, Manager of Intracoastal Lots, LLC, a Florida Limited Liability Company. He/she is personally known to me OR has produced _____ as identification.

_____
Notary Public, State of Florida
Printed Name, Commission, Seal and Term Expiration Date

EXHIBIT "A"

LEGAL DESCRIPTION

Angler's Cove Planned Unit Development

Legal Description

Tax Parcel: 02-16-33-06-00-0160

BEING A PORTION OF THE SOUTH 140 FEET OF THE NORTH 740 FEET OF WINTHROP HOLDING CORPORATION'S RESUBDIVISION, ACCORDING TO THE MAP IN MAP BOOK 11, PAGE 107 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT THE SOUTHEASTERLY CORNER OF ADMIRALTY CLUB AS RECORDED IN MAP BOOK 33 PAGES 71 THROUGH 74, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA; THENCE NORTH 64 DEGREES 03 MINUTES 58 SECONDS EAST ON AN EASTERLY EXTENTION OF THE SOUTHERLY LINE OF SAID ADMIRALY CLUB, SAID LINE ALSO BEING THE NORTHERLY LINE OF LANDS AS DESCRIBED IN OFFICIAL RECORD BOOK 6441, PAGES 4368 THROUGH 4369, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, A DISTANCE OF 59.90 FEET TO THE NORTHEASTERLY CORNER OF SAID OFFICIAL RECORD BOOK 6441, PAGES 4368 THROUGH 4369; THENCE SOUTH 25 DEGREES 27 MINUTES 34 SECONDS EAST, A DISTANCE OF 139.95 FEET TO THE SOUTHEASTERLY CORNER OF SAID OFFICIAL RECORD BOOK 6441, PAGES 4368 THROUGH 4369, SAID POINT BEING ON THE SOUTH LINE OF THE SOUTHERLY 140 FEET OF THE NORTHERLY 740 OF SAID WINTHROP HOLDING CORPORATION'S RESUBDIVISION; THENCE SOUTH 64 DEGREES 04 MINUTES 24 SECONDS WEST ALONG SAID SOUTH LINE, A DISTANCE OF 438.54 FEET TO A POINT THE EASTERLY TOP OF BANK OF THE HALIFAX RIVER; THENCE NORTH 45 DEGREES 12 MINUTES 59 SECONDS WEST, A DISTANCE OF 14.73 FEET; THENCE NORTH 30 DEGREES 53 MINUTES 09 SECONDS WEST, A DISTANCE OF 9.95 FEET TO A POINT ON THE WESTERLY FACE OF SEAWALL; THENCE CONTINUE ALONG SAID WESTERLY FACE OF SEAWALL NORTH 19 DEGREES 20 MINUTES 01 SECONDS WEST, A DISTANCE OF 9.44 FEET; THENCE NORTH 08 DEGREES 49 MINUTES 13 SECONDS EAST, A DISTANCE OF 45.18 FEET ; THENCE NORTH 13 DEGREES 53 MINUTES 21 SECONDS EAST, A DISTANCE OF 9.42 FEET; THENCE NORTH 16 DEGREES 52 MINUTES 09 SECONDS EAST, A DISTANCE OF 18.44 FEET; THENCE NORTH 18 DEGREES 06 MINUTES 38 SECONDS EAST, A DISTANCE OF 39.90 FEET; THENCE NORTH 18 DEGREES 18 MIUNTES 09 SECONDS EAST, A DISTANCE OF 28.18 FEET TO A POINT OF INTERSECTION WITH THE SOUTHERLY LINE OF AFOREMENTIONED ADMIRALTY CLUB; THENCE ALONG SAID SOUTHERLY LINE NORTH 64 DEGREES 03 MINUTES 58 SECONDS EAST, A DISTANCE OF 292.72 FEET TO THE POINT OF BEGINNING.
THE ABOVE DESCRIBED PARCEL CONTAINS 1.3 ACRES MORE OR LESS.

EXHIBIT "B"

CONCEPTUAL DEVELOPMENT PLAN

INTENTIONALLY LEFT BLANK

LEGAL DESCRIPTION

BEING A PORTION OF THE SOUTH 140 FEET OF THE NORTH 740 FEET OF WINTHROP HOLDING CORPORATION'S RESUBDIVISION, ACCORDING TO THE MAP IN MAP BOOK 11, PAGE 107 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
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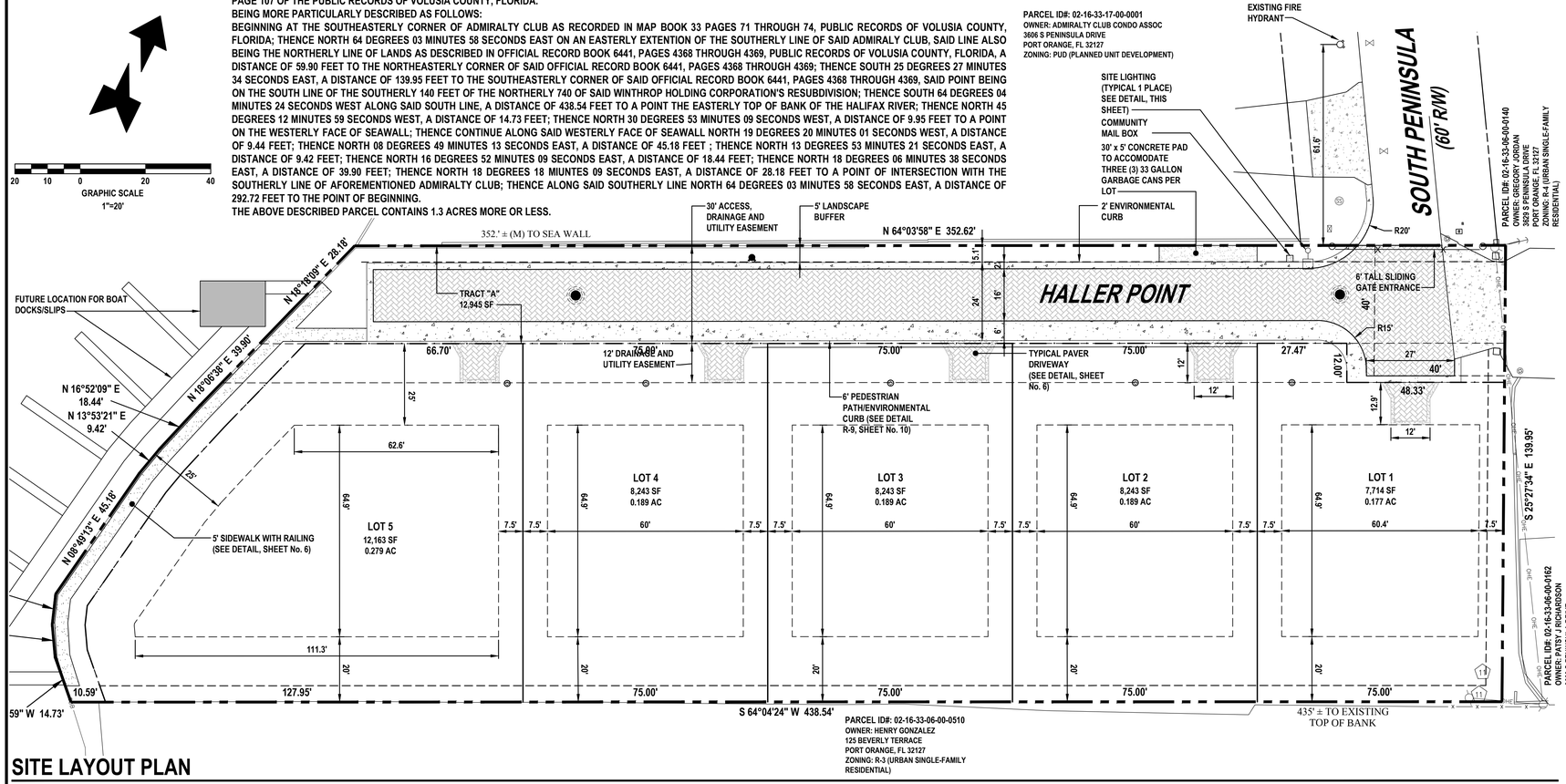
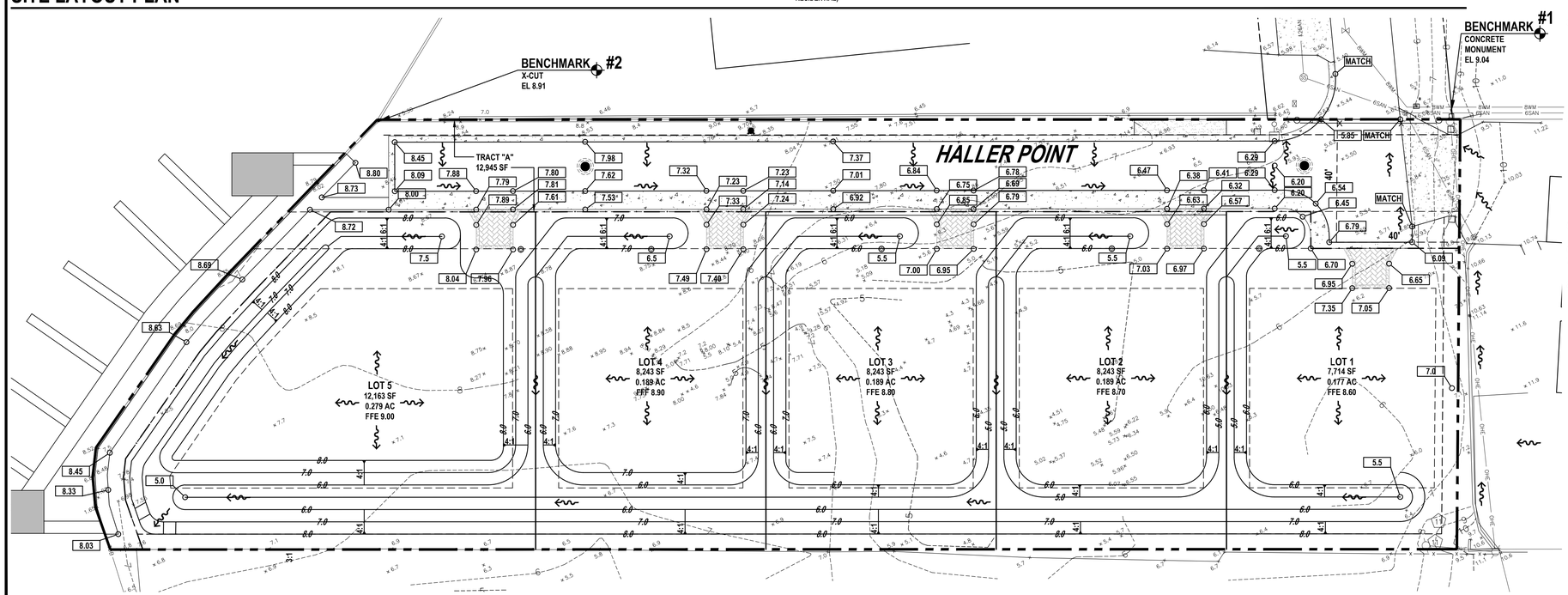
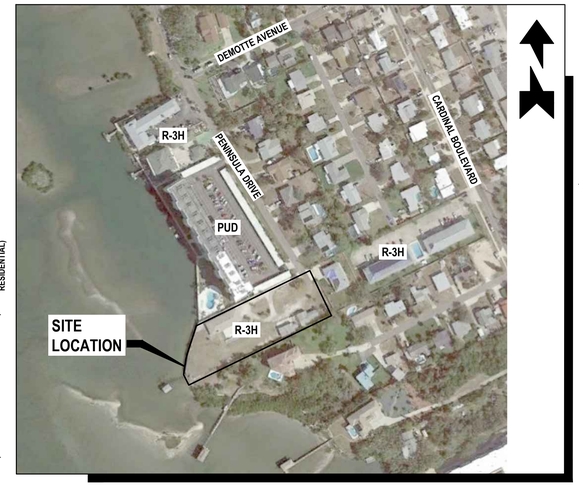
THE ABOVE DESCRIBED PARCEL CONTAINS 1.3 ACRES MORE OR LESS.



SITE LAYOUT PLAN



DRAINAGE AND GRADING PLAN



AERIAL MAP

SCALE: 1" = 200'

CONCEPTUAL DEVELOPMENT PLAN

ANGLER'S COVE
SINGLE-FAMILY RESIDENTIAL
SITE DEVELOPMENT USAGE

1. SETBACK (PUD ZONING):

FRONT	25 FT
REAR	20 FT
SIDE	7.5 FT
MAXIMUM BUILDING COVERAGE:	40%
MINIMUM OPEN SPACE:	40%
MAXIMUM BUILDING HEIGHT:	45 FT
MINIMUM LIVING AREA/D.U.	2,500 SF
MINIMUM LOT AREA / D. U.	7,500 SF
MINIMUM LOT WIDTH	75 FT
MINIMUM COMMON SPACE	20%
MAXIMUM IMPERVIOUS AREA	60%

2. LANDSCAPE BUFFERS (DEVELOPMENT PERIMETER):

NORTH	5 FEET
*SOUTH	5 FEET (PERIMETER BUFFER NATURAL VEGETATION TO REMAIN)
*EAST	5 FEET (PERIMETER BUFFER NATURAL VEGETATION TO REMAIN)
WEST	5 FEET
*SOUTH AND WEST	BORDERS WILL REMAIN AS EXISTING CONDITIONS OR AT TIME OF EACH LOT BUILD OUT SHALL BE PURVIEW TO THE MINIMUM LANDSCAPE REQUIREMENTS OF THE PORT ORANGE LDC

3. EXISTING SITE COVERAGE:

	SQ. FT	ACRE	%
BUILDINGS	4,938	0.113	8.7
PAVEMENT	1,498	0.034	2.6
CONCRETE SIDEWALKS	6,375	0.147	11.2
OPEN SPACE	44,740	1.027	77.6
TOTAL SITE	57,551	1.321	100.00
TOTAL IMPERVIOUS	12,811	0.294	22.4

4. PROPOSED SITE COVERAGE:

	SQ. FT	ACRE	%
PAVERS	6,643	0.153	11.6
CONCRETE SIDEWALKS	2,565	0.058	4.4
TOTAL SITE	57,551	1.321	100.00
TOTAL IMPERVIOUS	9,208	0.211	16.0 (60% MAX)
TOTAL OPEN SPACE	48,343	1.110	84.0
TOTAL COMMON SPACE	12,945	0.297	22.5

5. EXISTING URBAN HIGH DENSITY RESIDENTIAL (8-16 UNITS) = 21 UNITS
PROPOSED SUBURBAN RESIDENTIAL (2-4 UNITS) = 5 UNITS
6. SITE CONSISTS OF (40) PALM BEACH-URBAN LAND-PAOLA COMPLEX, 0 TO 8 PERCENT SLOPES
7. EXISTING ZONING: R-3H (MULTI-FAMILY RESIDENTIAL) PROPOSED: (PUD) PLANNED UNIT DEVELOPMENT
8. COMPLIANCE WITH THE LAND DEVELOPMENT CODE MAY NECESSITATE MODIFICATION OF THE CONCEPTUAL PLAN [LDC, CH. 17, SEC. 17(H)(2)(K)].

PROJECT TEAM

PROPERTY OWNER / APPLICANT:	INTRACOASTAL LOTS, LLC MANAGING MEMBER ROBERT C HELLERMANN, JR. 855 OLD SUGAR MILL ROAD PORT ORANGE, FL 32129 PHONE: 386-423-7468 EMAIL: BOBTEACH@AOL.COM
CIVIL ENGINEER / LANDSCAPE ARCHITECT / PROJECT MANAGER:	NEWKIRK ENGINEERING, INC. 1230 N US HIGHWAY 1, SUITE 3 ORMOND BEACH, FL 32174 PHONE: (386) 290-7599 EMAIL: HARRY@NEWKIRK-ENGINEERING.COM
SURVEYOR:	A1A GEO, INC. 1370 NORTH US HIGHWAY 1, SUITE 602 ORMOND BEACH, FL 32174 PHONE: (386) 405-6797 EMAIL: A1AGEOINC@GMAIL.COM
GEOTECHNICAL:	UNIVERSAL ENGINEERING SCIENCES 911 BEVILLE ROAD, SUITE 3 SOUTH DAYTONA BEACH, FL 32119 PHONE: (386) 756-1105 FAX: (386) 760-4067 EMAIL: BPOHL@UNIVERSALENGINEERING.COM

REVISIONS

DATE	DESCRIPTION
2/7/18	PER CITY COMMENTS

1230 North US1, Suite 3
Ormond Beach, Florida 32174
Phone (386) 672-7754
www.Newkirk-Engineering.com
C.A. # 30209
L.C. # 2600584

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Civil Engineering, Transportation, CEI & Landscape Architecture
NEWKIRK ENGINEERING INC.

CONCEPTUAL DEVELOPMENT PLAN
ANGLER'S COVE
3626 PENINSULA DRIVE
PORT ORANGE, FL 32127

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BRADLEY DONALD BAUKNECHT LICENSE NO. 75388 STATE OF FLORIDA PROFESSIONAL ENGINEER
BRADLEY D. BAUKNECHT, P.E. # 75388

PROJECT No:	2017-251
DATE:	JANUARY 2018
DESIGN BY:	BDB
DRAWN BY:	NWS
CHECKED BY:	BDB
SCALE:	1" = 20'

DRAWING NUMBER
EX-B

EXHIBIT "C"

MINIMUM DIMENSIONAL REQUIREMENTS

Lot Number	**Minimum Lot Area**	**Minimum Lot Width**	**Front Setback**	**Interior Side Setback**	**Rear Setback**	**Rear Buffer/ Easement**	**Accessory Structures Allowed in Rear Yard**
1	7,500	75	25	7.5	20	5	Yes
2	7,500	75	25	7.5	20	5	Yes
3	7,500	75	25	7.5	20	5	Yes
4	7,500	75	25	7.5	20	5	Yes
5	7,500	75	25	7.5	20	5	Yes

1. Accessory Structure is defined in Chapter 2, Section 2 of the LDC.

STAFF REPORT
SUBDIVISION FINAL PLAT & PLANS
Angler's Cove Subdivision
CASE NO. 18-50000001

REQUEST:	Approval of the Angler's Cove Final Plat and Subdivision Plans
OWNER/APPLICANT:	Robert C. Hellermann, Jr.
LOCATION:	3626 S. Peninsula Drive
STAFF RECOMMENDATION:	**Approval**
STAFF CONTACT:	Penelope Cruz, Principal Planner (386) 506-5671
PLANNING COMMISSION DATE:	March 22, 2018

DISCUSSION

The applicant requests approval of the Angler's Cove Subdivision Plat and Plans. If approved, the applicant proposes to subdivide the ±1.3-acre property into 5 single-family lots, along with associated subdivision improvements. The subject property is located at 3626 S. Peninsula Drive, south of the Admiralty Club condominium. The subject property is currently developed with two non-conforming single-family homes. As part of the proposed subdivision, the two existing single-family homes will be demolished.

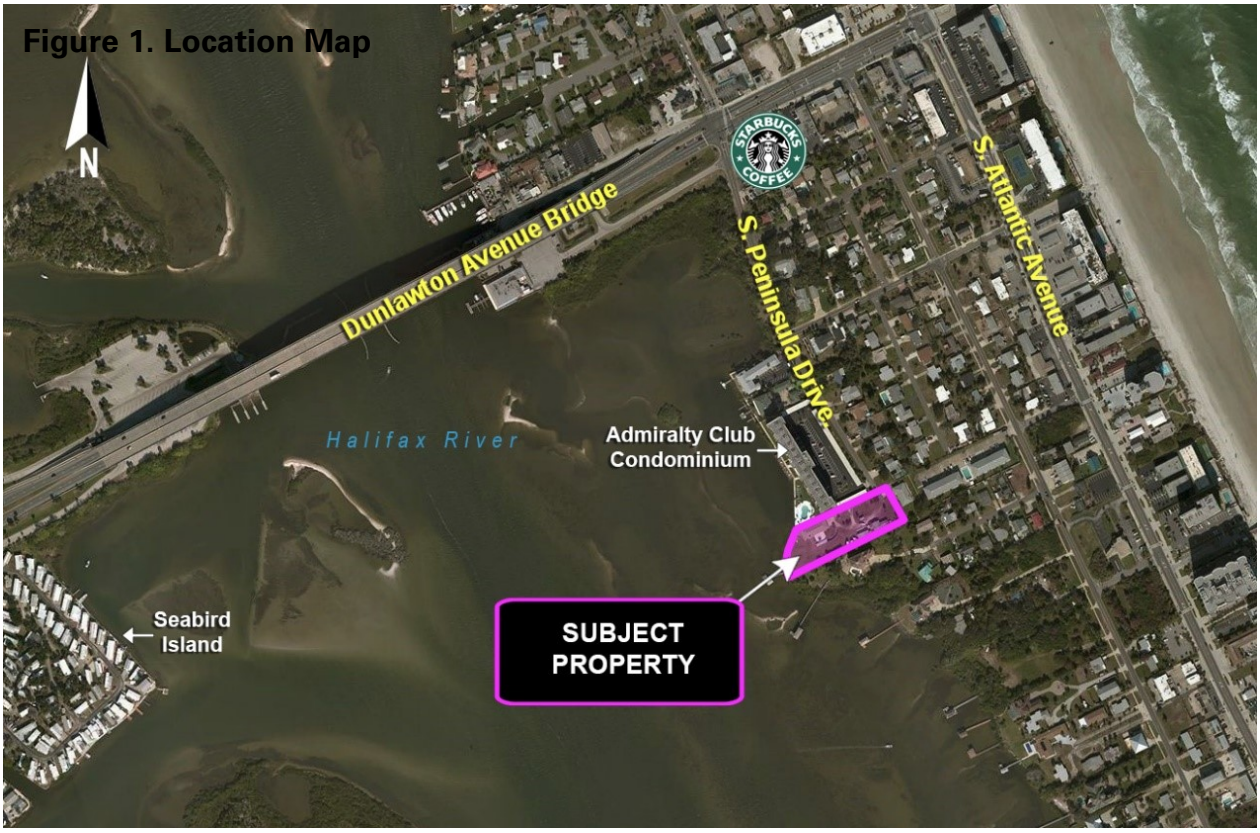


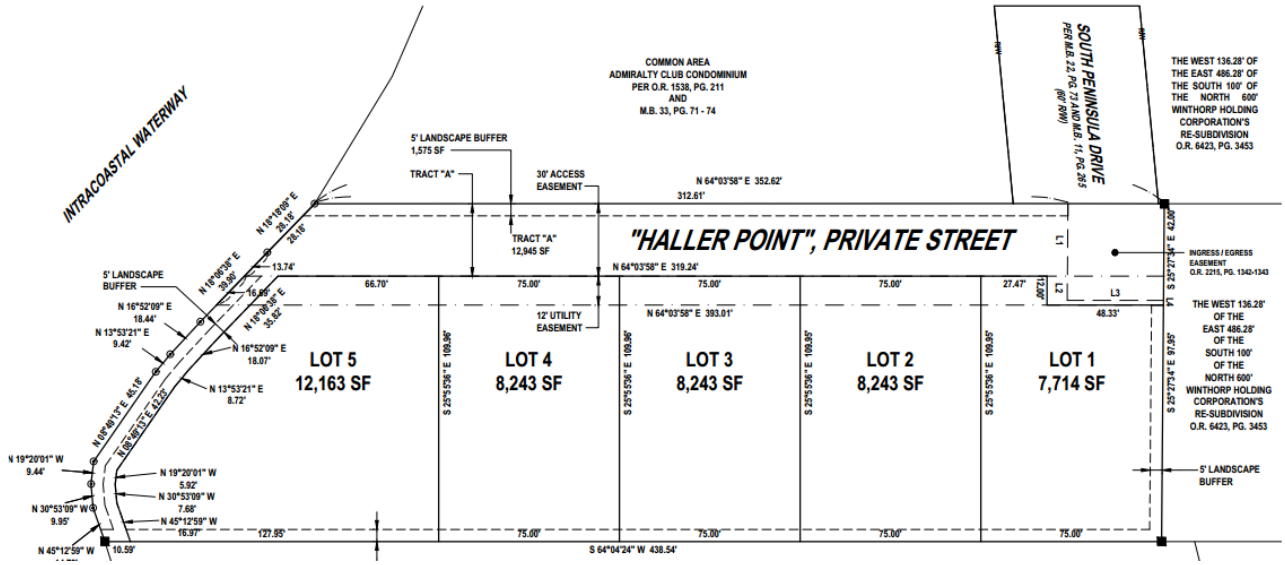
Figure 1. Location Map

The subject property is proposed to be rezoned to Planned Unit Development (PUD) to establish the regulatory framework for the subject 5-lot subdivision. The proposed PUD rezoning also requires a Future Land Use (FLU) Amendment to change the designation from *Urban High Density Residential* to *Suburban Residential*. Approval of the FLU amendment and rezoning requests are required for the subdivision plat and plans to be approved.

The subdivision plat and plans have been designed according to the requirements of the proposed Angler's Cove Master Development Agreement (MDA) and Conceptual Development Plan (CDP), and the City's Land Development Code (LDC). The proposed subdivision will be accessed from a private street that connects to S. Peninsula Drive. Each lot will have its own driveway off the private street. The subdivision plat and plans include:

- 30-foot wide access, drainage and utility easement along the north side of the property;
- 12-foot wide drainage and utility easement along the front of each lot;
- Stormwater conveyance system that is interconnected to a dry retention swale in the rear of the lots;
- Potable water and sewer utilities;
- Private street (Haller Point) constructed from pavers and includes a pedestrian path;
- Landscape buffers;
- Common open space;
- Five single-family lots ranging in size from 7,714 SF to 12,163 SF; and
- Common boat dock facility at the west end of the property.

Figure 2. Plat



According to the project engineer, there are no wetlands or surface waters, or critical habitats within the subject property. No listed species were observed on the property. No previously recorded cultural resources have been found on the property either. The proposed subdivision complies with all federal, state, regional and local regulations pertaining to the protection and preservation of valuable environmental resources.

Consistency with the Comprehensive Plan
The proposed 5-lot single-family subdivision is consistent with the intent of the proposed FLU designation and a permitted use by the proposed zoning. The proposed FLU amendment is generally consistent with the pertinent Goals, Objectives, and Policies of the City's Comprehensive Plan. The proposed FLU category is compatible with adjacent parcels and reduces the allowable density in the Coastal High Hazard Area. All public facilities have adequate capacity to accommodate the proposed amendment.

CONCURRENCY REVIEW
Public facilities and services such as roads, public infrastructure, schools, and recreation facilities are currently available to serve the proposed five residential lots. The following discussion summarizes the impact the proposed subdivision will have on the public facilities and services.

Transportation
The daily trips associated with the proposed subdivision can be accommodated on the existing roadway network. Per the *Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition*, the Angler's Cove Subdivision will generate approximately 48 daily trips. Since the daily trips generated by this development is less than 1% of the roadway capacity for S. Peninsula Drive, this subdivision is considered *de minimus*[1] and a Traffic Impact Analysis (TIA) is not required.

Water and Sewer
The proposed subdivision will be served by potable water and sanitary sewer. All lots will be provided with stub-outs for utilities. The developer will construct potable water and sanitary sewer lines in accordance with the utility plan for this subdivision. Irrigation will be provided by a private well.

Solid Waste
Residential trash pick-up will be done by the City's waste collection provider.

Stormwater Drainage
The City's Comprehensive Plan and Land Development Code require that there be no net loss of stormwater retention function as a result of development, therefore the subdivision property must have the same ability to store and discharge water after development as it does before development occurs. The drainage system shown on the plans meets the requirements of the City and of the St. Johns River Water Management District.

Recreation and Open Space
According to the City's 2018 Concurrency Management Report, the City is not deficient in any of the recreational facility categories and there are sufficient facilities to support additional population from this subdivision.

School Capacity
The Volusia County School District determined that the impacts associated with the proposed subdivision can be accommodated by existing facilities.

---

[1] *For transportation facilities, developments that would not affect more than one percent of the maximum volume at the adopted level-of-service are considered de minimus.*

RECOMMENDATION

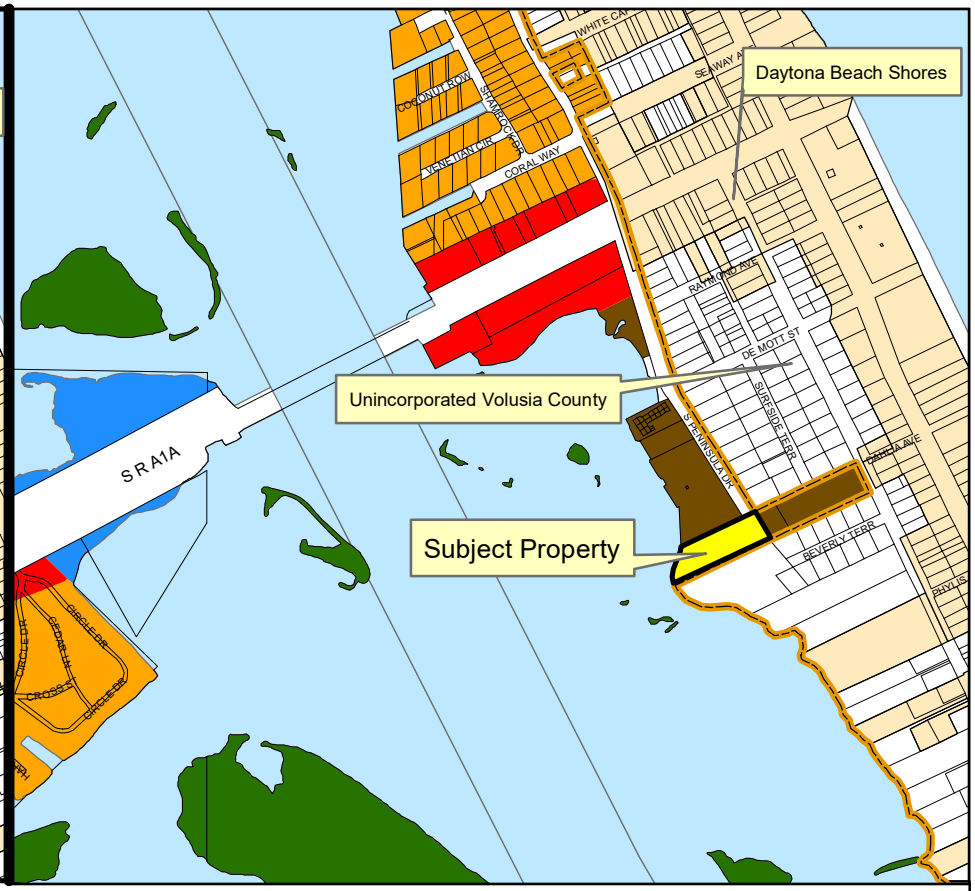
Staff recommends **approval** of the Angler's Cove Final Plat and Subdivision Plans**,** subject to the following:

1. Review by the City Attorney as to legal form and content;
2. City Council approval the Future Land Use Amendment request for the subject property (Case No. 18-20000001);
3. City Council approval the Rezoning request for the subject property (Case No. 18-65000001); and
4. Resolution of all remaining comments prior to City Council.

ATTACHMENTS

1. Exhibit A – Current and Proposed Future Land Use Map
2. Exhibit B – Current and Proposed Zoning Map
3. Exhibit C – Angler's Cove Plat and Subdivision Plans

Current Future Land Use



Proposed Future Land Use

- Public/Institutional
- Conservation
- Suburban Residential (2-4 Units/Acre)
- Urban Medium Density Residential (4-8 Units/Acre)
- Urban High Density Residential (8-16 Units/Acre)
- Commercial

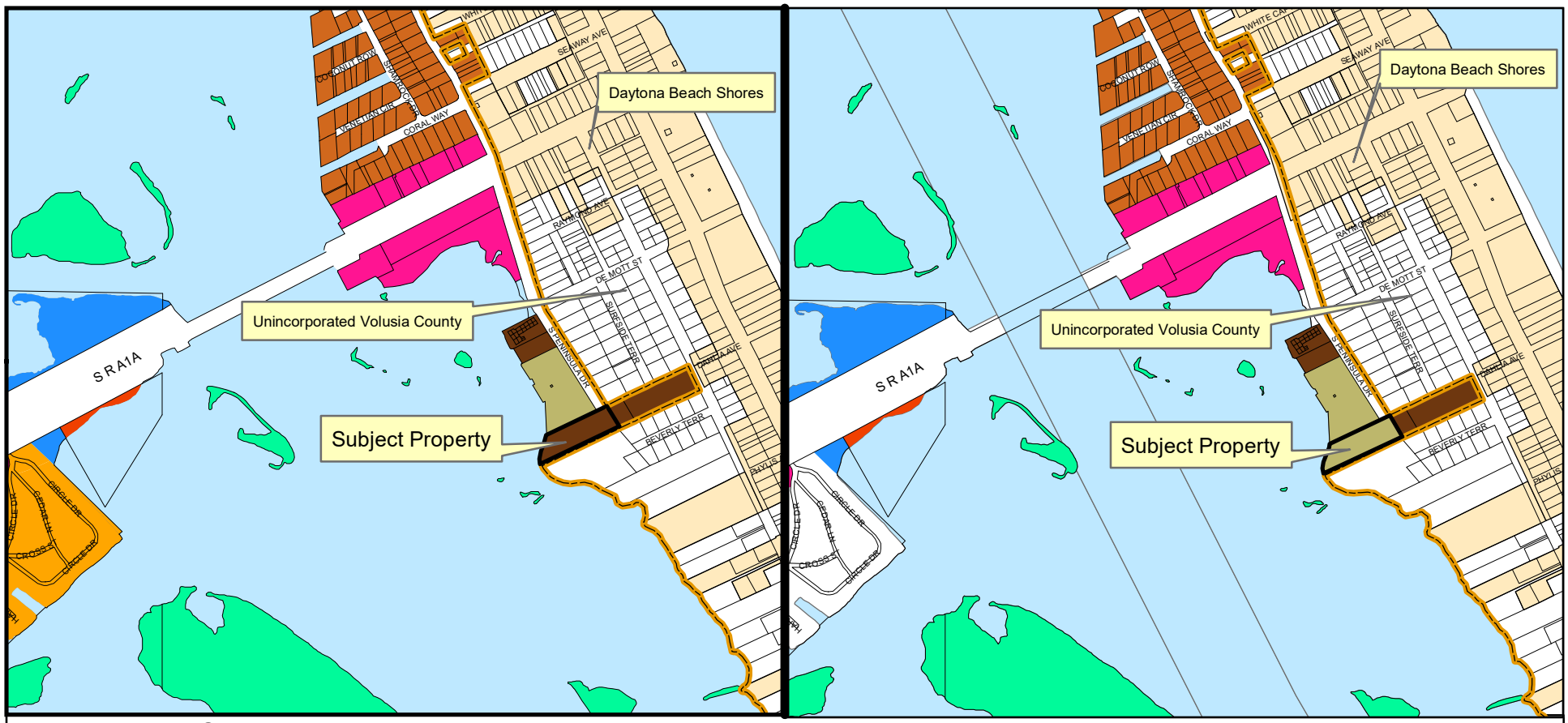
CITY OF PORT ORANGE 1867 FLORIDA

EXHIBIT A

CASE NO. 18-20000001 and 18-65000001

DEPARTMENT OF COMMUNITY DEVELOPMENT

N W E S



Current Zoning

- GPU Government/Public Use
- F-C Flood Plain-Conservation
- R-8SF Single Family Residential
- R-3H Multi-Family Residential

Proposed Zoning

- PUD Planned Unit Development
- PCD Planned Commercial Development
- CC Community Commercial
- Daytona-Beach_Shores

EXHIBIT B

CASE NO. 18-20000001 and 18-65000001

DEPARTMENT OF COMMUNITY DEVELOPMENT

N
W E
S

EXHIBIT C

ANGLER'S COVE

A REPLAT OF A PORTION OF WINTHORP HOLDING CORPORATION'S RESUBDIVISION OF BLOCKS 19 TO 29 INCLUSIVE, OF HALIFAX ESTATES (M.B 11, PG. 107).

BEING A PORTION OF SECTION 02, TOWNSHIP 16 SOUTH, RANGE 33 EAST, CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA,

GENERAL NOTES:

1. ☐ FD 4" X 4" CONCRETE MONUMENT (AS NOTED) ■ SET 4" X 4" CONCRETE MONUMENT PRM LB 8205 ⊙ SET NAIL AND DISK PRM LB 8205
2. NOTICE: THIS PLAT, AS RECORDED IN ITS GRAPHIC FORM, IS THE OFFICIAL DEPICTION OF THE SUBDIVIDED LANDS DESCRIBED HEREIN AND WILL IN NO CIRCUMSTANCES BE SUPPLANTED IN AUTHORITY BY ANY OTHER GRAPHIC OR DIGITAL FORM OF THE PLAT, WHETHER GRAPHIC OR DIGITAL. THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT RECORDED ON THIS PLAT THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.
3. ALL MEASUREMENT DIMENSIONS ON THIS PLAT IS IN U.S. FOOT AND DECIMALS THEREOF.
4. ALL MEASUREMENTS REFER TO HORIZONTAL PLANE IN ACCORDANCE WITH THE DEFINITION OF THE UNITED STATES SURVEY FOOT OR METER ADOPTED BY THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY. ALL MEASUREMENTS SHALL USE THE 39.2712 = 3.28083333333 EQUATION FOR CONVERSION FROM A U.S. FOOT TO METERS.
5. ACCURACY: THE BOUNDARY LINEAR ERROR OF CLOSURE DOES NOT EXCEED 1 : 10,000, THE BOUNDARY ANGULAR ERROR OF CLOSURE DOES NOT EXCEED 15 SECONDS MULTIPLIED BY THE SQUARE ROOT OF THE NUMBER OF ANGLES TURNED.
6. ALL LOT LINES ARE RADIAL UNLESS SHOWN OTHERWISE. (NR) DENOTES NON-RADIAL LINES RELATIVE TO CURVES.
7. BEARING STRUCTURE BASED ON THE SOUTH LINE OF ADMIRALTY CLUB CONDOMINIUM AS RECORDED IN PLAT BOOK 33, PAGES 71 - 74, PUBLIC RECORDS OF VOLUSIA COUNTY FLORIDA, BEING N 64° 03'58" E.
8. THIS PLAT IS SUBJECT TO ALL EASEMENTS OF RECORD AND RESERVATIONS OF EASEMENTS, INCLUDING BUT NOT LIMITED TO DRAINAGE, MAINTENANCE, UTILITY AND ACCESS EASEMENTS DEDICATED OR GRANTED HEREON WHICH SHALL BE LOCATED AS FOLLOWS EXCEPT AS OTHERWISE NOTED ON THIS PLAT: FRONT LOT LINES (STREET FRONTAGE) 12.00 FEET WIDE. COMMON AREAS (STREET FRONTAGE) 12.00 FEET WIDE..
9. UTILITIES INCLUDE BUT ARE NOT LIMITED TO SANITARY SEWER, POTABLE WATER, STORM DRAINAGE, ELECTRIC, TELEPHONE, CABLE TELEVISION, SECURITY, TELECOMMUNICATIONS, FIBER OPTIC AND NATURAL GAS.
10. ALL PLATTED UTILITY EASEMENTS SHALL PROVIDE THAT SUCH EASEMENTS SHALL ALSO BE EASEMENTS FOR THE CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES; PROVIDED, HOWEVER, NO SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES SHALL INTERFERE WITH THE FACILITIES AND SERVICES OF AN ELECTRIC, TELEPHONE, GAS, OR OTHER PUBLIC UTILITY. IN THE EVENT A CABLE TELEVISION COMPANY DAMAGES THE FACILITIES OF A PUBLIC UTILITY, IT SHALL BE SOLELY RESPONSIBLE FOR THE DAMAGES. THIS SECTION SHALL NOT APPLY TO THOSE PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS, OR OTHER PUBLIC UTILITY. SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION.
11. ALL OTHER EASEMENTS ARE SUBORDINATE TO ANY CONSERVATION EASEMENTS DEDICATED HEREON. THERE SHALL BE NO REMOVAL OR DISTURBANCE OF ANY VEGETATION WITHIN SUCH CONSERVATION EASEMENTS. ANY PROPOSED CONSTRUCTION OR OTHER USE WITHIN A CONSERVATION EASEMENT MUST BE REVIEWED AND APPROVED BY THE CITY OF PORT ORANGE AND ANY OTHER AUTHORITY HAVING JURISDICTION OVER THE CONSERVATION EASEMENT.
12. TREE CONSERVATION EASEMENTS AS DEFINED ON THIS PLAT IS FOR THE EXPRESS PURPOSE OF THE PRESERVATION AND LONGEVITY OF THE TREES THEREIN. ACTIONS DETRIMENTAL TO TREE HEALTH AND SURVIVAL WITHIN THE BOUNDARIES OF THE EASEMENT ARE PROHIBITED WITHOUT THE EXPRESS PERMISSION OF THE CITY OF PORT ORANGE AND ANY OTHER AUTHORITY HAVING JURISDICTION OVER THE CONSERVATION EASEMENT. NOTHING HEREIN SHALL, HOWEVER, BE CONSTRUCTED TO PREVENT NATURAL VEGETATION WITHIN THE EASEMENT AREA FROM BEING CLEARED BY HAND TO PROVIDE A NEAR, MANICURED APPEARANCE. IN ADDITION, NOTHING HEREIN SHALL BE CONSTRUCTED TO PREVENT THE PLACEMENT OF SOD, IRRIGATION AND LANDSCAPE PLANTS OR TO PREVENT NORMAL LAWN MAINTENANCE SUCH AS MOWING, EDGING AND WEEDING NOT HARMFUL TO THE OBJECTIVE OF TREE PRESERVATION WITHIN THE EASEMENT AREA. ANY PROPOSED CONSTRUCTION OR OTHER USE WITHIN A CONSERVATION EASEMENT MUST BE REVIEWED AND APPROVED BY THE CITY OF PORT ORANGE AND ANY OTHER AUTHORITY HAVING JURISDICTION OVER THE CONSERVATION EASEMENT.
13. THE COMMON AREAS GRANTED TO ANGLER'S COVE HOMEOWNERS' ASSOCIATION, INC. BY THIS PLAT AND VIA SEPARATE INSTRUMENT SHALL BE SUBJECT TO EASEMENT AS SHOWN OR DESCRIBED HEREON OR GRANTED IN ACCORDANCE WITH ANGLER'S COVE HOMEOWNERS' ASSOCIATION COVENANTS AND RESTRICTIONS.
14. ANGLER'S COVE HOMEOWNERS' ASSOCIATION, INC., A FLORIDA NON-PROFIT CORPORATION SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE DRAINAGE SYSTEM SERVING THE AREA WITHIN THE BOUNDARIES OF THE PLAT, AS DEPICTED ON THE STORMWATER MANAGEMENT PLAN APPROVED FOR THIS DEVELOPMENT BY THE CITY OF PORT ORANGE, FLORIDA. IN THE EVENT THE ASSOCIATION, ITS EMPLOYEES OR ASSIGNS FAILS TO PERFORM THE MAINTENANCE, REPAIR OR REPLACEMENT, AS NECESSARY, OF THE STORMWATER RETENTION AND DRAINAGE FACILITIES LOCATED WITHIN THE BOUNDARY OF THIS PLAT (PROPERTY), THE CITY OF PORT ORANGE SHALL HAVE THE RIGHT TO ENTER UPON THE COMMON AREAS AND DESIGNATED EASEMENT AREAS OF THE PROPERTY AND PROVIDE MAINTENANCE, REPAIR, OR REPLACEMENT OF THE STORMWATER DRAINAGE FACILITY AND SHALL HAVE THE RIGHT TO LIEN ALL OWNERS OF RECORD IN THE PROPERTY FOR THE COST OF SUCH MAINTENANCE, REPAIR, OR REPLACEMENT AS THE CITY MAY DEEM NECESSARY. IN THE EVENT OF TERMINATION, DISSOLUTION, OR FINAL LIQUIDATION OF THE ASSOCIATION, THE RESPONSIBILITY FOR THE OPERATION AND MAINTENANCE OF THE SURFACE WATER OR STORMWATER MANAGEMENT SYSTEM WILL BE TRANSFERRED TO AND ACCEPTED BY AN ENTITY WHICH COMPLIES WITH SECTION 40C-42.027, F.A.C. AND BE APPROVED BY THE SAINT JOHNS RIVER WATER MANAGEMENT DISTRICT PRIOR TO SUCH TERMINATION, DISSOLUTION, OR LIQUIDATION.
15. BUILDING SETBACK REQUIREMENTS:
    FRONT = 25 FT
    REAR = 20 FT
    SIDE = 7.5 FT
    MAXIMUM BUILDING COVERAGE = 40%
    MINIMUM COMMON OPEN SPACE = 20%
    MAXIMUM BUILDING HEIGHT = 45 FT
16. ALL PRIVATE UTILITY, ACCESS, DRAINAGE AND MAINTENANCE EASEMENTS OVER PRIVATE, SHARED DRIVEWAYS ARE INTENDED TO BE RECIPROCAL EASEMENTS TO AND AMONG THE AFFECTED LOT OWNERS FOR PRIVATE UTILITY SERVICE LATERALS, PRIVATE ACCESS, SHARED DRAINAGE AND MAINTENANCE PURPOSES.
17. RETENTION AREAS / COMMON AREAS ARE GRANTED AS EASEMENTS TO THE CITY OF PORT ORANGE ALONG WITH THE RIGHT OF ACCESS, INGRESS AND EGRESS, TOGETHER WITH THE PERPETUAL RIGHT TO HARVEST EXCESS STORMWATER / GROUNDWATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
18. IN ADDITION TO THE USES AND PURPOSES OTHERWISE STATED ON THIS PLAT, ALL DRAINAGE EASEMENTS ARE GRANTED TO THE CITY OF PORT ORANGE FOR THE BENEFIT OF ACCOMMODATING ALL DRAINAGE AND STORMWATER FROM ADJOINING, OFF-SITE DEDICATED RIGHTS-OF-WAY.
19. ANGLER'S COVE HOMEOWNERS' ASSOCIATION, INC. SHALL OWN AND BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING, IRRIGATION, SIDEWALKS, BIKE PATHS, PEDESTRIAN WALKWAYS AND IMPROVEMENTS CONSTRUCTED WITHIN ALL COMMON AREAS.
20. THE ADMIRALTY CLUB ASSOCIATION LOCATED AT 3606 S PENINSULA DRIVE SHALL BE PROVIDED ACCESS THROUGH THE 30-FOOT ACCESS EASEMENT TO MAINTENANCE THEIR CONCRETE MASONRY WALL THAT EXTENDS ON THE NORTH PROPERTY LINE OF ANGLER'S COVE RECORDED IN OFFICIAL RECORDS BOOK _____, PAGES _____.
21. PLAT IS SUBJECT TO THE INGRESS / EGRESS EASEMENT IN OR BOOK 2215, PAGE 1342, PRVCF.
22. AN AGREEMENT TO BE DETERMINED BETWEEN THE BENEFITING PARTY TO THE INGRESS / EGRESS EASEMENT AND THE HOA WITH OR BOOK _____, PAGE _____, PRVCF.
23. THIS PLAT IS SUBJECT TO THE ANGLER'S COVE PLANNED UNIT DEVELOPMENT MASTER DEVELOPMENT AGREEMENT AS RECORDED IN OFFICIAL RECORDS BOOK 7381, PAGES 4290 THROUGH 4311 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
24. THE ARTICLES OF INCORPORATION FOR THE ANGLER'S COVE HOMEOWNERS' ASSOCIATION, INC. ARE RECORDED IN OFFICIAL RECORDS BOOK _____, PAGES _____ THROUGH 2896 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA. THE DECLARATION OF COVENANTS AND RESTRICTIONS FOR THE ANGLER'S COVE HOMEOWNERS' ASSOCIATION, INC. ARE RECORDED IN OFFICIAL RECORDS BOOK _____, PAGES _____ THROUGH _____ OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

A1A SURVEYING
LAND SURVEYING CONSTRUCTION LAYOUT
244 Ridgewood Avenue, Daytona Beach, Florida 32117
Voice: 386.882.1868
LB # 8205 LS # 6378

SHEET 1 OF 2

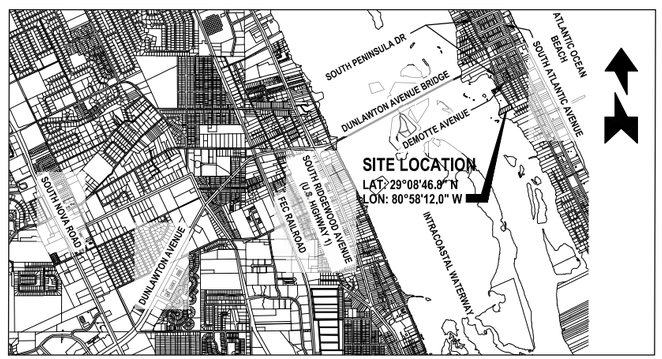
LEGAL DESCRIPTION:

BEING A PORTION OF THE SOUTH 140 FEET OF THE NORTH 740 FEET OF WINTHROP HOLDING CORPORATION'S RESUBDIVISION, ACCORDING TO THE MAP IN MAP BOOK 11, PAGE 107 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEASTERLY CORNER OF ADMIRALTY CLUB AS RECORDED IN MAP BOOK 33 PAGES 71 THROUGH 74, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA; THENCE NORTH 64 DEGREES 03 MINUTES 58 SECONDS EAST ON AN EASTERLY EXTENTION OF THE SOUTHERLY LINE OF SAID ADMIRALY CLUB, SAID LINE ALSO BEING THE NORTHERLY LINE OF LANDS AS DESCRIBED IN OFFICIAL RECORD BOOK 6441, PAGES 4368 THROUGH 4369, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, A DISTANCE OF 59.90 FEET TO THE NORTHEASTERLY CORNER OF SAID OFFICIAL RECORD BOOK 6441, PAGES 4368 THROUGH 4369; THENCE SOUTH 25 DEGREES 27 MINUTES 34 SECONDS EAST, A DISTANCE OF 139.95 FEET TO THE SOUTHEASTERLY CORNER OF SAID OFFICIAL RECORD BOOK 6441, PAGES 4368 THROUGH 4369, SAID POINT BEING ON THE SOUTH LINE OF THE SOUTHERLY 140 FEET OF THE NORTHERLY 740 OF SAID WINTHROP HOLDING CORPORATION'S RESUBDIVISION; THENCE SOUTH 64 DEGREES 04 MINUTES 24 SECONDS WEST ALONG SAID SOUTH LINE, A DISTANCE OF 438.54 FEET TO A POINT THE EASTERLY TOP OF BANK OF THE HALIFAX RIVER; THENCE NORTH 45 DEGREES 12 MINUTES 59 SECONDS WEST, A DISTANCE OF 14.73 FEET; THENCE NORTH 30 DEGREES 53 MINUTES 09 SECONDS WEST, A DISTANCE OF 9.95 FEET TO A POINT ON THE WESTERLY FACE OF SEAWALL; THENCE CONTINUE ALONG SAID WESTERLY FACE OF SEAWALL NORTH 19 DEGREES 20 MINUTES 01 SECONDS WEST, A DISTANCE OF 9.44 FEET; THENCE NORTH 08 DEGREES 49 MINUTES 13 SECONDS EAST, A DISTANCE OF 45.18 FEET ; THENCE NORTH 13 DEGREES 53 MINUTES 21 SECONDS EAST, A DISTANCE OF 9.42 FEET; THENCE NORTH 16 DEGREES 52 MINUTES 09 SECONDS EAST, A DISTANCE OF 18.44 FEET; THENCE NORTH 18 DEGREES 06 MINUTES 38 SECONDS EAST, A DISTANCE OF 39.90 FEET; THENCE NORTH 18 DEGREES 18 MIUNTES 09 SECONDS EAST, A DISTANCE OF 28.18 FEET TO A POINT OF INTERSECTION WITH THE SOUTHERLY LINE OF AFOREMENTIONED ADMIRALTY CLUB; THENCE ALONG SAID SOUTHERLY LINE NORTH 64 DEGREES 03 MINUTES 58 SECONDS EAST, A DISTANCE OF 292.72 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS 1.3 ACRES MORE OR LESS.



LOCATION MAP

SCALE: 1" = 2,000'

INDEX OF SHEETS:

SHEET 1 - COVER AND DEDICATIONS
SHEET 2 - PLAT MAP

ABBREVIATIONS AND LEGEND:

CA	CENTRAL ANGLE (DELTA)	LS	LICENSED SURVEYOR
CB	CHORD BEARING	NO	NUMBER
CH	CHORD	O.R.	OFFICIAL RECORDS BOOK
CM	CONCRETE MONUMENT	(P)	PLAT / PLATTED
DWG	DRAWING	P.A.	PROFESSIONAL ASSOCIATION
FAX	FACSIMILE	PG.	PAGE
FD	FOUND	PRM	PERMANENT REFERENCE MONUMENT
FL	FLORIDA	PSM	PROFESSIONAL SURVEYOR AND MAPPER
ID	IDENTIFICATION	R	RADIUS
IRC	IRON ROD & CAP	RNG.	RANGE
L	LENGTH	R/W	RIGHT-OF-WAY
LB	LICENSED BUSINESS	SEC.	SECTION
LC	LICENSED CORPORATION	TWP.	TOWNSHIP
LLC	LIMITED LIABILITY COMPANY	℄	CENTERLINE RIGHT-OF-WAY

PLAT BOOK _____ PAGE _____

DEDICATION

KNOW BY ALL THESE PRESENTS, THAT INTRACOASTAL LOTS, LLC, A FLORIDA LIMITED LIABILITY COMPANY, BEING THE OWNER IN FEE SIMPLE OF THE LANDS DESCRIBED IN THE FOREGOING CAPTION TO THIS PLAT "ANGLER'S COVE", LOCATED IN THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA, HEREBY DEDICATE SAID LANDS AND PLAT FOR THE USES AND PURPOSES THEREIN EXPRESSED. ACCESS EASEMENT OVER THE PRIVATE STREET (HALLER POINT) IS GRANTED TO THE CITY OF PORT ORANGE FOR EMERGENCY VEHICLES AND GOVERNMENT SERVICES. (HALLER POINT). A PRIVATE STREET, IS GRANTED TO THE ANGLER'S COVE HOMEOWNERS ASSOCIATION. ALL POTABLE WATER AND SANITARY SEWER CONSTRUCTED WITHIN THE AREA ENCOMPASSED WITHIN THE PLAT ARE DEDICATED TO THE CITY OF PORT ORANGE. ALL DRAINAGE, MAINTENANCE, UTILITY AND ACCESS EASEMENTS SHOWN OR DESCRIBED ON THE PLAT ARE, UNLESS OTHERWISE INDICATED, GRANTED TO THE CITY OF PORT ORANGE. ALL DRAINAGE, MAINTENANCE, LANDSCAPE AND ACCESS EASEMENTS SHOWN OR DESCRIBED ON THE PLAT, UNLESS OTHERWISE INDICATED, ARE GRANTED TO THE BENEFITED LOT OWNERS AND TO THE ANGLER'S COVE HOMEOWNERS ASSOCIATION.

IN WITNESS WHEREOF, HAS CAUSED THESE PRESENTS TO BE SIGNED BY THE OFFICER NAMED BELOW AND ITS SEAL AFFIXED HERETO ON THIS _____ DAY OF _____, 2018.

OWNER: INTRACOASTAL LOTS, LLC, A FLORIDA LIMITED LIABILITY COMPANY

BY: _____

PRINT NAME: _____

TITLE: _____

SIGNED IN THE PRESENCE OF:

1) _____ 2) _____

PRINT NAME: _____ PRINT NAME: _____

STATE OF FLORIDA, COUNTY OF VOLUSIA

THIS IS TO CERTIFY, THAT ON THIS _____ DAY OF _____, 2018, BEFORE ME, AN OFFICER DULY AUTHORIZED TO TAKE ACKNOWLEDGMENTS IN THE STATE AND COUNTY AFORESAID, PERSONALLY APPEARED _____ AS _____ OF _____, WHO IS PERSONALLY KNOWN TO ME OR PRODUCED THE FOLLOWING IDENTIFICATION _____, AND DID / DID NOT TAKE AN OATH THAT HE/SHE IS THE PERSON DESCRIBED IN AND WHO EXECUTED THE FOREGOING DEDICATION AND SEVERALLY ACKNOWLEDGES THE EXECUTION THEREOF TO BE HIS/HER FREE ACT AND DEED AS SUCH OFFICER THERETO DULY AUTHORIZED; THAT THE OFFICIAL SEAL OF SAID LIMITED LIABILITY COMPANY IS AFFIXED HERETO; AND THAT SAID DEDICATION IS THE ACT AND DEED OF SAID LIMITED LIABILITY COMPANY.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND SEAL ON THE ABOVE DATE.

_____

NOTARY PUBLIC [NOTARY STAMP]

CERTIFICATE OF CLERK

THIS IS TO CERTIFY THAT I HAVE EXAMINED THE FOREGOING PLAT AND FOUND THAT IT COMPLIES IN FORM WITH ALL OF THE REQUIREMENTS OF CHAPTER 177, FLORIDA STATUTES, AND WAS FILED FOR RECORD ON THE _____ DAY OF _____, 2018,

AT _____, FILE # _____.

BY: _____
CLERK OF THE CIRCUIT COURT
IN AND FOR VOLUSIA COUNTY, FLORIDA.

REVIEW BY SURVEYOR AND MAPPER FOR THE CITY

I HEREBY CERTIFY , THAT I HAVE EXAMINED THE FORGOING PLAT ENTITLED "ANGLER'S COVE" FOR COMPLIANCE WITH THE REQUIREMENTS OF CHAPTER 177, FLORIDA STATUTES, AND THAT I HAVE PROVIDED BOTH THE CITY AND THE SURVEYOR MAPPER OF RECORD A LIST OF DEVIATIONS, IF ANY, FROM SUCH REQUIREMENTS.

_____ _____
SIGNATURE DATE

PRINTED NAME: _____ _____
P.L.S. / P.S.M. NUMBER

CERTIFICATE OF SURVEYOR AND MAPPER

KNOW BY ALL THESE PRESENTS. THAT THE UNDERSIGNED, BEING A PROFESSIONAL SURVEYOR AND SURVEYOR AND MAPPER, DOES HEREBY CERTIFY THAT THE PLAT SHOWN AND DESCRIBED HEREON, ENTITLED "ANGLER'S COVE" WAS PREPARED UNDER MY DIRECTION AND SUPERVISION, THAT THE PLAT COMPLIES WITH ALL OF THE SURVEY REQUIREMENTS OF CHAPTER 177, FLORIDA STATUTES AND THAT ALL MONUMENTATION SHOWN HEREON OR REQUIRED PER CHAPTER 177, FLORIDA STATUTES, HAS BEEN PROPERLY PLACED.

_____ _____
DAVID McMILLEN DATE
L.S. NUMBER 6378
A1A SURVEYING, INC.
244 RIDGEWOOD AVENUE,
DAYTONA BEACH, FLORIDA 32117 (LB) LICENSED BUSINESS # 8205

CITY COUNCIL CERTIFICATE OF APPROVAL

THIS STATEMENT HEREBY CERTIFIES THAT THE PLAT ENTITLED "ANGLER'S COVE" WAS APPROVED BY THE PORT ORANGE CITY COUNCIL ON THIS _____DAY OF _____, 2018.

BY: _____ ATTEST: _____
MAYOR OF THE CITY OF PORT ORANGE CLERK OF THE CITY OF PORT ORANGE

PLANNING COMMISSION CERTIFICATE OF APPROVAL

THIS STATEMENT HEREBY CERTIFIES THAT THE PLAT ENTITLED "ANGLER'S COVE" WAS APPROVED BY THE PORT ORANGE PLANNING COMMISSION ON THIS _____ DAY OF _____, 2018.

BY: _____
CHAIRMAN OF THE PORT ORANGE PLANNING COMMISSION

ANGLER'S COVE

PLAT BOOK _____ PAGE _____

A REPLAT OF A PORTION OF WINTHORP HOLDING CORPORATION'S RESUBDIVISION OF BLOCKS 19 TO 29 INCLUSIVE, OF HALIFAX ESTATES (M.B 11, PG. 107).

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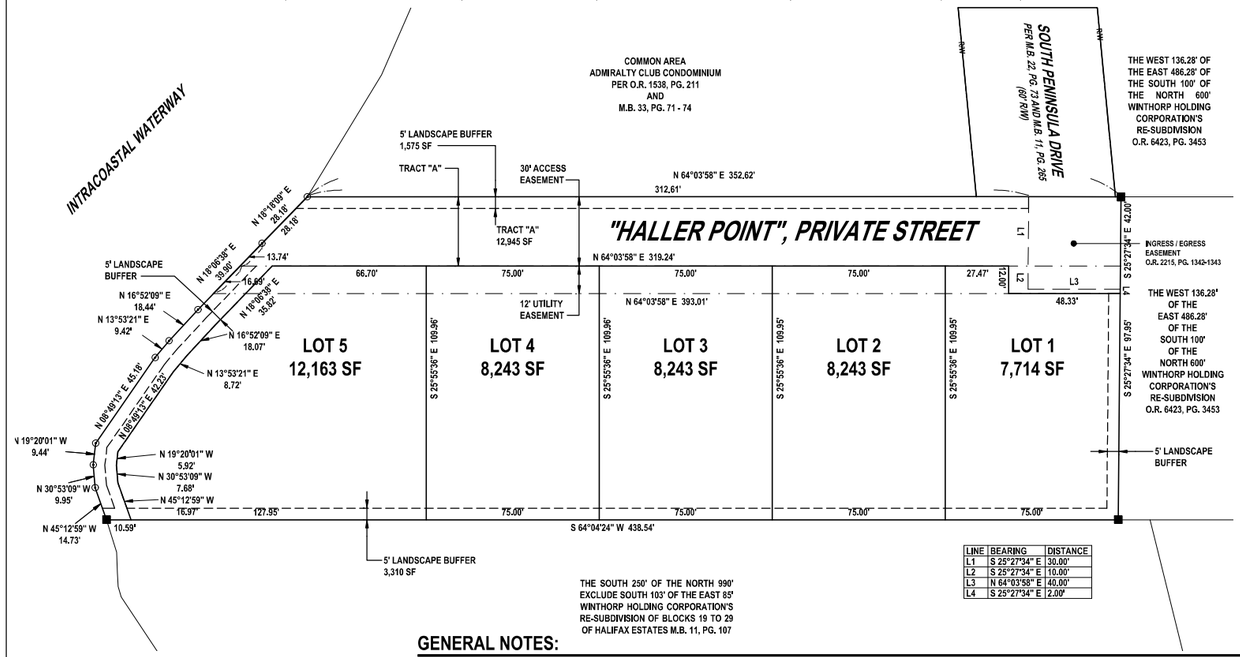

LINE	BEARING	DISTANCE
L1	S 25°27'34" E	30.00'
L2	S 25°27'34" E	10.00'
L3	N 64°03'58" E	40.00'
L4	S 25°27'34" E	2.00'

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10. ALL PLATTED UTILITY EASEMENTS SHALL PROVIDE THAT SUCH EASEMENTS SHALL ALSO BE EASEMENTS FOR THE CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES; PROVIDED, HOWEVER, NO SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES SHALL INTERFERE WITH THE FACILITIES AND SERVICES OF AN ELECTRIC, TELEPHONE, GAS, OR OTHER PUBLIC UTILITY. IN THE EVENT A CABLE TELEVISION COMPANY DAMAGES THE FACILITIES OF A PUBLIC UTILITY, IT SHALL BE SOLELY RESPONSIBLE FOR THE DAMAGES. THIS SECTION SHALL NOT APPLY TO THOSE PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS, OR OTHER PUBLIC UTILITY. SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION.
11. ALL OTHER EASEMENTS ARE SUBORDINATE TO ANY CONSERVATION EASEMENTS DEDICATED HEREON. THERE SHALL BE NO REMOVAL OR DISTURBANCE OF ANY VEGETATION WITHIN SUCH CONSERVATION EASEMENTS, ANY PROPOSED CONSTRUCTION OR OTHER USE WITHIN A CONSERVATION EASEMENT MUST BE REVIEWED AND APPROVED BY THE CITY OF PORT ORANGE AND ANY OTHER AUTHORITY HAVING JURISDICTION OVER THE CONSERVATION EASEMENT.
12. TREE CONSERVATION EASEMENTS AS DEFINED ON THIS PLAT IS FOR THE EXPRESS PURPOSE OF THE PRESERVATION AND LONGEVITY OF THE TREES THEREIN. ACTIONS DETRIMENTAL TO TREE HEALTH AND SURVIVAL WITHIN THE BOUNDARIES OF THE EASEMENT ARE PROHIBITED WITHOUT THE EXPRESS PERMISSION OF THE CITY OF PORT ORANGE AND ANY OTHER AUTHORITY HAVING JURISDICTION OVER THE CONSERVATION EASEMENT. NOTHING HEREIN SHALL, HOWEVER, BE CONSTRUCTED TO PREVENT NATURAL VEGETATION WITHIN THE EASEMENT AREA FROM BEING CLEARED BY HAND TO PROVIDE A NEAR, MANICURED APPEARANCE. IN ADDITION, NOTHING HEREIN SHALL BE CONSTRUCTED TO PREVENT THE PLACEMENT OF SOD, IRRIGATION AND LANDSCAPE PLANTS OR TO PREVENT NORMAL LAWN MAINTENANCE SUCH AS MOWING, EDGING AND WEEDING NOT HARMFUL TO THE OBJECTIVE OF TREE PRESERVATION WITHIN THE EASEMENT AREA. ANY PROPOSED CONSTRUCTION OR OTHER USE WITHIN A CONSERVATION EASEMENT MUST BE REVIEWED AND APPROVED BY THE CITY OF PORT ORANGE AND ANY OTHER AUTHORITY HAVING JURISDICTION OVER THE CONSERVATION EASEMENT.
13. THE COMMON AREAS GRANTED TO ANGLER'S COVE HOMEOWNERS' ASSOCIATION, INC. BY THIS PLAT AND VIA SEPARATE INSTRUMENT SHALL BE SUBJECT TO EASEMENT AS SHOWN OR DESCRIBED HEREON OR GRANTED IN ACCORDANCE WITH ANGLER'S COVE HOMEOWNERS' ASSOCIATION COVENANTS AND RESTRICTIONS.
14. ANGLER'S COVE HOMEOWNERS' ASSOCIATION, INC., A FLORIDA NON-PROFIT CORPORATION SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE DRAINAGE SYSTEM SERVING THE AREA WITHIN THE BOUNDARIES OF THE PLAT, AS DEPICTED ON THE STORMWATER MANAGEMENT PLAN APPROVED FOR THIS DEVELOPMENT BY THE CITY OF PORT ORANGE, FLORIDA. IN THE EVENT THE ASSOCIATION, ITS EMPLOYEES OR ASSIGNS FAILS TO PERFORM THE MAINTENANCE, REPAIR OR REPLACEMENT, AS NECESSARY, OF THE STORMWATER RETENTION AND DRAINAGE FACILITIES LOCATED WITHIN THE BOUNDARY OF THIS PLAT (PROPERTY), THE CITY OF PORT ORANGE SHALL HAVE THE RIGHT TO ENTER UPON THE COMMON AREAS AND DESIGNATED EASEMENT AREAS OF THE PROPERTY AND PROVIDE MAINTENANCE, REPAIR, OR REPLACEMENT OF THE STORMWATER DRAINAGE FACILITY AND SHALL HAVE THE RIGHT TO LIEN ALL OWNERS OF RECORD IN THE PROPERTY FOR THE COST OF SUCH MAINTENANCE, REPAIR, OR REPLACEMENT AS THE CITY MAY DEEM NECESSARY. IN THE EVENT OF TERMINATION, DISSOLUTION, OR FINAL LIQUIDATION OF THE ASSOCIATION, THE RESPONSIBILITY FOR THE OPERATION AND MAINTENANCE OF THE SURFACE WATER OR STORMWATER MANAGEMENT SYSTEM WILL BE TRANSFERRED TO AND ACCEPTED BY AN ENTITY WHICH COMPLIES WITH SECTION 40C-42.027, F.A.C. AND BE APPROVED BY THE SAINT JOHNS RIVER WATER MANAGEMENT DISTRICT PRIOR TO SUCH TERMINATION, DISSOLUTION, OR LIQUIDATION.
15. BUILDING SETBACK REQUIREMENTS:
    FRONT = 25 FT
    REAR = 20 FT
    SIDE = 7.5 FT
    MAXIMUM BUILDING COVERAGE = 40%
    MINIMUM COMMON OPEN SPACE = 20%
    MAXIMUM BUILDING HEIGHT = 45 FT
16. ALL PRIVATE UTILITY, ACCESS, DRAINAGE AND MAINTENANCE EASEMENTS OVER PRIVATE, SHARED DRIVEWAYS ARE INTENDED TO BE RECIPROCAL EASEMENTS TO AND AMONG THE AFFECTED LOT OWNERS FOR PRIVATE UTILITY SERVICE LATERALS, PRIVATE ACCESS, SHARED DRAINAGE AND MAINTENANCE PURPOSES.
17. RETENTION AREAS / COMMON AREAS ARE GRANTED AS EASEMENTS TO THE CITY OF PORT ORANGE ALONG WITH THE RIGHT OF ACCESS, INGRESS AND EGRESS, TOGETHER WITH THE PERPETUAL RIGHT TO HARVEST EXCESS STORMWATER / GROUNDWATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
18. IN ADDITION TO THE USES AND PURPOSES OTHERWISE STATED ON THIS PLAT, ALL DRAINAGE EASEMENTS ARE GRANTED TO THE CITY OF PORT ORANGE FOR THE BENEFIT OF ACCOMMODATING ALL DRAINAGE AND STORMWATER FROM ADJOINING, OFF-SITE DEDICATED RIGHTS-OF-WAY.
19. ANGLER'S COVE HOMEOWNERS' ASSOCIATION, INC. SHALL OWN AND BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING, IRRIGATION, SIDEWALKS, BIKE PATHS, PEDESTRIAN WALKWAYS AND IMPROVEMENTS CONSTRUCTED WITHIN ALL COMMON AREAS.
20. THE ADMIRALITY CLUB ASSOCIATION LOCATED AT 3606 S PENINSULA DRIVE SHALL BE PROVIDED ACCESS THROUGH THE 30-FOOT ACCESS EASEMENT TO MAINTENANCE THEIR CONCRETE MASONRY WALL THAT EXTENDS ON THE NORTH PROPERTY LINE OF ANGLER'S COVE RECORDED IN OFFICIAL RECORDS BOOK _____, PAGES _____
21. PLAT IS SUBJECT TO THE INGRESS / EGRESS EASEMENT IN OR BOOK 2215, PAGE 1342, PRVCF.
22. AN AGREEMENT TO BE DETERMINED BETWEEN THE BENEFITING PARTY TO THE INGRESS / EGRESS EASEMENT AND THE HOA WITH OR BOOK _____, PAGE _____ PRVCF.
23. THIS PLAT IS SUBJECT TO THE ANGLER'S COVE PLANNED UNIT DEVELOPMENT MASTER DEVELOPMENT AGREEMENT AS RECORDED IN OFFICIAL RECORDS BOOK 7381, PAGES 4290 THROUGH 4311 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
24. THE ARTICLES OF INCORPORATION FOR THE ANGLER'S COVE HOMEOWNERS' ASSOCIATION, INC. ARE RECORDED IN OFFICIAL RECORDS BOOK _____, PAGES _____ THROUGH 2896 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA. THE DECLARATION OF COVENANTS AND RESTRICTIONS FOR THE ANGLER'S COVE HOMEOWNERS' ASSOCIATION, INC. ARE RECORDED IN OFFICIAL RECORDS BOOK _____, PAGES _____ THROUGH _____ OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

30 20 10 0 30 60
GRAPHIC SCALE
1"=30'

A1A SURVEYING
LAND SURVEYING CONSTRUCTION LAYOUT
244 Ridgewood Avenue, Daytona Beach, Florida 32117
Voice: 386.882.1868
LB # 8205 LS # 6378

SITE PLAN DRAWINGS FOR

ANGLER'S COVE

SECTION 02, TOWNSHIP 16 S, RANGE 33 E
02-16-33-06-00-0160
3626 SOUTH PENINSULA DRIVE
PORT ORANGE, FL 32127

JANUARY 2018
REVISED FEBRUARY 2018

INDEX OF SHEETS

DWG.NO.	DESCRIPTION
1	COVER
SU-1	BOUNDARY AND TOPOGRAPHIC SURVEY
SU-2	BOUNDARY AND TOPOGRAPHIC SURVEY
3	DEVELOPMENT INFORMATION
4	DEMOLITION, TREE REMOVAL AND SWPPP PLAN
5	SWPPP DETAILS AND NOTES
6	SITE LAYOUT PLAN
7	DRAINAGE AND GRADING PLAN
8	UTILITY PLAN
9	UTILITY DETAILS AND NOTES
10	CITY OF PORT ORANGE DETAILS AND NOTES
11	CITY OF PORT ORANGE DETAILS AND NOTES
12	CITY OF PORT ORANGE DETAILS AND NOTES
13	MAINTENANCE OF TRAFFIC DETAILS
14	LANDSCAPE PLAN
15	IRRIGATION PLAN
16	AUTOTURN TRUCK EXHIBIT

LEGAL DESCRIPTION

BEING A PORTION OF THE SOUTH 140 FEET OF THE NORTH 740 FEET OF WINTHROP HOLDING CORPORATION'S RESUBDIVISION, ACCORDING TO THE MAP IN MAP BOOK 11, PAGE 107 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEASTERLY CORNER OF ADMIRALTY CLUB AS RECORDED IN MAP BOOK 33 PAGES 71 THROUGH 74, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA; THENCE NORTH 64 DEGREES 03 MINUTES 58 SECONDS EAST ON AN EASTERLY EXTENTION OF THE SOUTHERLY LINE OF SAID ADMIRALY CLUB, SAID LINE ALSO BEING THE NORTHERLY LINE OF LANDS AS DESCRIBED IN OFFICIAL RECORD BOOK 6441, PAGES 4368 THROUGH 4369, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, A DISTANCE OF 59.90 FEET TO THE NORTHEASTERLY CORNER OF SAID OFFICIAL RECORD BOOK 6441, PAGES 4368 THROUGH 4369; THENCE SOUTH 25 DEGREES 27 MINUTES 34 SECONDS EAST, A DISTANCE OF 139.95 FEET TO THE SOUTHEASTERLY CORNER OF SAID OFFICIAL RECORD BOOK 6441, PAGES 4368 THROUGH 4369, SAID POINT BEING ON THE SOUTH LINE OF THE SOUTHERLY 140 FEET OF THE NORTHERLY 740 OF SAID WINTHROP HOLDING CORPORATION'S RESUBDIVISION; THENCE SOUTH 64 DEGREES 04 MINUTES 24 SECONDS WEST ALONG SAID SOUTH LINE, A DISTANCE OF 438.54 FEET TO A POINT THE EASTERLY TOP OF BANK OF THE HALIFAX RIVER; THENCE NORTH 45 DEGREES 12 MINUTES 59 SECONDS WEST, A DISTANCE OF 14.73 FEET; THENCE NORTH 30 DEGREES 53 MINUTES 09 SECONDS WEST, A DISTANCE OF 9.95 FEET TO A POINT ON THE WESTERLY FACE OF SEAWALL; THENCE CONTINUE ALONG SAID WESTERLY FACE OF SEAWALL NORTH 19 DEGREES 20 MINUTES 01 SECONDS WEST, A DISTANCE OF 9.44 FEET; THENCE NORTH 08 DEGREES 49 MINUTES 13 SECONDS EAST, A DISTANCE OF 45.18 FEET ; THENCE NORTH 13 DEGREES 53 MINUTES 21 SECONDS EAST, A DISTANCE OF 9.42 FEET; THENCE NORTH 16 DEGREES 52 MINUTES 09 SECONDS EAST, A DISTANCE OF 18.44 FEET; THENCE NORTH 18 DEGREES 06 MINUTES 38 SECONDS EAST, A DISTANCE OF 39.90 FEET; THENCE NORTH 18 DEGREES 18 MIUNTES 09 SECONDS EAST, A DISTANCE OF 28.18 FEET TO A POINT OF INTERSECTION WITH THE SOUTHERLY LINE OF AFOREMENTIONED ADMIRALTY CLUB; THENCE ALONG SAID SOUTHERLY LINE NORTH 64 DEGREES 03 MINUTES 58 SECONDS EAST, A DISTANCE OF 292.72 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS 1.3 ACRES MORE OR LESS.

PROJECT STATEMENT

PROPOSE A 5 LOT SUBDIVISION WITH PAVING GRADING, DRAINAGE, UTILITY AND LANDSCAPE IMPROVEMENTS. THE SITE IS 1.318 ACRES WITH 0.158 ACRES OF IMPERVIOUS SURFACE.

CITY OF PORT ORANGE NOTE

ALL CONSTRUCTION SHALL COMPLY WITH THE STANDARD CONSTRUCTION DETAILS AS ADOPTED BY RESOLUTION OF THE CITY COUNCIL. ANY DEVIATION FFROM THE ADOPTED STANDARDS SHALL BE CLEARLY NOTED AS SUCH IN ALL PLANS AND SPECIFICATIONS. IF INADVERTENT DEVIATIONS IN PLANS ARE NOT SO NOTED, ADOPTED STANDARDS SHALL APPLY.

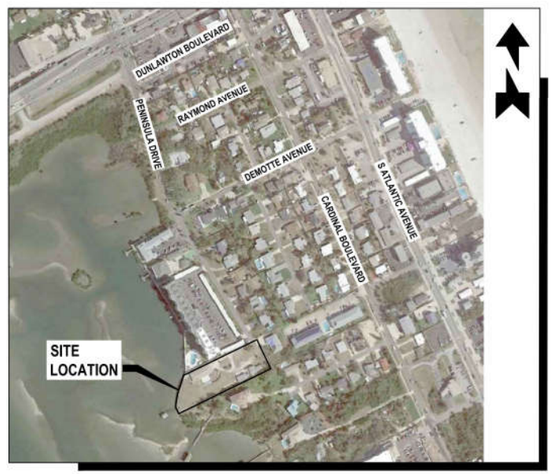
CONTACT NUMBERS

PLANNING & BUILDING - CITY OF PORT ORANGE (386) 506-5600
WATER - CITY OF PORT ORANGE UTILITY DEPARTMENT (386) 506-5754
WASTEWATER - CITY OF PORT ORANGE UTILITY DEPARTMENT (386) 506-5754
GAS - TECO PEOPLES GAS (386) 671-2232
ELECTRIC - FLORIDA POWER & LIGHT (386) 322-3420
TELEPHONE/CABLE - AT&T (386) 254-8550
TELEPHONE/CABLE - BRIGHTHOUSE NETWORKS (386) 760-9950

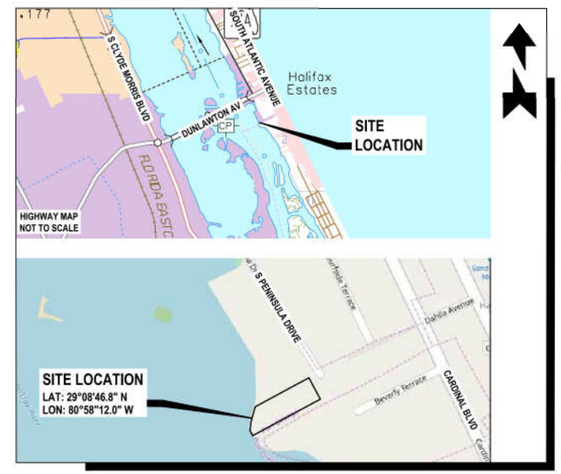
JURISDICTIONAL AGENCY	PERMIT No.
CITY OF PORT ORANGE (DEVELOPMENT ORDER)	.
FDEP (STORMWATER)	0361730001EG
FDEP (NPDES NOI)	.

THE GENERAL CONTRACTOR SHALL ENSURE THAT ANY SUBCONTRACTOR HAS A COMPLETE SET OF CONSTRUCTION DRAWINGS FOR ITS RESPECTIVE WORK. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR SUBCONTRACTORS ONLY UTILIZING INDIVIDUAL DRAWINGS FOR ITS WORK WHERE ADDITIONAL INFORMATION MAY BE CONTAINED ON OTHER DRAWINGS WITHIN THE SET.

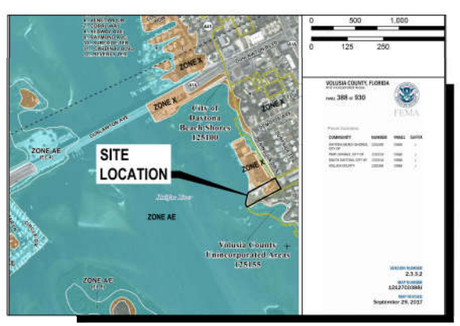
THESE DRAWINGS ARE THE PROPERTY OF NEWKIRK ENGINEERING, INC. ANY USE OR REPRODUCTION IN WHOLE OR PART IS PROHIBITED WITHOUT THE EXPRESSED WRITTEN CONSENT OF NEWKIRK ENGINEERING, INC. COPYRIGHT 2013 ALL RIGHTS RESERVED.



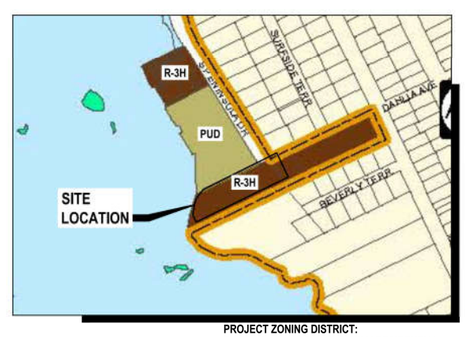
AERIAL MAP
SCALE: 1" = 300'



LOCATION MAP
SCALE: 1" = 400'



FLOOD ZONE MAP
FLOOD ZONE "X"
SCALE: 1" = 800'



ZONING MAP
PROJECT ZONING DISTRICT:
EXISTING: (R-3H) MULTI-FAMILY RESIDENTIAL
PROPOSED: (PUD) PLANNED UNIT DEVELOPMENT
SCALE: 1" = 300'

SOILS MAP
SOIL TYPES:
(40) PALM BEACH-URBAN LAND-PAOLA COMPLEX, 0 TO 8 PERCENT SLOPES
SCALE: 1" = 200'

PROJECT TEAM

PROPERTY OWNER / APPLICANT: INTRACOASTAL LOTS, LLC
MANAGING MEMBER ROBERT C HELLERMANN, JR.
855 OLD SUGAR MILL ROAD
PORT ORANGE, FL 32129
PHONE: 386-423-7468
EMAIL: BOBTEACH@AOL.COM

CIVIL ENGINEER / LANDSCAPE ARCHITECT / PROJECT MANAGER: NEWKIRK ENGINEERING, INC.
1370 N US HIGHWAY 1, SUITE 204
ORMOND BEACH, FL 32174
PHONE: (386) 290-7599
EMAIL: HARRY@NEWKIRK-ENGINEERING.COM

SURVEYOR: A1A GEO, INC.
1370 NORTH US HIGHWAY 1, SUITE 602
ORMOND BEACH, FL 32174
PHONE: (386) 405-6797
EMAIL: A1AGEOINC@GMAIL.COM

GEOTECHNICAL: UNIVERSAL ENGINEERING SCIENCES
911 BEVILLE ROAD, SUITE 3
SOUTH DAYTONA BEACH, FL 32119
PHONE: (386) 756-1105
FAX: (386) 760-4067
EMAIL: BPOHL@UNIVERSALENGINEERING.COM

One Nation... One Number... 811 Know what's below. Call before you dig.

1230 North US1, Suite 3
Ormond Beach, Florida 32174
Phone (386) 872-7794
www.Newkirk-Engineering.com
C.A. # 30209
L.C. # 26000584
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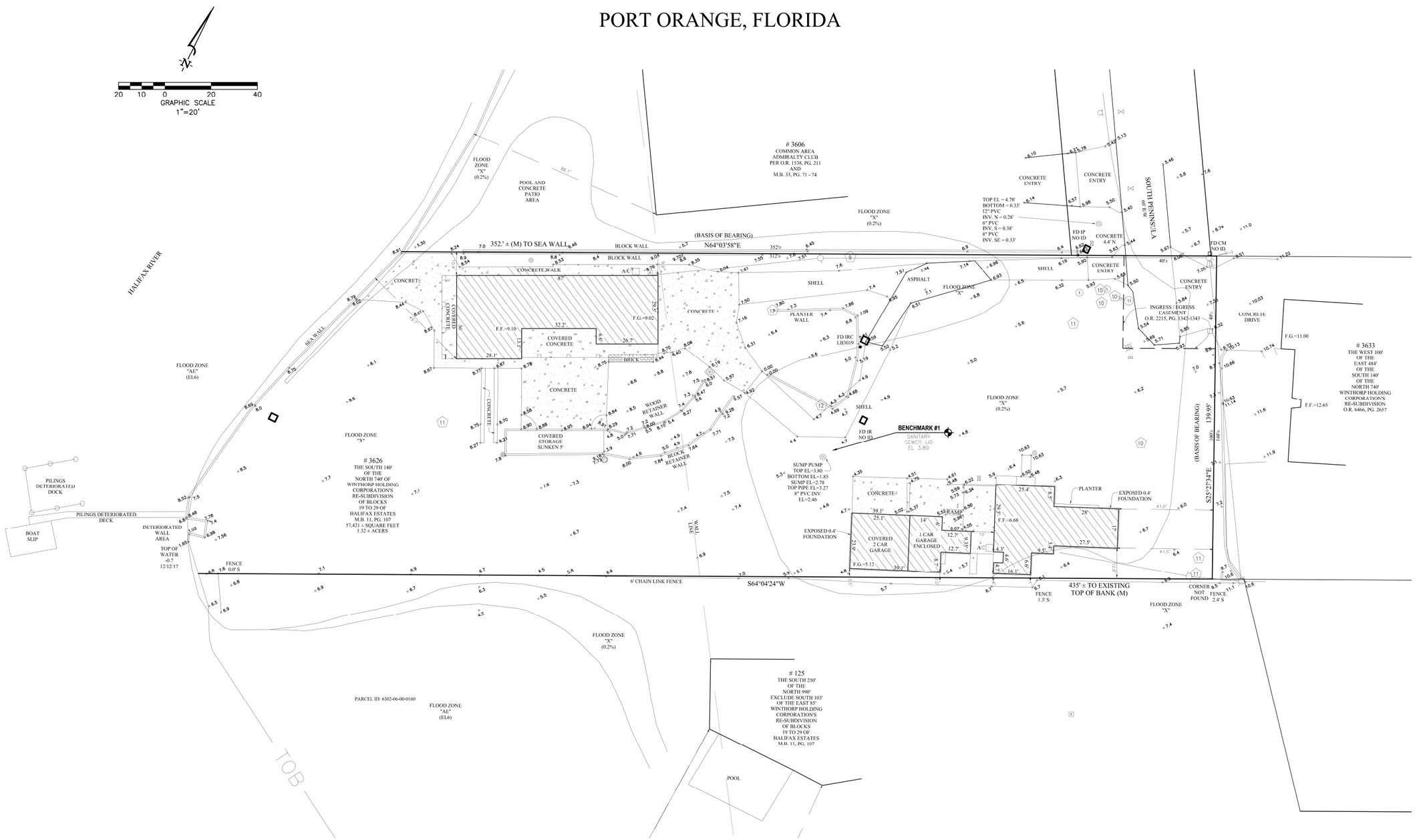
Civil Engineering, Transportation, CEI & Landscape Architecture
NEWKIRK ENGINEERING INC.
BRADLEY DONALD BAUKNECHT LICENSE NO. 75388 STATE OF FLORIDA PROFESSIONAL ENGINEER
BRADLEY D. BAUKNECHT, P.E. # 75388

DRAWING NUMBER
1

PROJECT No. 2017-251

3626 S. PENINSULA DRIVE

PORT ORANGE, FLORIDA



SHEET 1 OF 2

REVISIONS:	PROJECT No: 17-1206	PREPARED FOR THE EXCLUSIVE USE OF:	THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE 1"- 20'. ANY USE OF THIS FILE AT A SCALE LARGER THAN STATED SHALL BE A" THE USER'S OWN RISK.	TYPE OF SURVEY: BOUNDARY, TOPOGRAPHIC & SPECIAL PURPOSE	A1A SURVEYING
– ADDED SSMH INFORMATION.....01/04/18	FIELD WORK BY: AM		SURVEY IS NOT VALID WITHOUT SHEETS 1 THROUGH 2 TOGETHER SEE SHEET 2 OF 2 FOR SURVEYOR'S SIGNATURE	MAP SUBJECT: 3626 S. PENINSULA DRIVE	LAND SURVEYING CONSTRUCTION LAYOUT
	DATE: 12/12/17			ADDRESS: 3626 S. PENINSULA DRIVE PORT ORANGE, FLORIDA	244 Ridgewood Avenue, Daytona Beach, Florida 32117 Voice: 386.882.1868
	OFFICE WORK BY: BR				LB # 8205 LS # 6378
	DATE: 12/15/17				
	FIELD BOOK - PAGE: 08-__				
	SCALE: 1"=20'				

3626 S. PENINSULA DRIVE

PORT ORANGE, FLORIDA

LEGAL DESCRIPTION:

THE SOUTH 140 FEET OF THE NORTH 740 FEET OF WINTHORP HOLDING CORPORATION'S RESUBDIVISION OF BLOCKS 19 TO 29 INCLUSIVE, OF HALIFAX ESTATES ACCORDING TO THE MAP IN MAP BOOK 11, PAGE 107, OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA. LESS AND EXCEPT THAT PORTION DEEDED IN OFFICIAL RECORDS BOOK 2215, PAGE 1342.

THE ABOVE DESCRIBED PARCEL CONTAINS 1.318 ACRES MORE OR LESS.

ABBREVIATIONS / LEGEND:

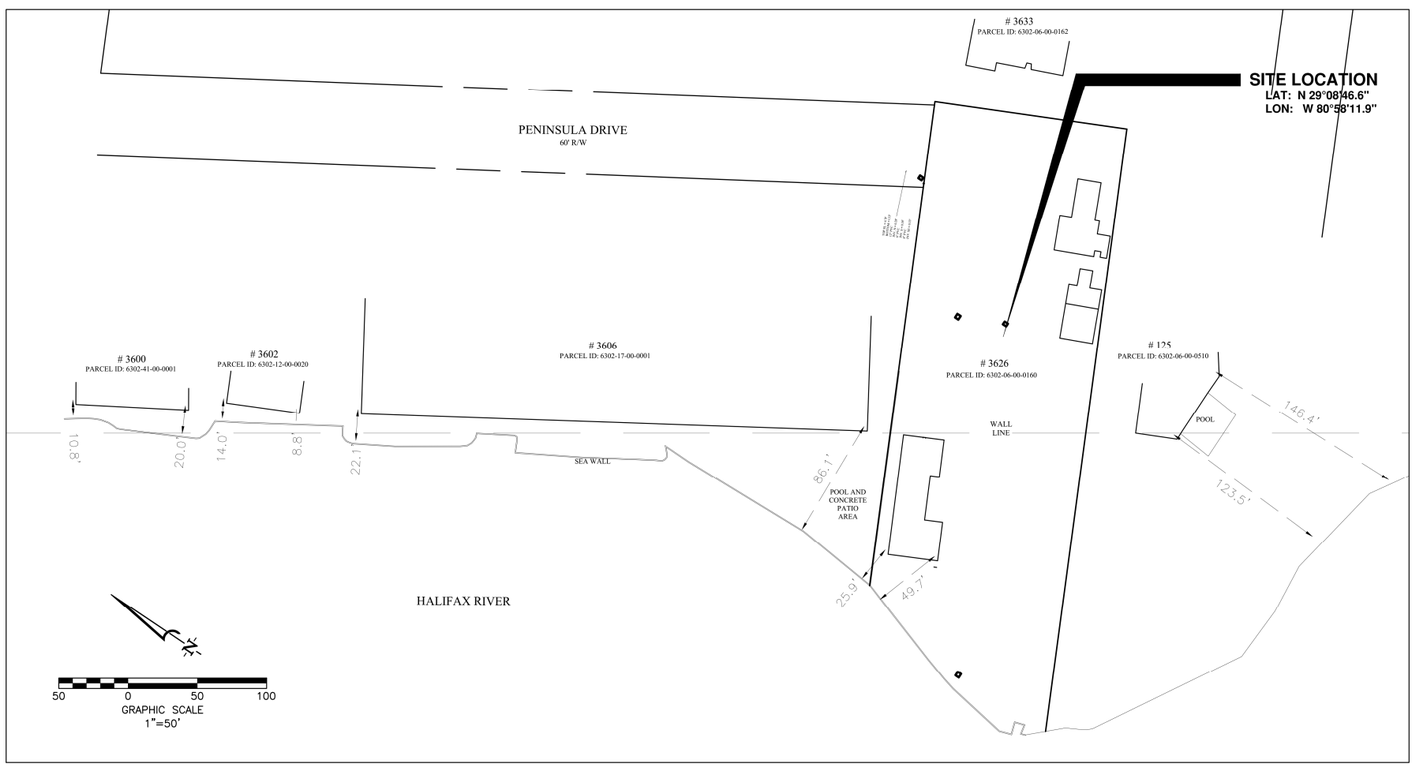
FD	FOUND
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
F.I.R.M	FLOOD INSURANCE RATE MAP
FL	FLORIDA
FPL	FLORIDA POWER AND LIGHT
HJ	HIRN HIP RAIHUN
IR	IRON ROD (AS NOTED)
IRC	IRON ROD & CAP (AS NOTED)
CM	CONCRETE MONUMENT
LB	LICENSED BUSINESS
LC	LICENSED CORPORATION
LLC	LIMITED LIABILITY COMPANY
LS	LICENSED SURVEYOR
(M)	MEASURED
NAVD	NORTH AMERICAN VERTICAL DATUM
NGVD	NATIONAL GEODETIC VERTICAL DATUM
(P)	PLAT
PG(S)	PAGE/PAGES
R/W	RIGHT-OF-WAY
No.	NUMBER
F.F.	FINISHED FLOOR
G.F.	GARAGE FINISHED FLOOR
RLS	REGISTERED LICENSED SURVEYOR

IRON ROD AND CAP (AS NOTED)
CONCRETE MONUMENT
CONCRETE MONUMENT
ELECTRIC BOX
WOOD POWER POLE
SANITARY SEWER MANHOLE
CLEAN OUT
DRAIN
IRRIGATION METER
WOOD LIGHT POLE
WOOD POLE
WATER METER
WATER VALVE
FIRE HYDRANT

OVERHEAD ELECTRIC
25.3 EXISTING GROUND ELEVATION
26.55 EXISTING HARD ELEVATION
CONCRETE HATCH
BUILDING HATCH

TREE LEGEND / SYMBOLS / COUNT:

OAK TREE	12	*1*
PALM TREE	11	*11*
		12 TOTAL



GENERAL NOTES AND SURVEY REPORT:

1. BEARING STRUCTURE (N 64°03'58" E) ALONG THE SOUTH LINE OF THE ADMIRALTY CLUB CONDOMINIUM AS RECORDED IN PLAT BOOK 33, PAGES 71-74 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA , FOR ANGLE MEASUREMENT ONLY.

2. LEGAL DESCRIPTION NOT PROVIDED. TAKEN FROM OFFICIAL RECORDS BOOK 6441, PAGE 4368, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA. NO TITLE WORK PROVIDED.

3. RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS ( ), WHEN DIFFERS FROM MEASURED.

4. FLOOD PLANE CERTIFICATION ACCORDING TO THE FEMA (FEDERAL EMERGENCY MANAGEMENT AGENCY) F.I.R.M (FEDERAL INSURANCE RATE MAP),CITY OF PORT ORANGE, FLORIDA, COMMUNITY NO. 120313, MAP NO. 12127C 0388 J, DATED: SEPTEMBER 29, 2017. THE PROPERTY IS IN FLOOD ZONE "X"(0.2%) AND "X" THE BASE 100 YEAR FLOOD ELEVATION NOT POSTED.

5. THE ACCURACY OF THE BOUNDARY CONTROL OF THE SUBJECT PROPERTY IS RURAL: THE CLOSURE IS : 1 : 5,000, THE MINIMUM RELATIVE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATIONS OF A CLOSED GEOMETRIC FIGURE IS FOUND TO EXCEED THIS REQUIREMENT

6. HISTORY REFERENCE TO PREVIOUS SURVEY OR HELPER SURVEYS, LINEAGE OF DATA HORIZONTAL DATA REFERENCES, DATE OF ORIGINAL PLAT.
   A.) OFFICIAL RECORDS BOOK 6441, PAGE 4368, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
   B.) ADMIRALTY CLUB CONDOMINIUM, MAP BOOK 33, PAGES 71 - 74, PUBLIC RECORDS VOLUSIA COUNTY, FLORIDA.
   C.) MAP OF WINTHROP HOLDING CORPORATION'S RE-SUBDIVISION, MAP BOOK 11, PAGE 107 VOLUSIA COUNTY, FLORIDA
   D.) OFFICIAL RECORDS BOOK 4428, PAGE 1154, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

7. NO UNDERGROUND UTILITIES LOCATED, EXCEPT AS SHOWN, FIELD VISIBLE

8. DATA SOURCES:
   ELEVATIONS REFER TO (NAVD 88) NATIONAL GEODETIC VERTICAL DATUM 1988. FEET AND DECIMAL PART THEREOF. BENCHMARK REFERENCE NAVD DATUM OF 1988. BENCHMARK NATIONAL GEODETIC SURVEY, DESIGNATION Z 404, ELEVATION = 2.86 FEET AND CHECKED INTO NAIL AND DISK,, MLS BM, ELEVATION 2.74

   A.) BENCHMARK #1: SANITARY SEWER LID LOCATED ON SITE, ELEVATION = 3.80
   B.) BENCHMARK #2:

9. THE HIGH WATER LINE AS SHOWN, WAS DETERMINES BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION. THE INTERPOLATION BETWEEN TIDAL POINTS TAKEN - POINT 3942, MEAN HIGH WATER ELEVATION = 0.02 FEET(NAVD 88) AND POINT 3945, MEAN HIGH WATER ELEVATION = 0.00 FEET (NAVD 88), THE MEAN HIGH WATER AVERAGE IS ELEVATION 0.01 FEET.

10. LIMITATIONS:
   A.) WHEN SOME INSTRUMENTS OF RECORD REFLECTING EASEMENTS, RIGHT-OF-WAY AND OR OWNERSHIP WERE FURNISHED TO THIS SURVEYOR, EXCEPT AS SHOWN. THERE MAY BE ADDITIONAL RESTRICTIONS AND/OR OTHER MATTERS THAT ARE NOT SHOWN ON THIS SURVEY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY, NO UNDERGROUND INSTALLATIONS OR IMPROVEMENTS HAVE BEEN LOCATED EXCEPT AS SHOWN. IF LOCATION OF EASEMENTS OR RIGHT-OF-WAY OF RECORD, IS REQUIRED, THIS INFORMATION MUST BE FURNISHED TO THE SURVEYOR AND MAPPER. PER FLORIDA STATUES RULE 5J-17.052(2)(d)(4). THIS SURVEYOR DOES NOT ACCEPT ANY RESPONSIBLY AND / OR BE HELD NEGLIGENT FOR ANY ERRONEOUS ERRORS DUE TO POSSIBLE DOCUMENTATION, THAT MIGHT COME UP LATER, THIS SURVEYOR ALSO RETAINS THE RIGHT TO REVISE THIS SURVEY, BASED ON NEW EVIDENCE, BROUGHT FORWARD AS OTHER SURVEYS BY OTHERS AND / OR LEGAL(S) DOCUMENTS NOT PROVIDED AT THE TIME OF THIS SURVEY.

   B.) IT IS UNDERSTOOD TO BE THE PROFESSIONAL OPINION OF THIS SURVEYOR AND THE FIRM, FROM WHICH IS FORMULATED ON HIS BEST KNOWLEDGE, INFORMATION AND BELIEF, AND AS SUCH, DOES NOT CONSTITUTE A GUARANTEE OR WARRANTY, EITHER EXPRESSED OR IMPLIED. FURTHERMORE, THIS SURVEYOR AND FIRM, DOES NOT ASSUME RESPONSIBILITY AND SHALL NOT BE LIABLE FOR CLAIMS ARISING FROM ERRONEOUS OR INCORRECT INFORMATION FURNISHED BY THE OWNER, LENDER, OR OWNER'S CONTRACTORS OR OTHERS, WHICH IS USED AS A BASIS TO FORMULATE THIS SURVEYOR'S OPINION.

   C.) ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE PARTY. PER FLORIDA STATUTES CHAPTER RULE 5J-17.051(3)(b)(6)

   D.) THE ACCEPTANCE OF THIS SURVEY AS CERTIFIED FOR THE EXCLUSIVE USE OF NAMES SHOWN HEREON SHALL CONSTITUTE FULFILLMENT OF MY CONTRACTUAL OBLIGATION. "ORIGINAL" AS DEFINED HEREON REFERS TO THE SIGNED AND SEALED GRAPHIC REPRESENTATION OF THE FIELD SURVEY. CAD FILES ARE NOT THE SURVEY AND THERE MAY BE A SURCHARGE FOR THEM.

   E.) TAX PARCEL IDENTIFICATION NUMBERS, ADJACENT OWNERS NAMES AND ADDRESS WHEN SHOWN SHOWN IS EITHER SUPPLIED BY CLIENT AND/OR TAKEN FROM COUNTY APPRAISER'S INTERNET WEB PAGE AND MAY NOT BE THE MOST CURRENT.

   F.) SPECIAL PURPOSE SURVEYS WHEN IDENTIFIED AS TYPE OF SURVEY:
      1.) WHEN TREES AS SHOWN ON THE SURVEY IT IS FOR THE LOCATION OF THE HARDWOOD TREES 6" INCHES DIAMETER TAKEN APPROXIMATELY 4 TO 4-1/2 FEET ABOVE GROUND LEVEL TREE IDENTIFICATION OTHER THAN LOCATION AND SIZE, SEE AN ARBORIST.
      2.) JURISDICTIONAL WETLANDS SHOWN WERE LOCATED FROM FLAGS/MARKS BY BIOLOGIST/ENVIRONMENTALIST ECOLOGICAL CONSULTING SOLUTIONS, INC., PROJECT #355.26.17, DATED 09/19/17 AND FIELD LOCATED 09/21/2017, THE DETERMINATION OF WETLANDS ARE OUT OF THE EXPERTISE OF THIS SURVEYOR AND MAPPER.
      3.) ARCHAEOLOGICAL FEATURES WHEN SHOWN WERE LOCATED FROM OBJECTS IDENTIFIED BY OTHERS AND THE DETERMINATION OF WHAT CONSTITUTES A ARCHAEOLOGICAL FEATURES IS OUT OF THE EXPERTISE OF THIS SURVEYOR AND MAPPER.
      4.) WILDLIFE CORRIDORS OR HABITATS WHEN SHOWN WERE LOCATED FROM OBJECTS IDENTIFIED BY OTHERS AND THE DETERMINATION OF WHAT CONSTITUTES A WILDLIFE CORRIDORS OR HABITATS IS OUT OF THE EXPERTISE OF THIS SURVEYOR AND MAPPER.
      5.) GEO-TECHNICAL BORINGS SHOWN AS MARKED AND FIELD LOCATED.

   G.) TOPOGRAPHIC SURVEY:
      1.) CONTOURS ARE ON ONE FOOT INTERVALS, INTERPOLATED BETWEEN GRIDS, VISIBLE GRADE BREAKS, ALONG WITH RANDOM GROUND ELEVATIONS.
      2.) OFFSITE TOPOGRAPHIC INFORMATION SHOWN IS BASED ON THE REQUEST BY THE CLIENT AND OR THE CLIENTS AGENT, BEING AN ARCHITECT OR ENGINEER.

REVISIONS:	PROJECT No: 17-1206 FIELD WORK BY: AM DATE: 12/12/17 OFFICE WORK BY: BR DATE: 12/15/17 FIELD BOOK - PAGE: 08-__ SCALE: 1"=50'	PREPARED FOR THE EXCLUSIVE USE OF:	THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE 1" - 50'. ANY USE OF THIS FILE AT A SCALE LARGER THAN STATED SHALL BE AT THE USER'S OWN RISK. THE FOREGOING PLAT IS CERTIFIED TO MEET THE STANDARDS OF PRACTICE SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS AS PER CHAPTER 5J17-6, FLORIDA ADMINISTRATIVE CODE, AS PURSUANT TO SECTION 472.027, FLORIDA STATUTES. NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER. 12/15/2017 DAVID McMILLEN	TYPE OF SURVEY: BOUNDARY, TOPOGRAPHIC & SPECIAL PURPOSE MAP SUBJECT: 3626 S. PENINSULA DRIVE ADDRESS: 3626 S. PENINSULA DRIVE PORT ORANGE, FLORIDA	A1A SURVEYING LAND SURVEYING CONSTRUCTION LAYOUT 244 Ridgewood Avenue, Daytona Beach, Florida 32117 Voice: 386.882.1868 LB # 8205 LS # 6378

GENERAL CONSTRUCTION NOTES

1. CITY GOVERNING SPECIFICATIONS: CITY OF PORT ORANGE LAND DEVELOPMENT CODE, CITY OF PORT ORANGE STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS, LATEST EDITION.
2. ALL CONSTRUCTION WITHIN THE FDOT RIGHT-OF-WAY SHALL CONFORM TO THE 2017/2018 EDITIONS OF THE FDOT DESIGN STANDARD INDEXES, THE FDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION AND THE FDOT UTILITY ACCOMMODATIONS MANUAL.
3. ALL UTILITY MATERIAL, CONSTRUCTION AND TESTING COVERED BY THESE DRAWINGS SHALL COMPLY WITH THE CITY OF PORT ORANGE STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS, LATEST EDITION. ALL UTILITY WORK AND CONNECTIONS SHALL BE COORDINATED WITH THE CITY OF PORT ORANGE INSPECTOR.
4. THE CONTRACTOR SHALL PAY FOR AND OBTAIN A BUILDING PERMIT. THE ENGINEER WILL SCHEDULE THE PRECONSTRUCTION CONFERENCE BEFORE THE CONTRACTOR'S START OF WORK. THE CONTRACTOR SHALL CONTACT THE BUILDING DEPARTMENT AT (386) 506-5600 FOR INFORMATION ON ISSUANCE OF CITY PERMITS AND / OR OTHER REQUIREMENTS.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER OF ANY DEFICIENCIES OR DISCREPANCIES AMONG THE DIVISIONS OF THE DRAWING AND SPECIFICATIONS PRIOR TO THE BID DATE. NEITHER THE OWNER OR ENGINEER WILL BE RESPONSIBLE FOR ANY DEFICIENCIES OR DISCREPANCIES RAISED AFTER THE BID OPENING. ACCORDINGLY, IN LIGHT OF THESE OBLIGATIONS, THE ENGINEER IS OBLIGATED TO INTERPRET THE DRAWINGS AND SPECIFICATIONS IN A MANNER THAT WILL PROVIDE THE OWNER WITH A COMPLETE, FUNCTIONING FACILITY FOR THE BID PRICE.
6. THESE DRAWINGS AND THE PROJECT MANUAL ARE COMPLEMENTARY, AND ANY REQUIREMENT OF ONE SHALL BE A REQUIREMENT OF THE OTHER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CAREFULLY EXAMINE THE DRAWINGS AND SPECIFICATIONS AND TO COMPARE THE REQUIREMENTS OF EACH DIVISION AND ENSURE THAT EACH TRADE OR SUBCONTRACTOR IS MAKING THE ALLOWANCES NECESSARY TO PROVIDE THE OWNER A COMPLETE FACILITY, OPERATIONAL IN ALL RESPECTS, UNLESS OTHERWISE SPECIFICALLY STATED IN THE DRAWINGS.
7. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR INSTRUCTING THE CONTRACTOR IN THE METHODS OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE METHOD TO CONSTRUCT THE IMPROVEMENTS AS SHOWN ON THE PLANS.
8. ONLY ONE TEMPORARY CONSTRUCTION SIGN IS PERMITTED, NOT TO EXCEED 32 SQUARE FEET IN SIGN AREA, MAXIMUM HEIGHT OF 8 FEET AND NO CLOSER THAN 10 FT FROM PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL APPLY FOR A TEMPORARY SIGN PERMIT AT THE PORT ORANGE BUILDING DEPARTMENT. THE SIGN MUST BE REMOVED UPON RECEIPT OF THE CERTIFICATE OF OCCUPANCY.
9. LITTER CONTROL MEASURES TO PREVENT WIND-DRIVEN DEBRIS SHALL BE IMPLEMENTED THROUGHOUT THE DURATION OF CONSTRUCTION. ALL DEBRIS SHALL BE REMOVED AND THE PROJECT SITE CLEANED WITHIN 30 DAYS OF COMPLETION OF CONSTRUCTION.
10. AT NO TIME SHALL EXCAVATIONS BE LEFT UNCOVERED AFTER WORKING HOURS. CONTRACTOR SHALL SECURE THE WORK AREA AT THE END OF EACH DAY'S WORK.
11. AT ALL TIMES, THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT UNDERGROUND UTILITIES, STRUCTURES AND OTHER ASSOCIATED FACILITIES FROM DAMAGE DURING CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MEASURES OF PROTECTION. ANY DAMAGED FACILITIES SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE CITY OR ENGINEER AT THE CONTRACTORS EXPENSE.
12. THERE SHALL BE NO DEVIATIONS FROM THESE PLANS UNLESS APPROVED IN WRITING BY THE ENGINEER AND THE OWNER.
13. THE CONTRACTOR SHALL CONTACT ALL CONCERNED UTILITIES AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS.
14. CONTRACTOR SHALL COORDINATE AND COMPLY WITH ALL UTILITY COMPANIES INVOLVED IN PROJECT AND PAY ALL REQUIRED FEES AND COST.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING CERTIFIED MATERIAL TEST RESULTS TO THE ENGINEER OF THE RECORD PRIOR TO THE RELEASE OF FINAL CERTIFICATION BY THE ENGINEER, TEST RESULTS MUST INCLUDE, BUT MAY NOT BE LIMITED TO, DENSITIES FOR SUBGRADE AND BASE DENSITIES AT UTILITY CROSSINGS, MANHOLES, INLETS, STRUCTURES. TEST SHALL INCLUDE ASPHALT GRADATION REPORTS, CONCRETE CYLINDERS, ETC.
16. WHERE NEW ASPHALT MEETS EXISTING ASPHALT, THE EXISTING ASPHALT SHALL BE SAW CUT TO PROVIDE A STRAIGHT EVEN LINE.
17. PRIOR TO REMOVING CURB OR GUTTER, THE ADJACENT ASPHALT SHALL BE SAW CUT TO PROVIDE A STRAIGHT EVEN LINE.
18. ALL PROPOSED ELEVATIONS REFER TO FINISHED GRADES.
19. CONCRETE WALKS SHALL BE 4 INCHES THICK HAVING A 3,000 PSI STRENGTH, POURED OVER PROPERLY PREPARED SUBGRADE. ALL CONCRETE SIDEWALKS SHALL BE 8 INCHES THICK ACROSS DRIVEWAYS. 1/2 INCH EXPANSION JOINTS SHALL BE PLACED AT A MAXIMUM OF 50'. CRACK CONTROL JOINTS SHALL BE 5' ON CENTERS.
20. CORE TESTS SHALL BE TAKEN TO VERIFY THICKNESS AND SUBSURFACE COMPACTION. PROVIDE FOR THREE SAMPLES, RANDOMLY LOCATED. TEST FOR EXTRACTION, GRADATION, LABORATORY DENSITY, AND MARSHALL'S STABILITY. PROVIDE A CERTIFICATE FROM THE TESTING AGENCY THAT MATERIALS AND INSTALLATION COMPLY WITH SPECIFICATIONS, SIGNED BY THE ASPHALTIC CONCRETE PRODUCER AND CONTRACTOR. ALL COSTS OF TESTS SHALL BE PAID BY THE CONTRACTOR. IF TESTS SHOW THE INSTALLATION DOES NOT MEET SPECIFICATIONS, THE PAVING SHALL BE REMOVED, REPLACED, AND RETESTED.
21. IF ANY MUCK-LIKE MATERIAL IS DISCOVERED, IT WILL BE REQUIRED TO BE REMOVED, BACKFILLED WITH APPROPRIATE FILL, COMPACTED, AND TESTED USING AASHTO T-180 MODIFIED PROCTOR METHOD.
22. FILL MATERIAL IS TO BE PLACED IN ONE FOOT LIFTS AND COMPACTED TO THE APPROPRIATE DENSITY (98% FOR PAVED AREAS AND 95% FOR BUILDING PADS AND ALL OTHER AREAS AS PER AASHTO T-180).
23. NO BURYING OF ANY ORGANIC MATERIALS ALLOWED.
24. THERE WILL BE NO PROPOSED OVERHEAD UTILITY AND SERVICE LINES ASSOCIATED WITH THIS PROJECT. ALL UTILITY LINES AND SERVICES WILL BE INSTALLED UNDERGROUND AT THE OWNER'S, DEVELOPER'S OR BUILDER'S EXPENSE.
25. ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE CITY STANDARD CONSTRUCTION DETAILS, LATEST VERSION, UNLESS OTHERWISE SPECIFICALLY APPROVED.

SITE PREPARATION FOR PAVEMENT

1. PRIOR TO CONSTRUCTION, THE LOCATION OF EXISTING UNDERGROUND UTILITY LINES WITHIN THE CONSTRUCTION AREA SHOULD BE ESTABLISHED. PROVISIONS SHOULD BE MADE TO RELOCATE INTERFERING UTILITIES TO APPROPRIATE LOCATIONS. IT SHOULD BE NOTED THAT IF UNDERGROUND PIPES ARE NOT PROPERLY REMOVED OR PLUGGED, THEY MAY SERVE AS CONDUITS FOR SUBSURFACE EROSION WHICH MAY SUBSEQUENTLY LEAD TO EXCESSIVE SETTLEMENT OF THE OVERLYING STRUCTURES.
2. STRIP THE PROPOSED CONSTRUCTION LIMITS OF ALL GRASS, ROOTS, TOPSOIL AND OTHER DELETERIOUS MATERIALS WITHIN AND 3 FEET BEYOND THE PROPOSED PAVEMENT LIMITS. EXPECT INITIAL CLEARING AND GRUBBING TO DEPTHS OF APPROXIMATELY 6 TO 12-INCHES.
3. PROOF-COMPACT THE EXPOSED SURFACE WITH LIGHT TO MEDIUM ROLLER UNTIL YOU MAINTAIN DENSITY OF AT LEAST 98 PERCENT SHOULD BE OBTAINED IN THE UPPER 12 INCHES BELOW BASE COURSE. THE COMPACTED SOILS SHALL EXHIBIT MOISTURE CONTENT WITHIN 2 PERCENT OF THE SOILS OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D-1557). VIBRATORY EQUIPMENT SHOULD BE OPERATED IN STATIC MODE WITHIN 75 FEET OF ADJACENT STRUCTURES.
4. SHOULD THE SOILS EXPERIENCE PUMPING AND SOIL STRENGTH LOSS DURING THE COMPACTION OPERATIONS, COMPACTION WORK SHOULD BE IMMEDIATELY TERMINATED AND (1) THE DISTURBED SOILS REMOVED AND BACKFILLED WITH DRY STRUCTURAL FILL SOILS WHICH ARE THEN COMPACTED, OR (2) THE EXCESS MOISTURE CONTENT WITHIN THE DISTURBED SOILS IS ALLOWED TO DISSIPATE BEFORE RECOMPACTING.
5. TEST THE COMPACTED SURFACE FOR COMPLIANCE AT A MINIMUM OF ONE (1) LOCATION PER 10,000 SQUARE FEET WITHIN THE PAVEMENT AREA (MINIMUM 3 LOCATIONS).
6. PLACE THE COMPACT BACKFILL MATERIAL AS REQUIRED. THE FILL SHALL CONSIST OF "CLEAN" FINE SAND WITH LESS THAN 5 PERCENT SOIL FINES. PLACE FILL IN UNIFORM 10 TO 12-INCH LOOSE LIFTS AND COMPACT EACH LIFT TO A MINIMUM DENSITY OF 95 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DENSITY WITH THE EXCEPTION THAT DENSITIES OF AT LEAST 98 PERCENT PERCENT SHALL BE OBTAINED WITHIN THE UPPER ONE FOOT BELOW BASE COURSE. COMPACTED SOILS SHALL EXHIBIT MOISTURE CONTENT WITHIN 2 PERCENT OF THE SOILS OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D-1557). IF LIGHT EQUIPMENT IS USED, THEN THE LIFT THICKNESS SHALL BE REDUCED TO 8-INCH THICK LIFTS.
7. PERFORM COMPLIANCE TESTS WITHIN EACH LIFT OR FILL AT A FREQUENCY OF NOT LESS THAN ONE TEST PER 10,000 SQUARE FEET OF PAVEMENT AREA (MINIMUM 3 LOCATIONS).

LEGEND

NOTE: NOT ALL SYMBOLS SHOWN HERE MAY BE APPLICABLE TO THESE DRAWINGS, ALSO THERE MAY BE ADDITIONAL SYMBOLS WITHIN PLANS NOT SHOWN HERE, SEE INDIVIDUAL DRAWING LEGEND WHERE APPLICABLE.

#3	BENCHMARK ID		
B24	BORING ID		FOUND 4" BY 4" CONCRETE MONUMENT L.B. #3724
	EXISTING CABLE TV PEDESTAL		EXISTING EASEMENT
	EXISTING CAP OR PLUG	FOC	EXISTING UNDERGROUND FIBER OPTIC CABLE
	EXISTING CLEAN OUT	#FM	EXISTING FORCE MAIN (# INDICATES SIZE)
	EXISTING CONDUIT RISER/ MARKER	GAS	EXISTING GAS MAIN
	EXISTING ELECTRIC METER	OHE	EXISTING OVERHEAD ELECTRIC CABLES
11.7	EXISTING ELEVATION (SOFT)	OHT	EXISTING OVERHEAD TRAFFIC SIGNAL CABLE
5.0±	PROPOSED ELEVATION (SOFT)	#RAW	EXISTING RAW WATER MAIN (# INDICATES SIZE)
11.75	EXISTING ELEVATION (HARD)	#REC	EXISTING RECLAIM WATER MAIN (# INDICATES SIZE)
5.00	PROPOSED ELEVATION (HARD)	#SAN	PROPOSED SANITARY SEWER (# INDICATES SIZE)
	EXISTING FIRE HYDRANT	#WM	PROPOSED WATER MAIN (# INDICATES SIZE)
	PROPOSED FIRE HYDRANT	12	EXISTING CONTOUR
	EXISTING FLOW DIRECTION	12	PROPOSED CONTOUR (SOFT)
	PROPOSED FLOW DIRECTION	12	PROPOSED CONTOUR (HARD)
	EXISTING GAS METER	UTEL	EXISTING UNDERGROUND TELEPHONE CABLE
	EXISTING GAS VALVE	UTV	EXISTING UNDERGROUND TELEVISION CABLE
	EXISTING GUY WIRE & ANCHOR PIN	UGE	EXISTING UNDERGROUND ELECTRICAL POWER CABLE
	EXISTING MAIL BOX		JURISDICTIONAL WETLAND LINE
	EXISTING MANHOLE (UNKNOWN)	#SAN	EXISTING SANITARY SEWER (# INDICATES SIZE)
	PROPOSED MANHOLE	#WM	EXISTING WATER MAIN (# INDICATES SIZE)
	EXISTING SANITARY SEWER CLEANOUT		EXISTING PIPE OR CONDUIT (TYPE SPECIFIED)
	EXISTING SANITARY SEWER MANHOLE		EXISTING SWALE OR CENTER OF DITCH
	EXISTING ROAD SIGNS AND POSTS		PROPOSED SWALE OR CENTER OF DITCH
	PROPOSED SIGN AND POST		EXISTING TOP OF DITCH BANK
	EXISTING TEE		EXISTING BOTTOM OF DITCH BANK
	EXISTING UTILITY POLE		EXISTING WOOD FENCE
	EXISTING VALVE IRRIGATION		EXISTING WIRE OR CHAIN LINK FENCE
	EXISTING VALVE WATER		PROPOSED WIRE OR CHAIN LINK FENCE
	PROPOSED WATER VALVE		PROPOSED SILT/SEDIMENT FENCE
	EXISTING WATER METER		PROPOSED COIR ROLL OR WATTLE
	EXISTING STORM SEWER WITH INLET		PROPOSED FLOATING TURBIDITY BARRIER
	PROPOSED STORM SEWER WITH INLET	TP	PROPOSED TREE PROTECTION
	FOUND 1/2" CAPPED IRON ROD L.B. #3724		
	FOUND 1/2" IRON ROD (NO I.D.)		

SITE DEVELOPMENT USAGE

1. SETBACK (PUD ZONING):

FRONT	25 FT
REAR	20 FT
SIDE	7.5 FT
MAXIMUM BUILDING COVERAGE:	40%
MINIMUM OPEN SPACE:	40%
MAXIMUM BUILDING HEIGHT:	45 FT
MINIMUM LIVING AREA/D.U.	2,500 SF
MINIMUM LOT AREA / D. U.	7,500 SF
MINIMUM LOT WIDTH	75 FT
MINIMUM COMMON OPEN SPACE	20%
MAXIMUM IMPERVIOUS AREA	60%

2. LANDSCAPE BUFFERS (DEVELOPMENT PERIMETER):

NORTH	5 FEET
*SOUTH	5 FEET (PERIMETER BUFFER NATURAL VEGETATION TO REMAIN)
*EAST	5 FEET (PERIMETER BUFFER NATURAL VEGETATION TO REMAIN)
WEST	5 FEET
*SOUTH AND EAST	BORDERS WILL REMAIN AS EXISTING CONDITIONS OR AT TIME OF EACH LOT BUILD OUT SHALL BE PURVIEW TO THE MINIMUM LANDSCAPE REQUIREMENTS OF THE PORT ORANGE LDC

3. EXISTING SITE COVERAGE:

	SQ. FT	ACRE	%
BUILDINGS	4,938	0.113	8.7
PAVEMENT	1,498	0.034	2.6
CONCRETE SIDEWALKS	6,375	0.147	11.2
OPEN SPACE	44,740	1.027	77.6
TOTAL SITE	57,551	1.321	100.00
TOTAL IMPERVIOUS	12,811	0.294	22.4

4. PROPOSED SITE COVERAGE:

	SQ. FT	ACRE	%	
PAVERS	6,643	0.153	11.6	
CONCRETE SIDEWALKS	2,565	0.058	4.4	
TOTAL SITE	57,551	1.321	100.00	
TOTAL IMPERVIOUS	9,208	0.211	16.0	(60% MAX)
TOTAL OPEN SPACE	48,343	1.110	84.0	
TOTAL COMMON SPACE	12,945	0.297	22.5	

5. EXISTING URBAN HIGH DENSITY RESIDENTIAL (8-16 UNITS) = 21 UNITS
PROPOSED SUBURBAN RESIDENTIAL (2-4 UNITS) = 5 UNITS

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS - 2017/2018 AND QUALIFIED PRODUCTS LIST

INDEX NO.	DESCRIPTION	INDEX NO.	DESCRIPTION
102	TEMPORARY EROSION AND SEDIMENT CONTROL	514	OPTIONAL BASE GROUP AND STRUCTURAL NUMBERS
200	STRUCTURE BOTTOMS - TYPES J AND P	515	TURNOUTS
205	PIPE BACKFILL	546	SIGHT DISTANCE AT INTERSECTIONS
214	CURB INLET TOP - TYPE 9	600	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES
232	DITCH BOTTOM INLETS - TYPES C, D, E AND H	602	TWO-LANE, TWO-WAY, WORK ON SHOULDER
261	U-TYPE CONCRETE ENDWALLS - BAFFLES AND AND GRATE OPTIONAL - 15" TO 30" PIPE	603	TWO-LANE, TWO-WAY, WORK WITHIN THE TRAVEL WAY
281	DITCH PAVEMENT AND SODDING	17302	TYPICAL SECTIONS FOR PLACEMENT OF SINGLE & MULTIPLE-COLUMN SIGNS
300	CURB & CURB AND GUTTER	17346	SPECIAL MARKING AREAS
304	PUBLIC SIDEWALK CURB RAMPS		
305	CONCRETE PAVEMENT JOINTS		
310	CONCRETE SIDEWALK		
505	EMBANKMENT UTILIZATION		

ABBREVIATIONS

AWWA	AMERICAN WATER WORKS ASSOCIATION	H/C	HANDICAP	SAN	SANITARY
CMP	CORRUGATED METAL PIPE	HDPE	HIGH DENSITY POLYETHYLENE	SH	SEASONAL HIGH
CPP	CORRUGATED PLASTIC PIPE	INV	INVERT	SFWMD	SOUTH FLORIDA WATER MANAGEMENT DISTRICT
CTV	CABLE TELEVISION	K_H	HORIZONTAL PERMEABILITY	SMH	SANITARY MANHOLE
DIP	DUCTILE IRON PIPE	K_V	VERTICAL PERMEABILITY	SS	SANITARY SEWER
ESMT	EASEMENT	KO	KNOCK OUT	SWPPP	STORMWATER POLLUTION PREVENTION PLAN
EXIST	EXISTING	LF	LINEAL FEET	TSB	TEMPORARY SEDIMENT BASIN
FAC	FLORIDA ADMINISTRATIVE CODE	MB	MAP BOOK	TYP	TYPICAL
FACBC	FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION	MES	MITERED END SECTION	UGE	UNDERGROUND ELECTRIC
FDEP	FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION	MJ	MECHANICAL JOINT	UGT	UNDERGROUND TELEPHONE
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION	N/A	NOT APPLICABLE	USACOE	UNITED STATES ARMY CORP OF ENGINEERS
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY	NIC	NOT IN CONTRACT	W	WATER (POTABLE)
FH	FIRE HYDRANT	NGVD	NATIONAL GEODETIC VERTICAL DATUM		
FOC	FIBER OPTIC CABLE	OHE	OVERHEAD ELECTRIC		
FF EL	FINISH FLOOR ELEVATION	OR	OFFICIAL RECORD		
FM	FORCE MAIN	PG	PAGE		
FPD	FEET PER DAY	PSI	POUNDS PER SQUARE INCH		
G	GAS	PVC	POLYVINYL CHLORIDE		
GW	GROUND WATER	PVMT	PAVEMENT		
		R	RADIUS		
		RCP	REINFORCED CONCRETE PIPE		
		RPM	REFLECTIVE PAVEMENT MARKER		
		R/W	RIGHT-OF-WAY		

SITE AND GENERAL INFORMATION

1. THE PROPERTY AREA BOUNDARY CONSISTS OF 57,412 SF OR 1.318 ACRES. FOR BOUNDARY AND TOPOGRAPHIC SURVEY REFER TO THE SURVEY PERFORMED BY A1A GEO, INC., PROJECT No. 17-1206 (SEE SHEET No. 2 OF THESE PLANS).
2. THE EXISTING ZONING IS R-3H (MULTI-FAMILY RESIDENTIAL) AND THE PROPOSED ZONING IS PUD (PLANNED UNIT DEVELOPMENT).
3. THE TAX PARCEL NUMBERS ARE 02-16-33-06-00-0160.
6. THE EXISTING SITE CONDITION IS UNDEVELOPED AND PARTIALLY CLEARED AND GRADED. THE FLUCFCS LAND USE IS (120) RESIDENTIAL, HIGH DENSITY (8-16 DWELLING UNITS).
7. PER THE USDA NATURAL RESOURCES CONSERVATION SERVICE FOR VOLUSIA COUNTY, THE SCS SOILS MAP INDICATES THE SITE CONSISTS OF (40) PALM BEACH-URBAN LAND-PAOLA COMPLEX, 0 TO 8 PERCENT SLOPES.
8. THE SITE IS LOCATED WITHIN ZONE "X" PER FEMA MAP PANEL No. 12127C0388 J, DATED SEPTEMBER 29, 2017.
9. ELECTRICAL UTILITY SERVICE WILL BE PROVIDED BY FLORIDA POWER & LIGHT. NATURAL GAS WILL BE PROVIDED BY TECO PEOPLES GAS COMPANY. TELEPHONE, CABLE AND INTERNET SERVICE WILL BE PROVIDED BY AT&T. CABLE TV AND INTERNET CAN ALSO BE PROVIDED BY BRIGHTHOUSE NETWORKS.
10. SOLID WASTE WILL BE COLLECTED AND DISPOSED OF BY WASTE PRO, INC.
11. THE SITE IS NOT LOCATED WITHIN THE LIMITS OF A WELLHEAD PROTECTION ZONE AND THERE IS NO ORDINARY HIGH WATER (OHW) LINE WITHIN THE SITE.
12. STORMWATER WILL BE PROVIDED BY ONSITE SWALES.
13. POTABLE WATER AND WASTEWATER UTILITIES PROVIDED BY CITY OF PORT ORANGE.
14. IRRIGATION SERVICE WILL BE PROVIDED BY A METER AND BACKFLOW PREVENTER.
15. ALL ON-SITE WATER AND SEWER FACILITIES ARE OWNED AND MAINTAINED BY THE PROPERTY OWNER.
16. COMPLIANCE WITH THE LAND DEVELOPMENT CODE MAY NECESSITATE MODIFICATION OF THE CONCEPTUAL PLAN (LDC, CH. 17, SEC. 17(H)(2)(K)).
17. PURSUANT TO THE VOLUSIA COUNTY MANATEE PROTECTION PLAN, THE PROPOSED BOAT SLIPS WILL BE SUBJECT TO THE MANATEE MITIGATION FEE, WHICH IS PROCESSED IN CONJUNCTION WITH THE REQUIRED BUILDING PERMIT FOR THE DOCK AND SLIPS. THE DOCK PROPOSED WITH 4-5 SLIPS WOULD BE CONSIDERED COMMERCIAL, SO THE MANATEE MITIGATION FEE WOULD BE $1,000 / PER SLIP. THE PROPOSED STAND-ALONE DOCK FOR ONE SINGLE-FAMILY RESIDENCE WOULD HAVE A MANATEE MITIGATION FEE OF $250.

LOT AREAS TABLE

PARCEL	USE	AREA SF	AREA AC
LOT 1	RESIDENTIAL	7714	0.177
LOT 2	RESIDENTIAL	8243	0.189
LOT 3	RESIDENTIAL	8243	0.189
LOT 4	RESIDENTIAL	8243	0.189
LOT 5	RESIDENTIAL	12163	0.279
TRACT A	COMMON AREA	12945	0.298
PROJECT TOTAL		57551	1.321

REVISIONS

DATE	DESCRIPTION
2/7/18	PER CITY COMMENTS

1230 North US1, Suite 3
Ormond Beach, Florida 32174
Phone (386) 872-7794
www.Newkirk-Engineering.com
C.A. # 30209
L.C. # 26000584
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Civil Engineering, Transportation, CEI & Landscape Architecture
NEWKIRK ENGINEERING INC.

DEVELOPMENT INFORMATION
ANGLER'S COVE
3626 PENINSULA DRIVE
PORT ORANGE, FL 32127

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BRADLEY DONALD BAUKNECHT LICENSE NO. 75388 STATE OF FLORIDA PROFESSIONAL ENGINEER

BRADLEY D. BAUKNECHT, P.E. # 75388

PROJECT No:	2017-251
DATE:	JANUARY 2018
DESIGN BY:	BDB
DRAWN BY:	NWS
CHECKED BY:	BDB
SCALE:	

DRAWING NUMBER

3

20 10 0 20 40

GRAPHIC SCALE
1"=20'

WARNING !!

CONTRACTOR SHALL TAKE ALL PRECAUTIONS DURING CONSTRUCTION TO AVOID CONTACT WITH EXISTING UNDERGROUND UTILITIES AND OVERHEAD ELECTRIC IN THE RIGHT-OF-WAY.

SWPPP INSPECTIONS AND RECORD KEEPING:

INSPECTIONS ARE REQUIRED AT LEAST EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS FOLLOWING A RAINFALL EVENT OF ONE-HALF (½) OF AN INCH OF RAINFALL OR GREATER AND SHALL CONTINUE UNTIL THE SITE COMPLIES WITH FINAL STABILIZATION (NOTICE OF TERMINATION). INSPECTIONS MUST BE CONDUCTED BY A "QUALIFIED" INSPECTOR. "QUALIFIED" IS DEFINED AS A PERSON THAT A). HAS SUCCESSFULLY COMPLETED AND MET ALL REQUIREMENTS NECESSARY TO BE FULLY CERTIFIED THROUGH THE FDEP STORMWATER, EROSION AND SEDIMENTATION CONTROL INSPECTOR TRAINING PROGRAM; B). HAS SUCCESSFULLY COMPLETED AN EQUIVALENT FORMAL TRAINING PROGRAM; OR C). THAT IS QUALIFIED BY OTHER TRAINING OR PRACTICAL EXPERIENCE IN THE FIELD OF STORMWATER POLLUTION PREVENTION AND EROSION AND SEDIMENTATION CONTROL. EACH INSPECTION MUST BE FOLLOWED UP BY A REPORT DOCUMENTING THE INSPECTOR'S FINDINGS AND REQUEST THE REQUIRED MAINTENANCE AND/OR REPAIR FOR THE EROSION AND SEDIMENTATION CONTROL MEASURES. THESE RECORDS ARE USED TO PROVE THAT THE REQUIRED INSPECTION AND MAINTENANCE WERE PERFORMED AND SHALL BE PLACED IN THE SWPPP LEDGER. IN ADDITION TO INSPECTION AND MAINTENANCE REPORTS, RECORDS SHOULD BE KEPT OF CONSTRUCTION ACTIVITIES THAT OCCUR ON THE SITE. THE CONTRACTOR SHALL RETAIN COPIES OF THE SWPPP, ALL REPORTS AND DATA FOR A MINIMUM OF FIVE (5) YEARS AFTER THE PROJECT IS COMPLETE IN PAPER AND CD FORMAT.

LAND ALTERATION / TREE PRESERVATION NOTES:

1. ALL TREES TO REMAIN MUST BE PROTECTED BY TREE PRESERVATION BARRICADES MEETING THE MINIMUM STANDARDS. PROTECTIVE BARRICADES SHALL REMAIN IN PLACE UNTIL LAND ALTERATION AND CONSTRUCTION ACTIVITIES ARE COMPLETED.
2. ALL TRIMMING SHALL BE UNDERTAKEN ON A TREE PROTECTED BY THE PROVISIONS OF THE LAND DEVELOPMENT CODE SHALL BE IN ACCORDANCE WITH THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) A-300 PRUNING STANDARDS.
3. OAK TREES LARGER THAN 36-INCHES AND ABOVE (HISTORIC) PRUNING SHALL BE PERFORMED BY AN ARBORIST CERTIFIED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE OR A REGISTERED CONSULTING ARBORIST WITH THE AMERICAN SOCIETY OF CONSULTING ARBORISTS. THE ARBORIST SHALL UNDERSTAND THAT THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) A300 PRUNING STANDARDS IS A STANDARD OF DIVISION 4.0.
4. ALL TREE ROOTS EXISTING WITHIN APPROVED IMPROVEMENT AREAS AND ORIGINATING FROM A PROTECTED TREE, SHALL BE SEVERED CLEAN AT THE LIMITS OF THE PRESERVED AREA WHERE INDICATED ON THIS PLAN.
5. SEE TREE PROTECTION DETAILS, SHEET No. 21.

BENCHMARK INFORMATION:

#1 BENCHMARK #1 CONCRETE MONUMENT
ELEVATION = 9.04

#2 BENCHMARK #2 X-CUT
ELEVATION = 8.91

#3 BENCHMARK #3 SANITARY SEWER LID
ELEVATION = 4.28

VERTICAL DATA

ELEVATIONS REFER TO (NAVD 88) NORTH AMERICA VERTICAL DATUM 1988. BENCHMARK, DESIGNATION IS A NATIONAL GEODETIC SURVEY DESIGNATION Z 404 ELEVATION 2.86 FEET.

DEMOLITION AND SWPPP NOTES:

1. ALL EROSION CONTROL DEVICES AND VISIBLE BARRICADES SHALL BE INSTALLED AND APPROVED BY THE ENGINEER PRIOR TO THE START OF CLEARING AND GRUBBING.
2. THE CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION MEETING WITH THE CITY AS SPECIFIED PRIOR TO START OF CONSTRUCTION.
3. THE SITE SHALL BE CLEARED AND GRUBBED OF ALL VEGETATION AND DEBRIS WITHIN THE APPROXIMATE LIMITS OF CLEARING AS INDICATED ON THE DRAWING.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE CITY OF PORT ORANGE UTILITY DEPARTMENT, FLORIDA SUNSHINE AND EMERGENCY SERVICES FOR RESPECTIVE UTILITY LOCATIONS AND "NOTICE" OF CONSTRUCTION ACTIVITY.
5. ALL REMOVED MATERIAL SHALL BE HAULED OFF-SITE TO AN APPROVED LANDFILL. TREES MAY BE LOGGED OR MULCHED FOR OFF-SITE DISPOSAL AT THE CONTRACTOR'S DISCRETION.
6. ALL EROSION CONTROL DEVICES SHALL BE PLACED PRIOR TO THE START OF WORK AND REMAIN IN PLACE UNTIL ALL WORK IS COMPLETE.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR PERIODIC INSPECTION AND REMOVAL OF DEBRIS AND SILT BEHIND EROSION CONTROL DEVICES..
8. ALL INLETS AND PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY INLET PROTECTION MEASURES TO PREVENT SILTATION IN THE DRAINAGE SYSTEM (SEE DETAILS THIS DRAWING). THE ENTIRE DRAINAGE SYSTEM SHALL BE CLEANED OF ALL DEBRIS PRIOR TO FINAL ACCEPTANCE.
9. ALL OFF-SITE AREAS DISTURBED DURING CONSTRUCTION ACTIVITY SHALL BE IMMEDIATELY RESTORED TO PRIOR CONDITION UPON COMPLETION OF WORK.
10. SOILS ARE TO BE STABILIZED BY WATER OR OTHER MEANS DURING CONSTRUCTION. THIS IS INTENDED TO REDUCE SOIL EROSION, BLOWING SAND AND THE IMPACT TO NEIGHBORING PROPERTIES.
11. THE CONTRACTOR SHALL PROVIDE THE ENGINEER, CITY A MOT PLAN AT PRECONSTRUCTION MEETING. TRAFFIC SHALL BE ALLOWED TO CONTINUE DURING WORK. PROVIDE MEASURES TO DETOUR TRAFFIC AROUND OPEN EXCAVATION WITH ADEQUATE BARRICADES, SIGNAGE AND FLAGPERSON TO DIRECT TRAFFIC. EMERGENCY SERVICES SHALL BE NOTIFIED 48 HOUR IN ADVANCE.
12. EXISTING DRIVEWAYS SHOWN ADJACENT TO OR OUTSIDE LIMITS OF CONSTRUCTION SHALL REMAIN IN-SERVICE. EXISTING UTILITIES AND DRIVEWAYS SHALL NOT BE REMOVED UNLESS OTHERWISE NOTED.
13. IF ANY DEWATERING IS TO OCCUR DURING ANY PHASE OF CONSTRUCTION THEN DEWATERING ACTIVITY SHALL ADHERE TO CHAPTER 40C-22 FAC MORE SPECIFICALLY AS FOLLOWS. PER 40C-22.030(3) A "NOTICED GENERAL SHORT-TERM DEWATERING PERMIT" IS REQUIRED "ONLY IF" DEWATERING EXCEEDS 4 MILLION GALLONS PER DAY, EXCEPT DURING THE FIRST 120 HOURS OF DEWATERING WHEN THE DAILY AND INSTANTANEOUS PUMPAGE RATES SHALL NOT EXCEED 6 MILLION GALLONS PER DAY. AVERAGE DAILY WITHDRAWAL SHALL NOT EXCEED 2 MILLION GALLONS PER DAY FOR THE FIRST 60 DAYS OF THE DEWATERING ACTIVITY AND SHALL NOT EXCEED ONE MILLION GALLONS PER DAY OF A 180 DAY DURATION. EACH SPECIFIC DEWATERING PROJECT SHALL NOT EXCEED 180 DAYS. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE ANY DEWATERING ACTIVITY IS BELOW THE SPECIFIED THRESHOLD. OTHERWISE A PERMIT WILL BE REQUIRED AT THE EXPENSE OF THE CONTRACTOR. THE CONTRACTOR SHALL FAMILIARIZE ITSELF WITH CHAPTER 40C-22 FAC AND BE SOLELY RESPONSIBLE FOR OBTAINING AND SUBMITTING FORM RDS-50 TO SJRWMD A MINIMUM OF 10 DAYS PRIOR TO ANY DEWATERING ACTIVITY. SUBMITTAL OF FORM RDS-50 IS NOT REQUIRED IF DEWATERING IS 300,000 GALLONS PER DAY OR LESS AND WILL NOT EXCEED 30 DAYS IN DURATION.

EROSION CONTROL NOTES:

1. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES. THE GENERAL CONTRACTOR SHALL STRICTLY ADHERE TO THE SWPPP DURING CONSTRUCTION OPERATIONS.
2. NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL EROSION CONTROL DEVICES HAVE BEEN INSTALLED.
3. THE CONTRACTOR SHALL POST "NO TRESPASSING" SIGNAGE AT ALL SITE ENTRANCES PRIOR TO CONSTRUCTION.
4. MAINTAIN EROSION CONTROL MEASURES AFTER EACH RAIN AND AT LEAST ONCE A WEEK.
5. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE GENERAL CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
6. GENERAL CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
7. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION.
8. NO TURBID WATER SHALL BE DISCHARGED OFF-SITE FROM THE DEWATERING OPERATION. CONTRACTOR SHALL TAKE MEASURES TO CONTROL TURBIDITY.
9. IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OF NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
10. GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
11. PROVIDE DUST CONTROL FOR ALL EARTHWORK OPERATIONS. COVER AREA WITH LIGHT COATING OF WATER OR OTHER APPROVED METHOD.

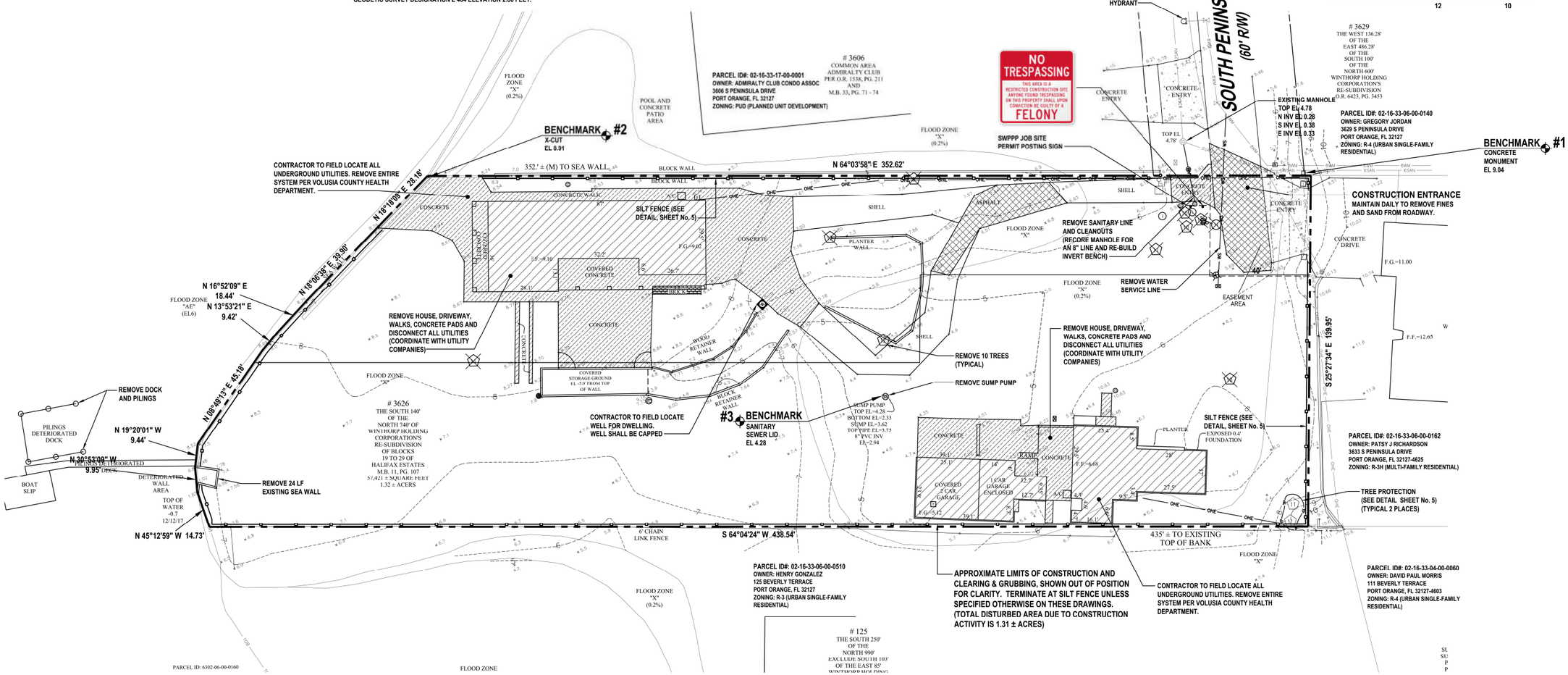
LEGEND:

- PROPOSED SILT FENCE (SEE CITY DETAIL R-22, SHEET No. 5)
- TP — PROPOSED TREE BARRICADE (SEE CITY DETAIL R-23, SHEET No. 5)
- PROPOSED AGGREGATE
- (10) EXISTING TREE (No. INDICATES SIZE)
- TREE TO BE REMOVED
- CONCRETE REMOVAL
- ASPHALT PAVEMENT REMOVAL
- BUILDING REMOVAL

TREE LEGEND :

NOTE : SZ = SIZE OF TREE CALIBER

		EXISTING	REMOVED
OAK TREE	SZ	1	1
PALM TREE	SZ	11	9
		12	10



REVISIONS

DATE	DESCRIPTION
2/7/18	PER CITY COMMENTS

1230 North US1, Suite 3
Ormond Beach, Florida 32174
Phone (386) 872-7794
www.Newkirk-Engineering.com
C.A. # 30209
L.C. # 26000584
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Civil Engineering, Transportation, CEI & Landscape Architecture
NEWKIRK ENGINEERING INC.

DEMOLITION, TREE REMOVAL AND SWPPP PLAN

ANGLER'S COVE

3626 PENINSULA DRIVE
PORT ORANGE, FL 32127

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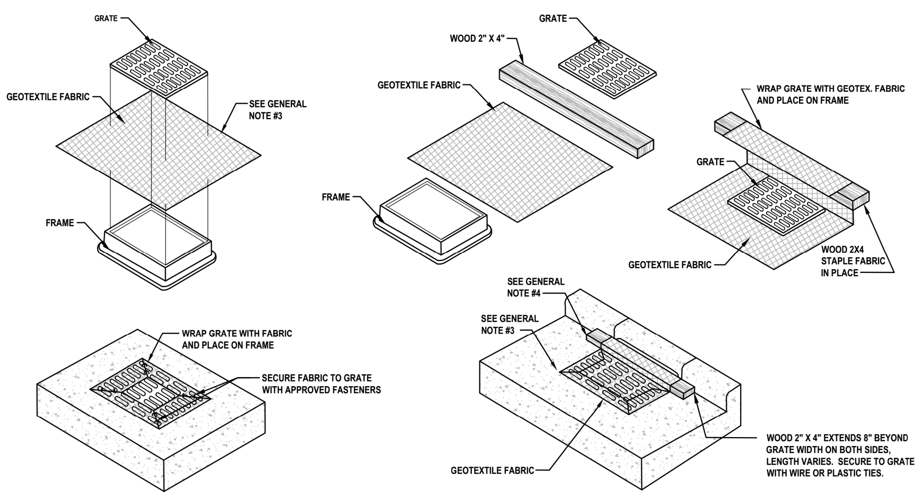
BRADLEY DONALD BAUKNECHT
LICENSE
NO. 75388
STATE OF FLORIDA
PROFESSIONAL ENGINEER

BRADLEY D. BAUKNECHT, P.E. # 75388

PROJECT No:	2017-251
DATE:	JANUARY 2018
DESIGN BY:	BDB
DRAWN BY:	NWS
CHECKED BY:	BDB
SCALE:	1" = 20'

DRAWING NUMBER

4



YARD INLET PROTECTION
(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)

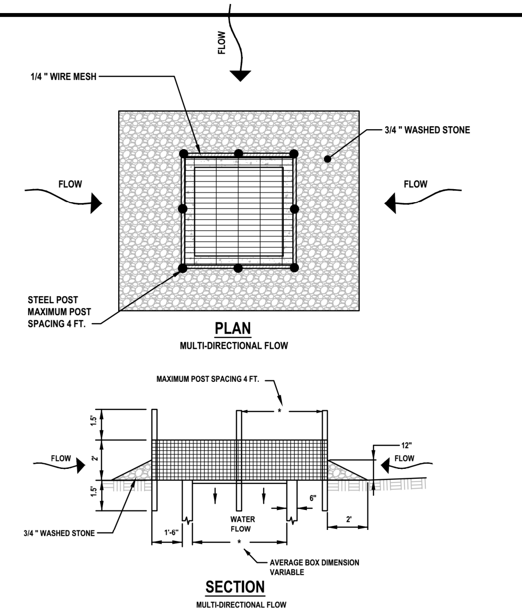
CURB INLET PROTECTION

GENERAL NOTES:

1. GEOTEXTILE TO BE MIRAFI FILTERWEAVE 402 OR GEOTEX 111F. ALTERNATIVES INCLUDE APPROVED EQUAL ASTM D4491 OR 100 TO 150 GALLON PER MINUTE PER SQUARE FOOT.
2. WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.
3. FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
4. FOR CURB INLET PROTECTION AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
5. TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.
6. THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS, OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

GEOTEXTILE FABRIC INLET PROTECTION

NOT TO SCALE

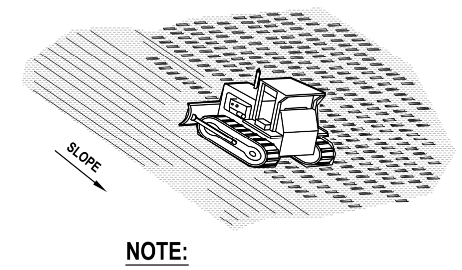


NOTE:

1. SEDIMENT CONTROL STONE SHALL BE 3/4" WASHED STONE.
2. WIRE MESH SHALL BE HARDWARE CLOTH 23 GAUGE MIN. AND SHALL HAVE 1/4 INCH MESH
3. TOP OF WIRE MESH SHALL BE A MINIMUM OF ONE FOOT BELOW THE SHOULDER OR ANY DIVERSION POINT.
4. STEEL POST SHALL BE 5 FT. IN LENGTH, BE INSTALLED 1.5 FT. DEEP MINIMUM, AND BE OF THE SELF-FASTENER ANGLE STEEL TYPE.
5. WOOD POST SHALL BE 5 FT. IN HEIGHT, BE INSTALLED TO 1.5 FT. DEEP MINIMUM, AND BE 3 INCHES IN DIAMETER.
6. POST SPACING SHALL BE A MAXIMUM OF 4 FT.

HARDWARE CLOTH INLET PROTECTION

NOT TO SCALE

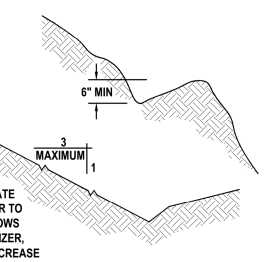


NOTE:

USE DOZER TRACKS TO CREATE GROOVES PERPENDICULAR TO THE SLOPE. GROOVES WILL CATCH SEED, FERTILIZER, MULCH, RAINFALL AND DECREASE SEDIMENT IN RUNOFF.

TRACKING DETAIL

NOT TO SCALE



CULTIVATE SOILS TO CREATE FURROWS PERPENDICULAR TO SLOPE. CONTOURS/FURROWS WILL CATCH SEED, FERTILIZER, MULCH, RAINFALL AND DECREASE RUNOFF.

SURFACE ROUGHENING

(NOT TO SCALE)

TEMPORARY SEEDING SPECIFICATION:

GENERAL
SEEDING CAN BE USED FOR TEMPORARY STABILIZATION. DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS CEASED FOR MORE THAN 7 DAYS SHALL BE TEMPORARILY SEEDED AND WATERED. AREAS WHERE FINAL GRADING HAS BEEN COMPLETED FOR MORE THAN 7 DAYS SHALL BE TEMPORARILY SEEDED. TEMPORARY SEED MIXTURE IS SPECIFIED BELOW.

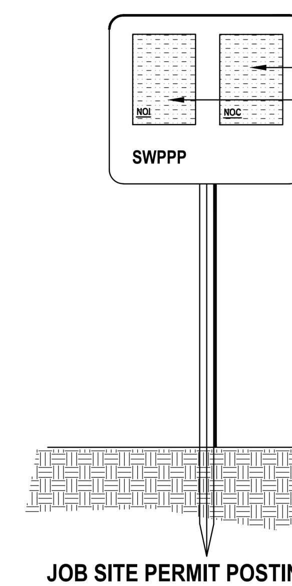
SEEDING MIXTURES
SEED MIXTURE SHALL BE BERMUDA COMMON 90 LB PURE LIVE SEED PER ACRE, FIBER 2000 LB PER ACRE, STABILIZER 120 LB PER ACRE AND FERTILIZER 300 LB PER ACRE.

ALL SLOPES AND FLAT GRADE
APPLY 6:20:20 COMMERCIAL ORGANIC FERTILIZER AT A RATE OF 300 LB PER ACRE AND SEED IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

TEMPORARY SEEDING PLANTING DATES	SEED VARIETY	APPLICATION RATE
MARCH 15 - OCTOBER 15	PENSACOLA BAHIA (SCARIFIED)	90
	BERMUDA COMMON (50% HULLED)	25
0CTOBER 16 - MARCH 14	PENSACOLA BAHIA (SCARIFIED)	100
	BERMUDA COMMON (50% HULLED)	35
	ANNUAL RYE GRASS	10
	RYE GRAIN	30

MULCH SEEDED AREA WITH 2 TONS PER ACRE CLEAN GRAIN STRAW. ANCHOR STRAW WITH HYDRAULIC WOOD FIBER MULCH AT THE RATE OF 1000 LB PER ACRE, OR 150-200 POUNDS OF ORGANIC MULCH TACKIFIER PER ACRE, OR USE NETTING.

HYDRO FIBER MULCH MIXTURE SHALL BE PERFORMED IN A TANK WITH A CONTINUOUS AGITATION AND RECIRCULATION SYSTEM WITH SUFFICIENT OPERATING CAPACITY TO PRODUCE A HOMOGENOUS SLURRY AND DISCHARGE SYSTEM WHICH WILL APPLY THE SLURRY AT A CONTINUOUS AND UNIFORM RATE. MIXTURE SHALL CONTAIN A GREEN FUGITIVE DYE AS AN APPLICATION INDICATOR.

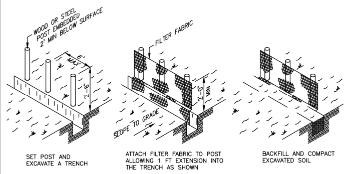


NOTICE OF COVERAGE (NOC)
NOTICE OF INTENT (NOI)

1. NOTICE OF INTENT (NOI) (APPLICATION FOR PERMIT COVERAGE) AND NOTICE OF COVERAGE (NOC) (OR APPROVAL FROM REGULATORY AGENCY) ARE TO BE POSTED.
2. ALL POSTING IS TO BE AT JOB SITE ENTRANCE WHERE IT MAY BE VIEWED BY AUTHORITIES HAVING JURISDICTION AND THE PUBLIC.
3. POSTING IS REQUIRED FROM THE DAY CONSTRUCTION ACTIVITIES START UNTIL THE NOTICE OF TERMINATION (NOT) IS FILED.
4. PROJECT MUST BE POSTED IN TWO LOCATIONS; AT THE JOB SITE ENTRANCE AND INSIDE WALL OF JOB TRAILER.

JOB SITE PERMIT POSTING DETAIL

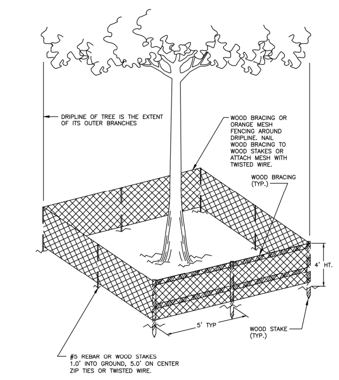
NOT TO SCALE



SILT FENCE DETAIL
F.D.O.T. INDEX NO. 102

NOTES:
1. MATERIALS, CONSTRUCTION METHODS AND MAINTENANCE SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND DESIGN STANDARDS CURRENT EDITION.
2. CONTRACTOR SHALL PROVIDE SILT FENCES, SYNTHETIC JUTE BALES, WATTLES, &/OR HAVE BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED AT ALL STORMWATER DISCHARGE POINTS FOR EROSION CONTROL AND SEDIMENT CONTROL DURING CONSTRUCTION.
3. CONTRACTOR SHALL ROUGH GRADE STORM- WATER 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 SJRWMD.
5. CONTRACTOR WILL BE ALLOWED TO USE A SMALL PIECE OF EQUIPMENT UP TO THE SIZE AND WEIGHT OF A D-3 DOZER TO CLEAR A NARROW PATH TO INSTALL THE SILT FENCE.

STANDARD CONSTRUCTION DETAIL
SILT FENCE TURBIDITY BARRIER
REV. 12/08 | FILE NAME: R22.DWG | DETAIL REF: R-22



NOTE: BARBED WIRE FENCING IS NOT PERMISSIBLE

STANDARD CONSTRUCTION DETAIL
TREE PROTECTION BARRICADE
REV. 12/08 | FILE NAME: R23.DWG | DETAIL REF: R-23

CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES

THE FOLLOWING MEASURES REPRESENT MINIMUM STANDARDS TO BE ADHERED TO BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION OF A PROJECT. THE CITY RESERVES THE RIGHT TO REQUIRE ADDITIONAL MEASURES TO BE EMPLOYED WHEN WARRANTED BY EXTREME CONDITIONS AND/OR THE FAILURE OF THE CONTRACTOR TO EMPLOY THE APPROPRIATE EROSION CONTROL BEST MANAGEMENT PRACTICES. FAILURE TO COMPLY WITH THESE PROVISIONS SHALL RESULT IN THE ISSUANCE OF A "STOP WORK ORDER".

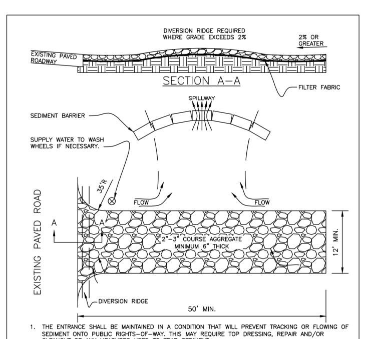
1. NO DISTURBANCE OF PROPOSED CONSERVATION EASEMENTS, NATURAL BUFFERS, OR WATER BODIES IS PERMITTED. THE CONTRACTOR SHALL LOCATE THESE AREAS ON SITE AND BARRICADE THEM TO AVOID ANY UNAUTHORIZED CLEARING. BARRICADES AND OTHER PROTECTIVE FENCING ARE TO BE LOCATED AT THE DRIP LINE OF EXISTING NATIVE TREES OR AT THE EDGE OF THE NATIVE UNDER- STORY HABITAT, WHICHEVER IS NEAREST TO THE CONSTRUCTION ACTIVITY.
2. SPECIMEN AND HISTORIC TREES, CONSERVATION EASEMENTS, NATURAL VEGETATION BUFFERS, AND SIMILAR AREAS MUST BE PROTECTED BY BARRICADES OR FENCING PRIOR TO CLEARING. BARRICADES ARE TO BE SET AT THE DRIP LINE OF THE TREES AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. BARBED WIRE IS NOT PERMITTED AS A PROTECTIVE BARRIER.
3. WHERE A CHANGE OF GRADE OCCURS AT THE DRIP LINE OF A SPECIMEN TREE, SILT FENCES WILL BE REQUIRED DURING CONSTRUCTION AND RETAINING WALLS MUST BE INSTALLED PRIOR TO FINAL ACCEPTANCE BY THE CITY.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL PROTECTIVE VEGETATION BARRICADES AND EROSION CONTROL STRUCTURES AND MEASURES IN PLACE PRIOR TO THE COMMENCEMENT OF ANY EARTHWORK, INCLUDING PRELIMINARY GRUBBING. THESE MEASURES INCLUDE, BUT ARE NOT LIMITED TO, TEMPORARY CONSTRUCTION FENCES, SYNTHETIC JUTE BALES, WATTLES, &/OR HAVE BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED, SILT FENCES, AND FLOATING TURBIDITY BARRIERS. FURTHER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL EROSION CONTROL DEVICES THROUGHOUT THE DURATION OF THE ENTIRE PROJECT. MAINTENANCE SHALL INCLUDE PERIODIC INSPECTION AND REMOVAL OF DEBRIS ABUTTING EROSION CONTROL DEVICES AS SPECIFICALLY IDENTIFIED IN CHAPTER 10, ARTICLE I, SECTION 5 OF THE LAND DEVELOPMENT CODE.
5. PRIOR TO THE INSTALLATION OF ANY FILL MATERIALS ON SUBJECT SITE, SILT FENCES SHALL BE INSTALLED (1) ALONG SUBJECT SITE BOUNDARY AND PROPERTY LINES, (2) AT THE EDGE OF CONSERVATION EASEMENTS AND WETLANDS, (3) ADJACENT TO NATURAL LANDSCAPE BUFFERS, (4) AROUND THE PERIMETER OF EXISTING STORM WATER TREATMENT FACILITIES, AND (5) AT ANY ADDITIONAL AREAS THAT THE CITY DEEMS NECESSARY TO BE PROTECTED FROM POTENTIAL EROSION IMPACTS DURING CONSTRUCTION. THESE CONDITIONS SHALL APPLY IN ALL INSTANCES WHERE FILL MATERIAL IS BEING INSTALLED WITHIN 25 FEET OF ANY OF THE AFOREMENTIONED LOCATIONS. WHILE THESE ITEMS REPRESENT THE MINIMUM REQUIREMENTS, THE CITY RESERVES THE RIGHT TO IMPOSE ADDITIONAL PROTECTIVE MEASURES, AS DETERMINED DURING ACTUAL SITE VISITS CONDUCTED AS PART OF THE STANDARD REVIEW OF THE SITE-SPECIFIC ABC CLEARING PERMIT APPLICATION AND THROUGHOUT PROJECT CONSTRUCTION.
6. WHERE FILL MATERIAL IS INTENDED TO BE INSTALLED ADJACENT TO EXISTING VEGETATION WHICH IS INTENDED TO REMAIN NATURAL, THE CONTRACTOR MAY INSTALL SILT FENCING AS A TREE PROTECTION MEASURE, IN LIEU OF INSTALLING EITHER WOOD BRACING OR ORANGE MESH FENCING. THIS PRACTICE IS ENCOURAGED BY THE CITY. IF THE SILT FENCE FAILS TO PROVIDE ADEQUATE PROTECTION FROM IMPACT DUE TO CONSTRUCTION, THEN ADDITIONAL CONSTRUCTION FENCING OR WOOD BRACING SHALL BE REQUIRED.
7. AT A MINIMUM, THE CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS. SUFFICIENT GRASS COVERAGE IS TO BE ESTABLISHED WITHIN TWO WEEKS.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR THROUGH SCHEDULING, TO MINIMIZE THE DISTURBANCE OF SITE AREAS THAT HAVE BEEN BROUGHT TO THEIR PROPOSED FINAL GRADE. WITHIN SEVEN (7) DAYS OF BRINGING A SUBJECT AREA TO ITS FINAL GRADE OR INACTIVITY IN CONSTRUCTION, THE CONTRACTOR SHALL INSTALL SEED AND MULCH OR SOD, AS REQUIRED.

STANDARD CONSTRUCTION DETAIL
CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES
REV. 12/08 | FILE NAME: R25.DWG | DETAIL REF: R-25

CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES (CONTD.)

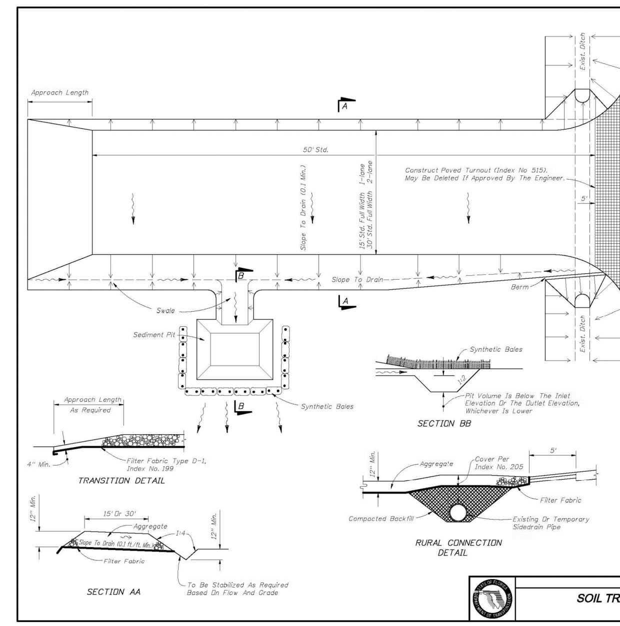
9. FOR INDIVIDUAL CONSTRUCTION PROJECTS INVOLVING MULTIPLE PHASES, (PHASING IS REQUIRED FOR SITES 30 ACRES AND LARGER) UPON COMPLETION OF EACH PHASE OF THE PROJECT, SEEDING AND MULCHING AND / OR SODDING IS TO BE PERFORMED PRIOR TO COMMENCING THE NEXT PHASE OF CONSTRUCTION.
10. ONCE AN AREA IS SEEDED OR SODDED, IT MUST BE MAINTAINED BY THE CONTRACTOR TO ALLOW THE GRASS TO BECOME ESTABLISHED. IF THE GRASS IS NOT ESTABLISHED WITHIN TWO WEEKS THE CITY MAY REQUIRE THE CONTRACTOR TO RE-SEED OR A NON-VEGETATIVE OPTION MAY BE EMPLOYED.
11. ANY BURNING OF CLEARED MATERIALS MUST BE INSPECTED AND PERMITTED ON A DAILY BASIS. CONTACT THE FIRE MARSHALL AT 756-5401 PRIOR TO EACH DAY OF DESIRED BURNING.
12. ABSOLUTELY NO BURYING OF CLEARED MATERIALS IS PERMITTED.
13. THE REMOVAL OF ALL VEGETATION AND TOPSOIL ON THE FUTURE ROADWAY, PARKING AND BUILDING LOT AREAS IS REQUIRED TO BE COMPLETED PRIOR TO THE PLACEMENT OF FILL ON THOSE AREAS. THE TOPSOIL MAY BE TEMPORARILY STOCKPILED AND USED AS TOPSOIL OVER OVER PROPOSED GREEN AREAS SUCH AS PLANT BEDS, SODDED AREAS, AND WHERE TREES ARE TO BE INSTALLED OR RELOCATED.
14. A SIGNED, DATED, AND SEALED LETTER FROM A SOILS ENGINEER OR THE ENGINEER OF RECORD CERTIFYING THAT THE AREAS TO BE FILLED HAVE BEEN STRIPPED OF ORGANIC MATERIALS, MUST BE SUBMITTED TO THE CITY PRIOR TO FILLING.
15. FILL MATERIAL IS TO BE PLACED IN ONE FOOT LIFTS AND COMPACTED TO THE APPROPRIATE DENSITY (98% FOR PAVED AREAS AND 95% FOR BUILDING PADS AND ALL OTHER AREAS AS PER AASHTO T-180).
16. DURING SUBDIVISION DEVELOPMENT WHEN FUTURE BUILDING LOTS ARE FILLED AS PART OF THE OVERALL SUBDIVISION IMPROVEMENTS, COMPACTION TEST REPORTS MUST BE PERFORMED ON THE BUILDING LOTS AT 300 FOOT INTERVALS. THESE TESTS ARE TO BE PERFORMED IN ONE-FOOT VERTICAL INCREMENTS. THE RESULTS OF THESE TESTS ARE TO BE SUBMITTED TO THE CITY UPON COMPLETION OF THE TESTS.
17. IF ANY MUCK MATERIAL IS DISCOVERED, IT SHALL BE REQUIRED TO BE REMOVED AND REPLACED WITH A SUITABLE MATERIAL THAT IS PROPERLY BACKFILLED, COMPACTED AND TESTED USING AASHTO T-180 MODIFIED PROCTOR METHOD.
18. STOCKPILING IS NOT GENERALLY PERMITTED BY THE CITY. WHEN ALLOWED, STOCKPILES SHALL NOT EXCEED SIX FEET IN HEIGHT MEASURED FROM THE ORIGINAL GRADE. AT A MINIMUM, STOCK PILES THAT WILL REMAIN IN PLACE IN EXCESS OF TWENTY DAYS SHOULD BE SEEDED AND MULCHED IMMEDIATELY UPON PLACEMENT OF THE FINAL LIFT.
19. SOILS ARE TO BE STABILIZED BY WATER OR OTHER MEANS DURING CONSTRUCTION. THIS IS INTENDED TO REDUCE SOIL EROSION AND THE IMPACT TO NEIGHBORING COMMUNITIES. ADEQUATE WATERING METHODS SHOULD BE EMPLOYED TO ALLOW DAILY COVERAGE OF THE ENTIRE LIMITS OF ALL AREAS THAT DO NOT HAVE AN ESTABLISHED VEGETATIVE COVER. METHODS TO BE EMPLOYED INCLUDE, BUT ARE NOT LIMITED TO, WATER TRUCKS, PERMANENT IRRIGATION SYSTEMS, TEMPORARY SPRINKLER SYSTEMS OPERATED BY PUMPING UNITS CONNECTED TO WET RETENTION PONDS, WATER CANNONS, TEMPORARY IRRIGATION SYSTEMS MOUNTED ATOP STOCKPILE AREAS, AND OTHER METHODS AS DEEMED NECESSARY BY THE CITY.
20. ALL FILL MATERIALS LOCATED BENEATH STRUCTURES AND PAVEMENT SHALL CONSIST OF CLEAN GRANULAR SAND FREE FROM ORGANICS AND SIMILAR MATERIAL THAT COULD DECOMPOSE.
21. ALL FILL TO BE PLACED IN LANDSCAPED AREAS SHALL HAVE A Ph RANGE BETWEEN 5.5 AND 7.5, BE ORGANIC IN NATURE, FREE OF ROCKS AND DEBRIS, OR MATCH NATIVE EXISTING SOILS.

STANDARD CONSTRUCTION DETAIL
CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES
REV. 12/08 | FILE NAME: R26.DWG | DETAIL REF: R-26



1. 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.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OR-WAY.
3. 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.
4. ALL MATERIALS SPILLED, DROPPED, OR TRACKED ONTO PUBLIC ROADS (INCLUDING T.G.C.E. AGGREGATE AND CONSTRUCTION MUD) SHALL BE REMOVED DAILY, OR MORE FREQUENTLY IF SO DIRECTED.
5. A SOIL TRACKING PREVENTION DEVICE (STPD) IS AN ACCEPTABLE ALTERNATIVE TO THIS DETAIL. REFERENCE FDOT INDEX 106 FOR DETAILS.

STANDARD CONSTRUCTION DETAIL
TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
REV. 12/08 | FILE NAME: R27.DWG | DETAIL REF: R-27



GENERAL NOTES

1. A Soil Tracking Prevention Device (STPD) shall be constructed at locations designated by the engineer for points of egress from unstabilized areas of the project to public roads where off-site tracking of mud could occur. Traffic from unstabilized areas of the construction project shall be directed thru a STPD. Barriers, flagging, or other positive means shall be used as required to limit and direct vehicular egress across the STPD.
2. The Contractor may propose an alternative technique to minimize off-site tracking of sediment. The alternative must be reviewed and approved by the Engineer prior to its use.
3. All materials spilled, dropped, or tracked onto public roads (including the STPD aggregate and construction mud) shall be removed daily, or more frequently if so directed by the Engineer.
4. Aggregates shall be as described in Section 901 excluding 901-2.3. Aggregates shall be FDOT size #1. If this size is not available, the next available smaller size aggregate may be substituted with the approval of the Engineer. Sizes containing excessive small aggregate will track off the project and are unsuitable.
5. The sediment pit should provide a retention volume of 3600 cubic feet/acre of surface area draining to the pit. When the STPD is isolated from other drainage areas, the following pit volumes will satisfy this requirement: 15' x 50'=100 ft.³ 30' x 50'=200 ft.³ As an option to the sediment pit, the width of the swale bottom can be increased to obtain the volume. When the sediment pit or swale volume has been reduced to one half, it shall be cleaned. When a swale is used, synthetic bales or silt fence shall be placed along the entire length.
6. The swale ditch draining the STPD shall have a 0.02% minimum and a 1.0% maximum grade along the STPD and to the sediment pit.
7. Mitered end sections are not required when the sidedrain pipe satisfies the clear zone requirements.
8. The STPD shall be maintained in a condition that will allow it to perform its function. To prevent off-site tracking, the STPD shall be rinsed (daily when in use) to move accumulated mud downward thru the stone. Additional stabilization of the vehicular route leading to the STPD may be required to limit the mud tracked.
9. A STPD shall be paid for under the contract unit price for Soil Tracking Prevention Device, EA. The unit price shall constitute full compensation for construction, maintenance, replacement of materials, removal, and restoration of the area utilized for the STPD; including but not limited to excavation, grading, temporary pipe (including MES when required), filter fabric, aggregate, paved turnout (including asphalt and base construction), ditch stabilization, approach route stabilization, sediment removal and disposal, water, rinsing and cleaning of the STPD and cleaning of public roads, grassing and sod. Synthetic Bale or Bale Type Barrier shall be paid for under the contract unit price for Synthetic Bales, LF. Silt fence shall be paid for under the contract unit price for Staked Silt Fence, LF.
10. The nominal size of a standard STPD is 15' x 50' unless otherwise shown in the plans. If the volume of entering and existing vehicles warrant, a 30' width STPD may be used if approved by the Engineer. When a double width (30') STPD is used, the pay quantity shall be 2 for each location.

2010 FDOT Design Standards
SOIL TRACKING PREVENTION DEVICE TYPE A
Last Revision 07/01/07 | Sheet No. 1 of 1 | Index No. 106

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1230 North US1, Suite 3
Ormond Beach, Florida 32174
Phone (386) 872-7794
www.Newkirk-Engineering.com
C.A. # 30209
L.C. # 26000584
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SWPPP DETAILS AND NOTES
ANGLER'S COVE
3626 PENINSULA DRIVE
PORT ORANGE, FL 32127

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BRADLEY DONALD BAUKNECHT LICENSE NO. 75388 STATE OF FLORIDA PROFESSIONAL ENGINEER
BRADLEY D. BAUKNECHT, P.E. # 75388

PROJECT No:	2017-251
DATE:	JANUARY 2018
DESIGN BY:	BDB
DRAWN BY:	NWS
CHECKED BY:	BDB
SCALE:	

DRAWING NUMBER
5

GENERAL NOTES:

1. CITY OF PORT ORANGE BUILDING PERMITS ARE REQUIRED FOR BUILDING, DUMPSTER ENCLOSURE, LIGHT POLES, FENCE AND MONUMENT SIGN. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING APPROPRIATE INFORMATION (ENGINEERING, SPECIFICATIONS, SHOP DRAWINGS, ETC.).
2. PERMITS ARE REQUIRED FOR: CONCRETE SLAB AT SOUTH SIDE OF BUILDING AND, DUMPSTER ENCLOSURE. CONTACT THE BUILDING DIVISION IF THERE ARE QUESTIONS OR CONCERNS ABOUT PERMIT REQUIREMENTS FOR WORK NOT SPECIFICALLY MENTIONED HEREIN.
3. ALL DIMENSIONS AND TIES ARE TO THE EDGE OF PAVEMENT AND OUTSIDE FACE OF BUILDING.
4. ALL IMPROVEMENTS SHALL BE STAKED FOR CONSTRUCTION BY MEANS OF DIGITAL COORDINATES BY SURVEYOR UTILIZING GEODETIC TOTAL STATION OR GPS. SCALING OF DRAWINGS FOR PURPOSES OF STAKING ARE AT THE SURVEYOR'S RISK.
5. THE CONTRACTOR SHALL COORDINATE WITH THE EXISTING ADJACENT BUSINESSES TO ENSURE THERE IS NO DISRUPTION TO THEIR RESPECTIVE OPERATIONS.
6. THE CONTRACTOR AT ITS OWN DISCRETION SHALL MAINTAIN THE CONSTRUCTION SITE SECURE FROM TRESPASS.
7. SOD ALL DISTURBED AREAS IN RIGHT-OF-WAY WITH BAHIA SOD.
8. ALL CURB RAMPS SHALL COMPLY WITH SECTION 406 OF FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION (FACBC).
9. ALL PAVEMENT EDGE SHALL HAVE TYPE "D" CURBING UNLESS OTHERWISE NOTED ON THESE PLANS.

PAVEMENT MARKING NOTES:

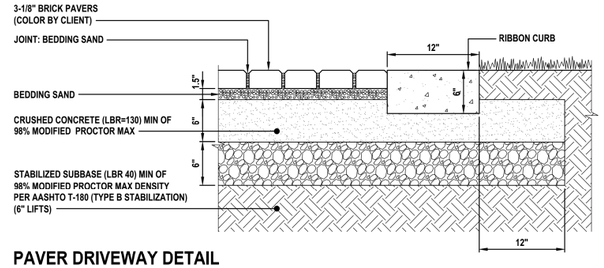
1. PAINTED PAVEMENT MARKINGS SHALL BE APPLIED AFTER PAVEMENT SURFACE HAS CURED. SURFACE SHALL BE FREE OF FINE SAND AND DEBRIS PRIOR TO APPLICATIONS.
2. APPLY PAINTED PAVEMENT MARKINGS AT LAST STAGE OF CONSTRUCTION AFTER LANDSCAPE PLANTINGS ARE INSTALLED.
3. PAINT SHALL BE SHERWIN WILLIAMS LOW-VOC ACRYLIC PRO PARK PAINT, APPLY PER MANUFACTURER'S RECOMMENDATIONS. REFER TO DRAWINGS FOR LOCATIONS OF SPECIFIC COLORS.
4. ALL STRIPING SHALL BE THERMOPLASTIC EXCEPT PARKING SPACE LINES.
5. ALL REFLECTIVE PAVEMENT MARKERS ARE TO BE PLACED IN ACCORDANCE WITH FDOT STANDARD INDEX NO. 17352.
6. ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH INDEX NO. 17301 AND THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".
7. LOCATION OF SIGNS IS APPROXIMATE ONLY AND IS SUBJECT TO CHANGE AS DIRECTED BY THE ENGINEER.
8. FOR ADDITIONAL DETAILS SEE INDEX NO. 11860, 11863, 17302, 17344 AND 17346.
9. ALL TRAFFIC CONTROL SIGNS SHALL BE FABRICATED USING 3M BRAND "SCOTCHLITE" SHEETING (ENGINEER GRADE) ON MINIMUM .08 GA ALUMINUM BLANKS. ALL 36"x48" SIGNS SHALL BE .100 GA MINIMUM AND SHALL BE INSTALLED USING 3"x12" ROUND ALUMINUM POST. ALL STOP SIGNS SHALL BE 36" OCTAGON INSTALLED ON 12.3 LBS/FT "U" CHANNEL POST RAIL STEEL ONLY OR 3"x12' ROUND ALUMINUM POSTS. "U" CHANNEL POSTS MAY BE USED FOR SIGNS SMALLER THAN 36"x36". ALL SPEED LIMIT SIGNS SHALL BE 24"x30".

PAVING LEGEND

PAVER ROAD	3 - 1/8" BRICK PAVERS (COLOR PER OWNER) 6" CRUSHED CONCRETE BASE (LBR=130) MIN OF 98% MODIFIED PROCTOR MAX DENSITY PER AASHTO T-180 (4" LIFTS) 12" STABILIZED SUBBASE (LBR 40) MIN OF 98% MODIFIED PROCTOR MAX DENSITY PER AASHTO T-180 (TYPE B STABILIZATION) (SEE DETAIL, THIS SHEET)
PAVER DRIVEWAY	3 - 1/8" BRICK PAVERS (COLOR PER OWNER) 6" CRUSHED CONCRETE BASE (LBR=130) MIN OF 98% MODIFIED PROCTOR MAX DENSITY PER AASHTO T-180 (4" LIFTS) 6" STABILIZED SUBBASE (LBR 40) MIN OF 98% MODIFIED PROCTOR MAX DENSITY PER AASHTO T-180 (TYPE B STABILIZATION) (SEE DETAIL, THIS SHEET)
CONCRETE SIDEWALK	4" THICK CLASS I CONCRETE (3,000 P.S.I. @ 28 DAYS) PER FDOT INDEX 310 SEE DETAILS SHEET No. 10

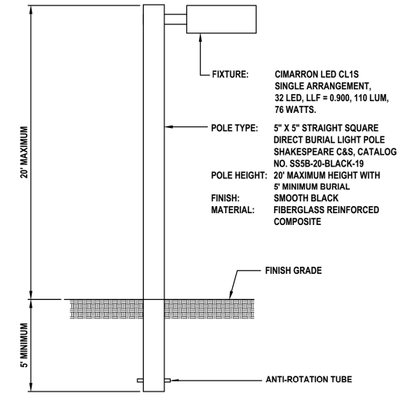
LEGEND

SITE LIGHTING
(SEE DETAIL, THIS SHEET)



PAVER DRIVEWAY DETAIL

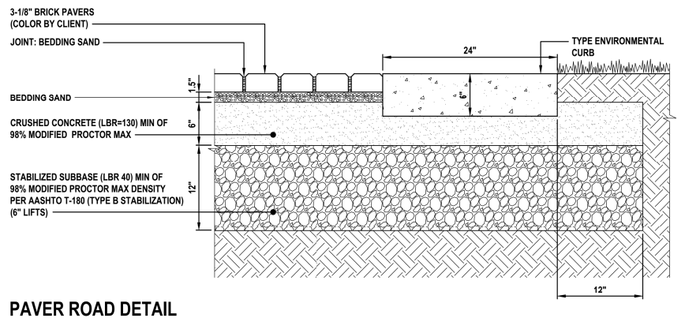
NOT TO SCALE



1. CONTRACTOR MUST OBTAIN CITY BUILDING PERMIT FOR LIGHT POLES. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING APPROPRIATE INFORMATION (ENGINEERING, SPECIFICATIONS, ETC...) FOR LIGHT FIXTURES AT TIME OF PERMIT REVIEW.
2. DESIGNED TO HANDLE A MINIMUM 130 MPH WIND SPEED.
3. MAKE THE HOLE, GENERALLY HOLES SHALL BE ROUND WITH SMOOTH VERTICAL SIDES CONSISTING OF UNDISTURBED SOIL FOR BEST COMPACTION AND STABILITY OF POLES. DIAMETER OF POLE SHALL BE ABOUT TWICE THE DIAMETER OF THE POLE AT ITS BASE. HOLES SHALL BE AUGURED.
4. WIRE THE POLE UTILIZING APPROVED METHODS.
5. INSTALL THE POLE, IN MANY CASES COMPOSITE POLES CAN BE MANUALLY LIFTED INTO PLACE AND INSERTED INTO THE HOLE.
6. ALIGN AND LEVEL THE POLE.
7. BACKFILL THE HOLE, FILL AND TAMP EVERY 6 TO 8 INCHES OF BACKFILL, FREQUENT TAMPING IS IMPORTANT FOR INSTALLATION.

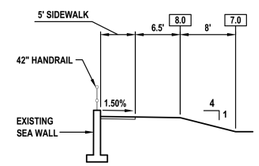
SITE LIGHTING DETAIL

NOT TO SCALE



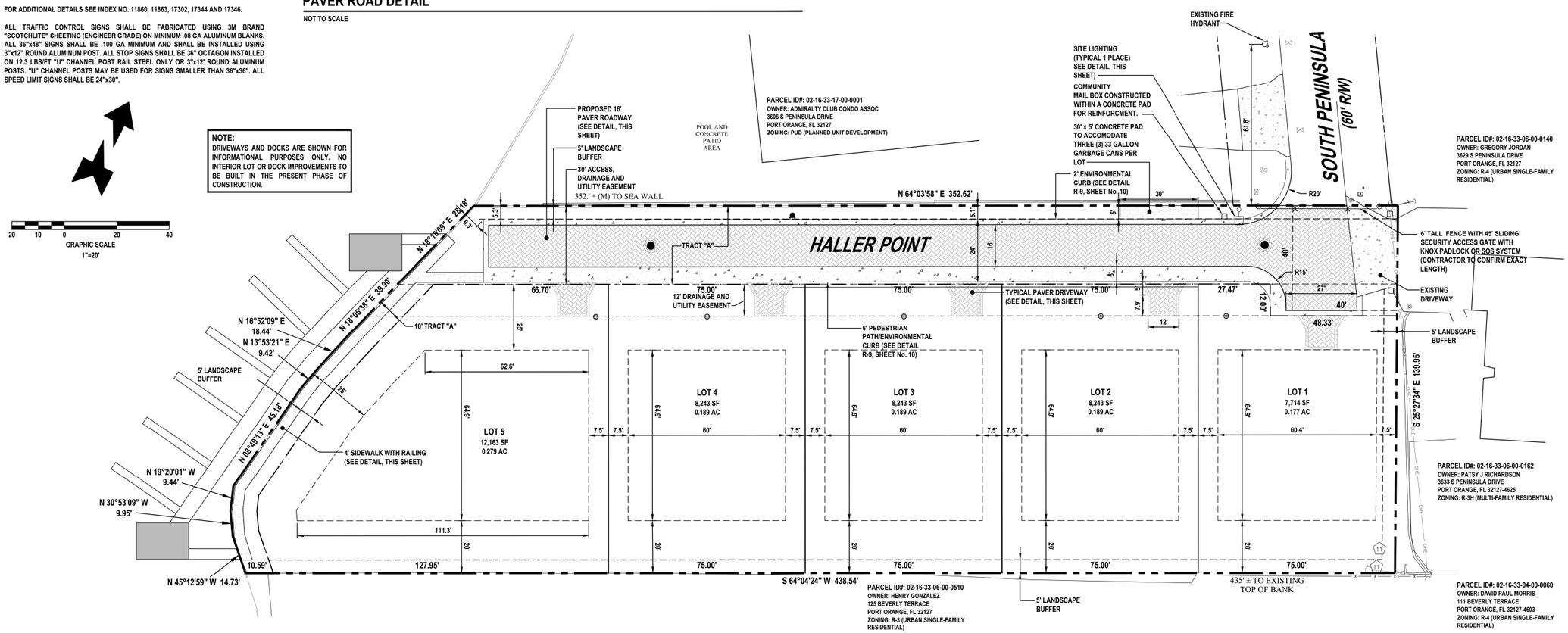
PAVER ROAD DETAIL

NOT TO SCALE



SIDEWALK DETAIL

NOT TO SCALE



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DATE	DESCRIPTION
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1230 North US1, Suite 3
Ormond Beach, Florida 32174
Phone (386) 872-7794
www.Newkirk-Engineering.com
C.A. # 30209
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SITE LAYOUT PLAN
ANGLER'S COVE
3626 PENINSULA DRIVE
PORT ORANGE, FL 32127

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BRADLEY DONALD BAUKNECHT LICENSE NO. 75388 STATE OF FLORIDA PROFESSIONAL ENGINEER

BRADLEY D. BAUKNECHT, P.E. # 75388

PROJECT No:	2017-251
DATE:	JANUARY 2018
DESIGN BY:	BDB
DRAWN BY:	NWS
CHECKED BY:	BDB
SCALE:	1" = 20'

DRAWING NUMBER

6

DRA DRAINAGE RETENTION AREA:

1. INITIALLY CONSTRUCT THE RETENTION BASIN TO ROUGH GRADE BY UNDER-EXCAVATING THE BASIN BOTTOM AND SIDES BY APPROXIMATELY 12-INCHES.
2. AFTER THE DRAINAGE AREA CONTRIBUTING TO THE BASIN HAS BEEN FULLY STABILIZED, THE INTERIOR SIDE SLOPES AND BASIN BOTTOM SHOULD BE EXCAVATED TO FINAL DESIGN SPECIFICATIONS. THE EXCESS SOIL AND UNDESIRABLE MATERIAL SHOULD BE CAREFULLY EXCAVATED AND REMOVED FROM THE POND SO THAT ALL ACCUMULATED SILTS, CLAY, ORGANICS AND OTHER FINE SEDIMENT MATERIAL HAS BEEN REMOVED FROM THE POND AREA. THE EXCAVATED MATERIAL SHOULD BE DISPOSED OF BEYOND THE LIMITS OF THE DRAINAGE AREA OF THE BASIN.
3. ONCE THE BASIN HAS BEEN EXCAVATED TO FINAL GRADE, THE ENTIRE BASIN BOTTOM SHOULD BE DEEP RAKED AND LOOSENED FOR OPTIMAL INFILTRATION.
4. FINALLY, THE BASIN SHOULD BE STABILIZED WITH "SAND GROWN" BAHIA.

BENCHMARK INFORMATION:

#1 BENCHMARK #1 CONCRETE MONUMENT
ELEVATION = 9.04

#2 BENCHMARK #2 X-CUT
ELEVATION = 8.91

VERTICAL DATA
ELEVATIONS REFER TO (NAVD 88) NORTH AMERICA VERTICAL DATUM 1988. BENCHMARK, DESIGNATION IS A NATIONAL GEODETIC SURVEY DESIGNATION Z 404 ELEVATION 2.86 FEET.

CONTOUR LEGEND:

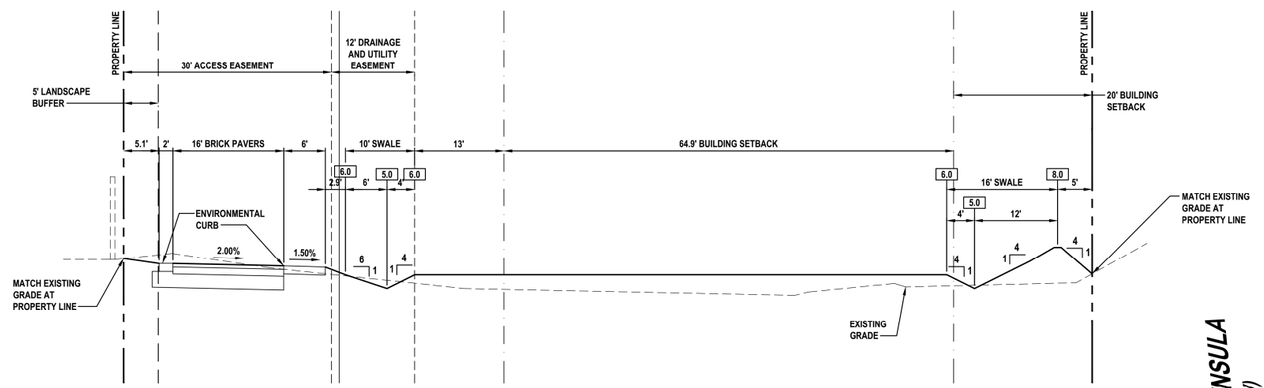
– –85– – EXISTING CONTOUR
—85— PROPOSED CONTOUR
~~> DRAINAGE FLOW ARROW

GENERAL EARTHWORK NOTES:

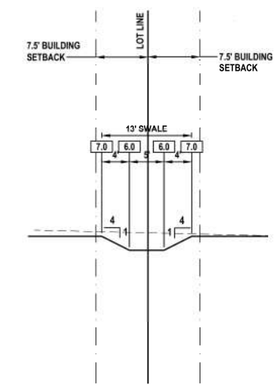
1. IF ANY MUCK OR MUCK-LIKE MATERIAL IS DISCOVERED, IT WILL BE REQUIRED TO BE REMOVED, BACKFILLED WITH APPROPRIATE FILL, COMPACTED, AND TESTED USING AASHTO T-180 MODIFIED PROCTOR METHOD.
2. ALL FILLING IS TO BE PERFORMED IN ONE-FOOT LIFTS. THE COMPACTION REQUIREMENT IS 98% FOR PAVED AREAS AND 95% FOR UNPAVED AREAS PER AASHTO T-180 MODIFIED PROCTOR TEST.
3. TEMPORARY FILL STOCKPILING IS NOT PERMITTED IN LIFTS GREATER THAN SIX FEET.
4. SOILS ARE TO BE STABILIZED BY WATER OR OTHER MEANS DURING CONSTRUCTION. THIS IS INTENDED TO REDUCE SOIL EROSION AND THE IMPACT TO NEIGHBORING COMMUNITIES.
5. ONCE AN AREA IS SEEDED OR SODDED, IT MUST BE MAINTAINED TO ALLOW THE GRASS TO GROW.
6. ALL NON-PAVED AREAS MUST BE PLANTED, GRASSED, OR MULCHED.

GENERAL GRADING NOTES:

1. CROSS SLOPES OF ACCESSIBLE PARKING SPACES AND ACCESS AISLE SHALL NOT EXCEED 1:48 IN ACCORDANCE WITH SECTION 502.4 OF FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION (FACBC).
2. THE MAXIMUM ELEVATION CHANGE AT THE ENTRANCE DOOR MAY NOT EXCEED 1/2 INCH.
3. ALL SIDEWALK LANDINGS SHALL HAVE SLOPES NO GREATER THAN 1/4 INCH / 1 FOOT IN MANEUVERING SPACES AT ALL DOORWAYS.
4. ALL SIDEWALKS SHALL HAVE A 1.0% CROSS SLOPE (2.0% MAXIMUM).
5. ALL CURB RAMPS SHALL COMPLY WITH SECTION 406 OF FACBC.
6. ALL IMPROVEMENTS SHALL BE STAKED FOR CONSTRUCTION BY MEANS OF DIGITAL COORDINATES BY SURVEY OR UTILIZING GEODETIC TOTAL STATION. SCALING OF DRAWINGS FOR PURPOSES OF STAKING ARE AT THE SURVEYOR.



SECTION A
NOT TO SCALE



SECTION B
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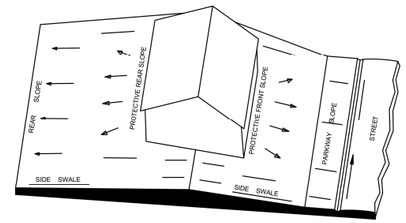


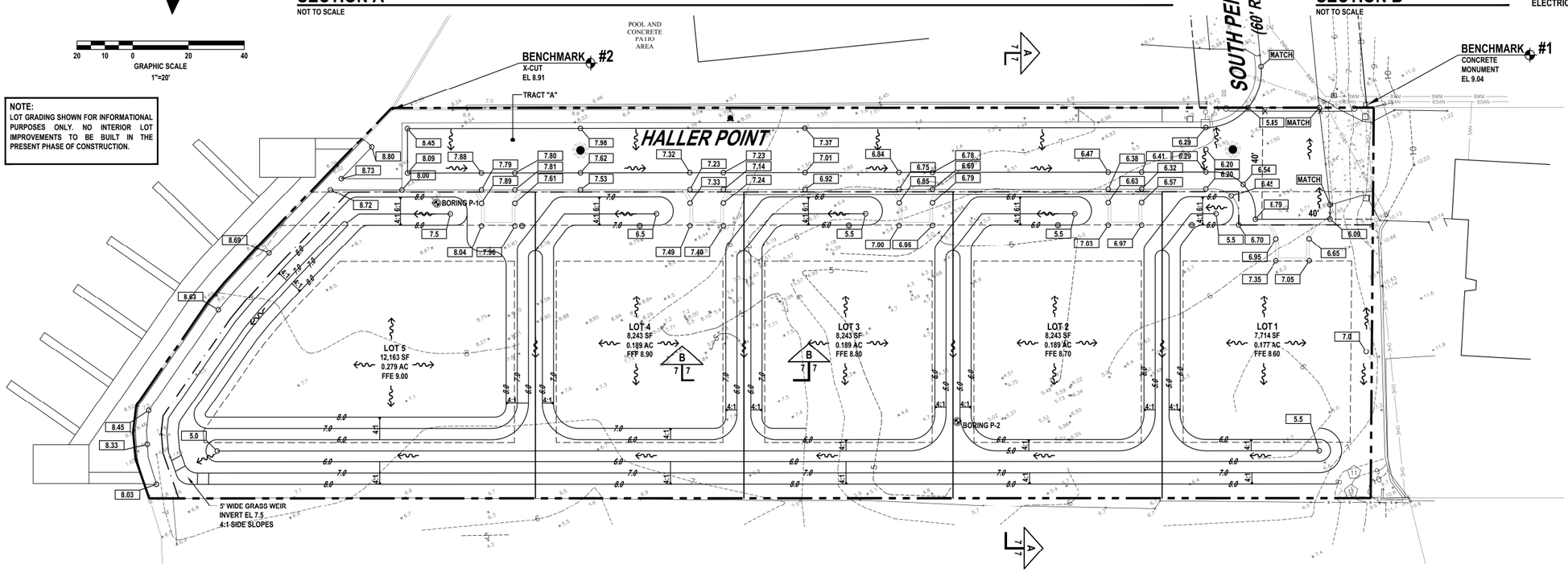
TYPICAL LOT GRADING "A"

TYPICAL LOT GRADING DETAILS
NOT TO SCALE

WARNING !!
CONTRACTOR SHALL TAKE ALL PRECAUTIONS DURING CONSTRUCTION TO AVOID CONTACT WITH EXISTING UNDERGROUND UTILITIES, GAS MAINS AND OVERHEAD ELECTRIC IN THE RIGHT-OF-WAY.

GRAPHIC SCALE
1"=20'

NOTE:
LOT GRADING SHOWN FOR INFORMATIONAL PURPOSES ONLY. NO INTERIOR LOT IMPROVEMENTS TO BE BUILT IN THE PRESENT PHASE OF CONSTRUCTION.



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DRAINAGE AND GRADING PLAN
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LICENSE
NO. 75388
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PROFESSIONAL ENGINEER
BRADLEY D. BAUKNECHT, P.E. # 75388

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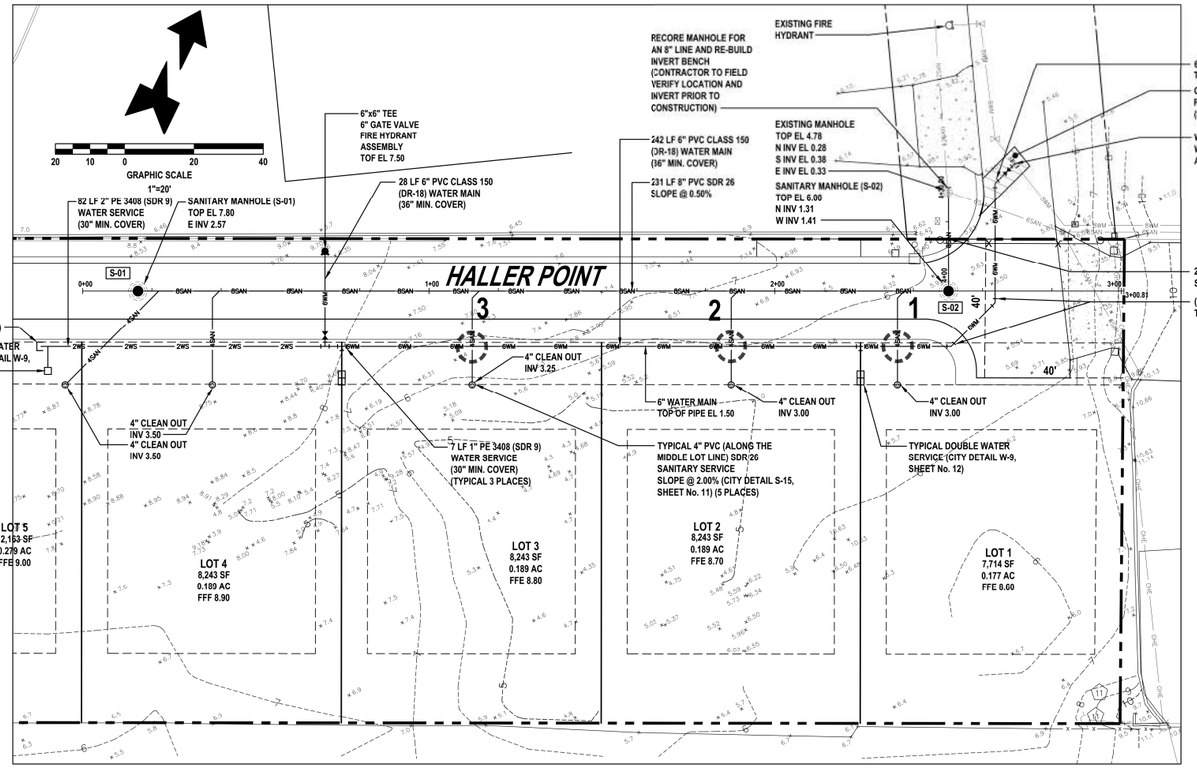


WARNING !!

CONTRACTOR SHALL TAKE ALL PRECAUTIONS DURING CONSTRUCTION TO AVOID CONTACT WITH EXISTING UNDERGROUND UTILITIES, GAS MAINS AND OVERHEAD ELECTRIC IN THE RIGHT-OF-WAY.

GENERAL UTILITY NOTE

THERE WILL NOT BE ANY OVERHEAD UTILITY AND SERVICE LINES ASSCIATED WITH THIS PROJECT. ALL UTILITY LINES AND SERVICES ARE REQUIRED TO BE INSTALLED UNDERGROUND AT THE OWNER'S, DEVELOPER'S EXPENSE. THIS APPLIES TO ALL CABLE. CONDUITS. OR WIRES FORMING PART OF AN ELECTRICAL DISTRIBUTION SYSTEM, INCLUDING SERVICE LINES TO INDIVIDUAL PROPERTIES NECESSARY TO SERVE NEW DEVELOPMENT, OR EXISTING DEVELOPMENT WHERE NEW OR UPGRADED SERVICE IS BEING INSTALLED.

PROPOSED UTILITY LEGEND

FM	FORCE MAIN (# INDICATES SIZE)
SAN	SANITARY SEWER (# INDICATES SIZE)
WS	POLYETHYLENE WATER SERVICE (# INDICATES SIZE)
WM	WATER MAIN (# INDICATES SIZE)
RC	RECLAIM SERVICE (# INDICATES SIZE)
GAS	GAS SERVICE (# INDICATES SIZE)
UGE	UNDERGROUND ELECTRICAL CONDUIT (# INDICATES SIZE)
1	UTILITY CONFLICT (SEE DETAIL SHEET No. 9)

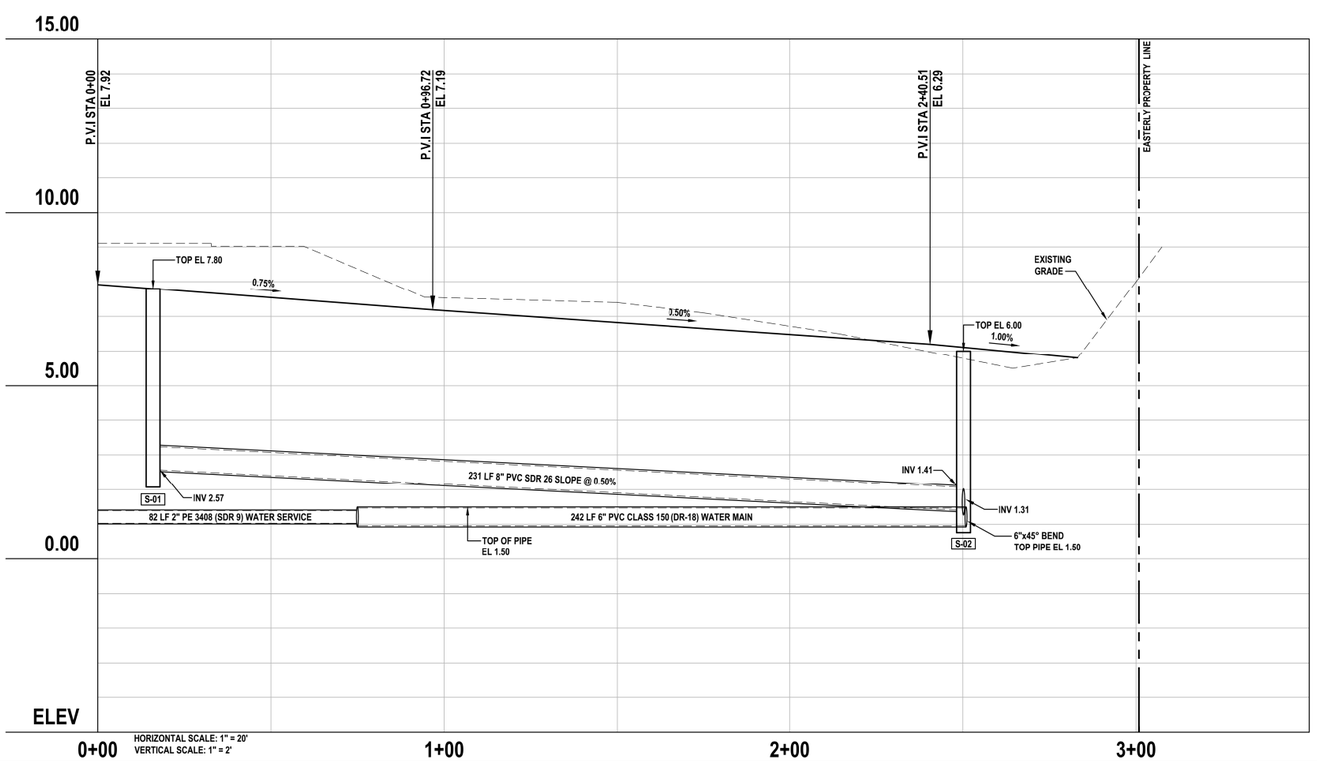
REQUIRED FIRE FLOW:

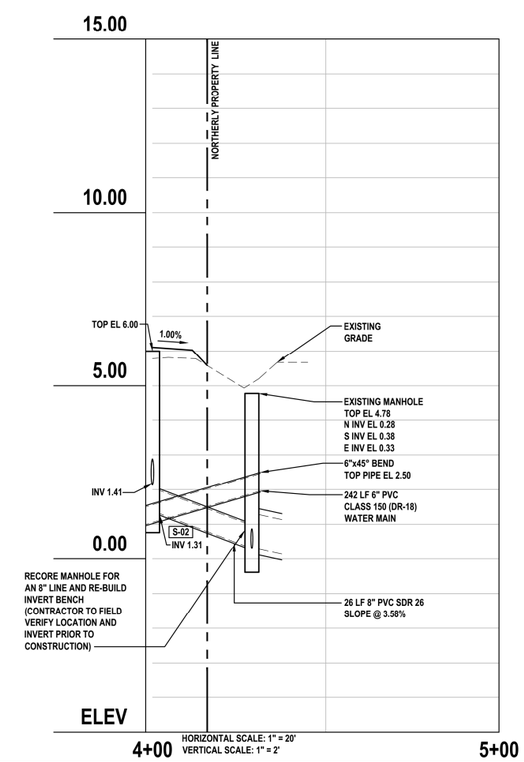
GENERAL WATER NOTES:

1. THE CITY OF PORT ORANGE WATER UTILITY DEPARTMENT SHALL BE NOTIFIED PRIOR TO BEGINNING ANY WATER SYSTEM CONSTRUCTION.
2. ALL WATER DISTRIBUTION CONSTRUCTION SHALL BE IN ACCORDANCE WITH FDEP REGULATIONS AND THE CITY OF PORT ORANGE UTILITY DETAILS AND SPECIFICATIONS (LATEST EDITION).
3. CONTRACTOR IS TO VERIFY THE LOCATION (HORIZONTAL AND VERTICAL) OF ALL EXISTING UTILITIES (UNDERGROUND AND OVERHEAD) PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY CONFLICTS SHALL BE REPORTED TO THE ENGINEER.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ANY EXISTING PAVEMENT, SIDEWALK, CURBING, UTILITIES AND DRAINAGE SYSTEMS DAMAGED DURING CONSTRUCTION. ALL DAMAGED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER.
5. LOCATION OF TELEPHONE, T.V. CABLE AND ELECTRICAL SERVICE CONNECTIONS TO BE DETERMINED BY APPROPRIATE UTILITIES PERSONNEL IN COOPERATION WITH CONTRACTOR.
6. ALL WATER MAINS SHALL BE LAID ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL.
7. TRENCHES SHALL BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE CITY WITH A MINIMUM COMPACTION OF 95 PERCENT (AASHTO-T180).
8. WATER SERVICES FROM 3/4" TO 2" POLYETHYLENE (ENDOT ENDOPURE) WITH 30" MINIMUM COVER.
9. WATER MAIN FROM 4" TO 12" SHALL BE PVC CLASS 150 (DR 18) WITH 36" MINIMUM COVER.
10. ALL WATER AND FIRE SERVICES ARE REQUIRED TO HAVE A HARD BODY GATE VALVE OFF THE MAIN LINE.
11. ALL VALVES SHALL BE BOLTED TO TEES.
12. ALL POTABLE WATER PIPE SHALL HAVE "NSF POTABLE WATER" IMPRINTED ON THE PIPE.
13. A TAPPING CONTRACTOR ACCEPTABLE TO THE CITY OF PORT ORANGE WILL BE REQUIRED FOR TAPS.
14. THE CONTRACTOR SHALL MAKE ALL ATTEMPTS TO LOCATE BURIED UTILITIES AND NOTIFY THE UTILITY COMPANIES 48 HR. PRIOR TO CONSTRUCTION.
15. UTILITY TRENCH CONSTRUCTION SHALL CONFORM TO CITY OF PORT ORANGE AND OSHA REQUIREMENTS.
16. IN THE CASE WHERE SOLVENT CONTAMINATION IS FOUND IN THE TRENCH, WORK WILL BE STOPPED AND THE PROPER AUTHORITIES NOTIFIED. WITH THE APPROVAL OF THE CITY OF PORT ORANGE UTILITY DEPARTMENT, DUCTILE IRON PIPE, FITTINGS AND APPROVED SOLVENT RESISTANT GASKET MATERIAL SHALL BE USED IN THE CONTAMINATED AREA. THE DUCTILE IRON PIPE WILL EXTEND AT LEAST 100 FEET BEYOND ANY DISCOVERED SOLVENT.

GENERAL SEWER NOTES:

1. CITY OF PORT ORANGE SHALL BE NOTIFIED PRIOR TO ANY SEWER CONSTRUCTION.
2. ALL SEWER CONSTRUCTION MUST COMPLY WITH FDEP REGULATIONS AND THE CITY OF PORT ORANGE UTILITY DETAILS AND SPECIFICATIONS (LATEST EDITION).
3. ALL SANITARY SEWER LINES SHALL BE PVC SDR 26 DUE TO THE MINIMUM AMOUNT OF COVER. WATER LINES, RECLAIMED LINES AND STORM DRAINAGE CROSSINGS SHALL FOLLOW THE C-900 OR CONCRETE ENCASEMENT REQUIREMENT PER THESE STANDARDS AND AS FDEP REQUIREMENTS. STANDARDS AND AS PER FDEP REQUIREMENTS.
4. SEWER LINE CONSTRUCTION SHALL BE ACCOMPLISHED BY THE USE OF A LASER INSTRUMENT UNLESS ANOTHER METHOD IS PREVIOUSLY APPROVED BY CITY OF PORT ORANGE.
5. THE CONTRACTOR SHALL AT ALL TIMES, DURING PIPE LAYING, DEWATER THE GROUND SUFFICIENTLY TO KEEP THE GROUNDWATER ELEVATION A MINIMUM OF 6" BELOW THE PIPE BEING LAID WITHIN THE AREA OF THE TRENCH.
6. ALL PIPES SHALL BE LAID ON A FIRM FOUNDATION. SOFT OR SPONGY BEDDING FOR PIPES WILL NOT BE ACCEPTED. ANY UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH A DRY, COMPACTED, GRANULAR MATERIAL SATISFACTORY TO THE CITY OF PORT ORANGE.
7. SANITARY SEWER PIPE SHALL BE PVC SDR 26.
8. EXCAVATION AND BACKFILL: THE CONTRACTOR SHALL PROVIDE ADEQUATE SHEETING AND BRACING OF EXCAVATION WORK IN ORDER TO PROVIDE FOR THE SAFETY OF WORKMEN, AS WELL AS REPRESENTATIVES OF THE CITY OF PORT ORANGE, THE DESIGN ENGINEER, AND THE DEVELOPER.
9. ALL TRENCHES SHALL BE BACKFILLED WITH ACCEPTABLE MATERIAL AND COMPACTED TO MINIMUM COMPACTION OF (95) PERCENT OF THE OPTIMUM DENSITY OF THAT MATERIAL BASED ON THE AASHTO T-180 MODIFIED PROCTOR TEST.
10. ALL TESTING REQUIRED BY THE CITY SHALL BE PAID FOR BY THE CONTRACTOR.
11. GRAVITY MAINS MUST HAVE A TELEVISED INSPECTION. A VIDEO INSPECTION FORM MUST BE FAXED TO THE CITY OF PORT ORANGE WASTEWATER COLLECTION DEPARTMENT 48 HOURS PRIOR TO VIDEO INSPECTION. A CITY INSPECTOR MUST BE PRESENT.
12. SEWER CLEANOUT LOCATED ON PAVEMENT AND SIDEWALK AREA SHALL BE TRAFFIC BEARING FLAT TOP BRASS CAP.





REVISIONS

DATE	DESCRIPTION
2/7/18	PER CITY COMMENTS

1230 North US1, Suite 3
Ormond Beach, Florida 32174
Phone (386) 872-7794
www.Newkirk-Engineering.com
C.A. # 30209
L.C. # 26000584
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Civil Engineering, Transportation, CEI & Landscape Architecture
NEWKIRK ENGINEERING INC.

UTILITY PLAN
ANGLER'S COVE
3626 PENINSULA DRIVE
PORT ORANGE, FL 32127

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BRADLEY DONALD BAUKNECHT
LICENSE
NO. 75388
STATE OF FLORIDA
PROFESSIONAL ENGINEER

BRADLEY D. BAUKNECHT, P.E. # 75388

PROJECT No:	2017-251
DATE:	JANUARY 2018
DESIGN BY:	BDB
DRAWN BY:	NWS
CHECKED BY:	BDB
SCALE:	AS SHOWN

DRAWING NUMBER

8

FDEP WATER NOTES

1. ALL PIPE, PIPE FITTINGS, PIPE JOINT PACKING AND JOINTING MATERIALS, VALVES, FIRE HYDRANTS, AND METERS INSTALLED UNDER THIS PROJECT WILL CONFORM TO APPLICABLE AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS.

2. ALL PUBLIC WATER SYSTEM COMPONENTS, EXCLUDING FIRE HYDRANTS, THAT WILL BE INSTALLED UNDER THIS PROJECT AND THAT WILL COME INTO CONTACT WITH DRINKING WATER WILL CONFORM TO NSF INTERNATIONAL STANDARD 61.

3. ALL PROPOSED WATER MAINS SHALL BE FLUSHED, DISINFECTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE IN ACCORDANCE WITH AWWA SPECIFICATIONS C-651 AND THE FDEP PROTECTION REQUIREMENTS.

4. POTABLE WATER PIPES SHALL BE HYDROSTATICALLY TESTED FOR PRESSURE AND LEAKAGE IN ACCORDANCE WITH AWWA STANDARD C600 FOR DUCTILE IRON PIPES AND C605 FOR PVC PIPES, RESPECTIVELY.

5. ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT WILL CONTAIN NO LEAD, AND ANY SOLDER OR FLUX USED IN THIS PROJECT WILL CONTAIN NO MORE THAN 0.2% LEAD.

6. ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT WILL BE COLOR CODED OR MARKED IN ACCORDANCE WITH SUBPARAGRAPH 62-555.320(21)(B)3, F.A.C., USING BLUE AS A PREDOMINANT COLOR. (UNDERGROUND PLASTIC PIPE WILL BE SOLID-WALL BLUE PIPE, WILL HAVE A CO-EXTRUDED BLUE EXTERNAL SKIN, OR WILL BE WHITE OR BLACK PIPE WITH BLUE STRIPES INCORPORATED INTO, OR APPLIED TO, THE PIPE WALL; AND UNDERGROUND METAL OR CONCRETE PIPE WILL HAVE BLUE STRIPES APPLIED TO THE PIPE WALL. PIPE STRIPED DURING MANUFACTURING OF THE PIPE WILL HAVE CONTINUOUS STRIPES THAT RUN PARALLEL TO THE AXIS OF THE PIPE, THAT ARE LOCATED AT NO GREATER THAN 90-DEGREE INTERVALS AROUND THE PIPE, AND THAT WILL REMAIN INTACT DURING AND AFTER INSTALLATION OF THE PIPE. IF TAPE OR PAINT IS USED TO STRIPE PIPE DURING INSTALLATION OF THE PIPE, THE TAPE OR PAINT WILL BE APPLIED IN A CONTINUOUS LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF THE PIPE; FOR PIPE WITH AN INTERNAL DIAMETER OF 24 INCHES OR GREATER, TAPE OR PAINT WILL BE APPLIED IN CONTINUOUS LINES ALONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE. ABOVEGROUND PIPE WILL BE PAINTED BLUE OR WILL BE COLOR CODED OR MARKED LIKE UNDERGROUND PIPE.)

7. POTABLE WATER PIPES MUST BE MANUFACTURED IN ACCORDANCE WITH THE FOLLOWING AWWA SPECIFICATIONS:
   - A. DUCTILE IRON PIPE (3 INCHES TO 54 INCHES) - AWWA C150 AND AWWA C151;
   - B. PVC PIPE
     - (1) AWWA C900/ASTM 1784 (1 INCH TO 12 INCHES) WITH CL200 MINIMUM:
     - (2) AWWA C905 (14 INCHES TO 48 INCHES);

8. ALL FIRE HYDRANTS THAT WILL BE INSTALLED UNDER THIS PROJECT AND THAT WILL HAVE UNPLUGGED, UNDERGROUND DRAINS WILL BE LOCATED AT LEAST THREE FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, PIPELINE CONVEYING RECLAIMED WATER OR VACUUM-TYPE SANITARY SEWER; AT LEAST SIX FEET FROM ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-10, F.A.C.; AND AT LEAST TEN FEET FROM ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM."

9. NEW OR ALTERED WATER MAINS INCLUDED IN THIS PROJECT WILL BE INSTALLED IN ACCORDANCE WITH APPLICABLE AWWA STANDARDS OR IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDED PROCEDURES.

10. A CONTINUOUS AND UNIFORM BEDDING WILL BE PROVIDED IN TRENCHES FOR UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT; BACKFILL MATERIAL WILL BE TAMPED IN LAYERS AROUND UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT AND TO A SUFFICIENT HEIGHT ABOVE THE PIPE TO ADEQUATELY SUPPORT AND PROTECT THE PIPE; AND UNSUITABLY SIZED STONES (AS DESCRIBED IN APPLICABLE AWWA STANDARDS OR MANUFACTURERS' RECOMMENDED INSTALLATION PROCEDURES) FOUND IN TRENCHES WILL BE REMOVED FOR A DEPTH OF AT LEAST SIX INCHES BELOW THE BOTTOM OF UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT.

11. ALL WATER MAIN TEES, BENDS, PLUGS, AND HYDRANTS INSTALLED UNDER THIS PROJECT WILL BE PROVIDED WITH THRUST BLOCKS OR RESTRAINED JOINTS TO PREVENT MOVEMENT.

12. NEW OR ALTERED WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL BE CONSTRUCTED OF ASBESTOS-CEMENT OR POLYVINYL CHLORIDE PIPE WILL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA STANDARD C603 OR C605, RESPECTIVELY, AND ALL OTHER NEW OR ALTERED WATER MAINS INCLUDED IN THIS PROJECT WILL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA STANDARD C600.

13. NEW OR RELOCATED, UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT WILL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER, STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; A HORIZONTAL DISTANCE OF AT LEAST SIX FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER (OR A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER IF THE BOTTOM OF THE WATER MAIN WILL BE LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER); A HORIZONTAL DISTANCE OF AT LEAST SIX FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AND A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM."

14. NEW OR RELOCATED, UNDERGROUND WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES ABOVE THE OTHER PIPELINE OR AT LEAST 12 INCHES BELOW THE OTHER PIPELINE; AND NEW OR RELOCATED, UNDERGROUND WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OTHER PIPELINE.

15. AT THE UTILITY CROSSINGS DESCRIBED ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE WILL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE OR THE PIPES WILL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY- OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

16. IF CONNECTION OF THE PROPOSED ACTIVITY TO THE WATER MAIN WILL RESULT IN A DEPRESSURIZATION OF THE EXISTING SYSTEM BELOW 20 POUNDS PER SQUARE INCH, ONE OF THE FOLLOWING MUST OCCUR;
   - A. PRECAUTIONARY BOIL WATER NOTICES MUST BE ISSUED IN CASES OF PLANNED DISTRIBUTION INTERRUPTIONS, WHICH ARE DEEMED AN IMMINENT PUBLIC HEALTH THREAT BY THE DEP CENTRAL DISTRICT OR WILL AFFECT THE BACTERIOLOGICAL QUALITY OF THE DRINKING WATER UNLESS THE PUBLIC WATER SYSTEM CAN DEMONSTRATE, BY SOUND ENGINEERING JUDGMENT, THAT THE INTEGRITY OF THE WATER SYSTEM HAS BEEN MAINTAINED; OR
   - B. IN CASE OF BRIEF INTERRUPTION IN SERVICE, ADVISORIES (NOT BOIL WATER NOTICES) SHOULD BE ISSUED IF TEMPORARY CHANGES IN WATER QUALITY ARE EXPECTED TO OCCUR AND NOT DEEMED AN IMMINENT PUBLIC HEALTH RISK.

FDEP WASTEWATER NOTES

1. APPROPRIATE DEFLECTION TEST ARE SPECIFIED FOR ALL FLEXIBLE PIPE. TESTING IS REQUIRED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS TO PERMIT STABILIZATION OF THE SOIL-PIPE SYSTEM. TESTING REQUIREMENTS SPECIFY: 1) NO PIPE SHALL EXCEED A DEFLECTION OF 5%; 2) USING RIGID BALL OR MANDREL FOR THE DEFLECTION TEST WITH A DIAMETER NOT LESS THAN 95% OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE, DEPENDING ON WHICH IS SPECIFIED IN THE ASTM SPECIFICATIONS, INCLUDING THE APPENDIX, TO WHICH THE PIPE IS MANUFACTURE; AND 3) PERFORMING THE TEST WITHOUT MECHANICAL PULLING DEVICES.

2. LEAKAGE TEST ARE SPECIFIED REQUIRING THAT: 1) THE LEAKAGE EXFILTRATION OR INFILTRATION DOES NOT EXCEED 200 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM; 2) EXFILTRATION OR INFILTRATION TEST BE PERFORMED WITH A MINIMUM POSITIVE HEAD OF 2 FEET; AND 3) AIR TEST, AS A MINIMUM, CONFORM TO THE TEST PROCEDURE DESCRIBED IN ASTM C-828 FOR CLAY PIPE, ASTM C 924 FOR CONCRETE PIPE, ASTM F-1417 FOR PLASTIC PIPE, AND OTHER MATERIAL APPROPRIATE TEST PROCEDURES.

3. MANHOLE INSPECTION AND TESTING FOR WATERTIGHTNESS OR DAMAGE PRIOR TO PLACING INTO SERVICE ARE REQUIRED. AIR TESTING SPECIFIED FOR CONCRETE SEWER MANHOLES, SHALL CONFORM TO THE TEST PROCEDURES DESCRIBED IN ASTM C-1244.

4. SUITABLE COUPLINGS COMPLYING WITH ASTM SPECIFICATIONS ARE REQUIRED FOR JOINING DISSIMILAR MATERIALS.

5. CONCRETE MANHOLES SHALL HAVE THE FOLLOWING: 1) MANHOLE LIFT HOLES AND GRADE ADJUSTMENT RINGS SEALED WITH NON-SHRINK MORTAR OR OTHER APPROPRIATE MATERIAL; 2) INLET AND OUTLET PIPES BE JOINED TO THE MANHOLE WITH A GASKETED FLEXIBLE WATERTIGHT CONNECTION OR ANOTHER WATERTIGHT CONNECTION ARRANGEMENT THAT ALLOWS DIFFERENTIAL SETTLEMENT OF THE PIPE AND MANHOLE WALL; 3) WATERTIGHT MANHOLE COVERS BE USED WHEREVER THE TOPS MAY BE FLOODED BY STREET RUNOFF OR HIGH WATER.

LOCATION OF PUBLIC WATER SYSTEM MAINS IN ACCORDANCE WITH F.A.C. RULE 62-555.314

OTHER PIPE	HORIZONTAL SEPARATION	CROSSINGS (1)	JOINT SPACING AT 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 STORM SEWER, THEN 6 INCHES IS THE MINIMUM AND 12 INCHES IS PREFERRED	ALTERNATE 6 FT MINIMUM WATER MAIN
ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM	10 FT MINIMUM (3)	———	———

(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.

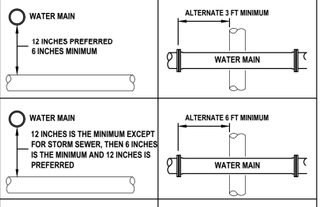
TABLE 1: CLASSES OF EMBEDMENT AND BACKFILL MATERIALS

ASTM D 2321 MATERIAL CLASS	ASTM D 2487 USCS SOIL GROUP	MATERIAL TYPE	% PASSING			ATTERBERG LIMITS	
			1 1/2 IN.	NO. 4	NO. 200	LL	PI
IA	NONE	MANUFACTURED OPEN GRADED AGGREGATES	100%	≤10%	<5%	NON PLASTIC	
IB	NONE	MANUFACTURED DENSE GRADED AGGREGATES	100%	≤50%	<5%	NON PLASTIC	
II	GW	COARSE-GRAINED SOILS, CLEAN	100%	<50% OF "COARSE FRACTION"	<5%	NON PLASTIC	
	GP						
	SW			>50% OF "COARSE FRACTION"			
	SP						
III	GM	COARSE-GRAINED SOILS W/ FINES	100%	<50% OF "COARSE FRACTION"	12% TO 50%		<4 OR <"A" LINE
	GC						<7 OR >"A" LINE
	SM			>50% OF "COARSE FRACTION"			>4 OR <"A" LINE
	SC						>7 OR >"A" LINE
IV-A	ML	FINE-GRAINED SOILS	100%	100%	>50%	<50	<4 OR <"A" LINE
	CL						>7 OR >"A" LINE

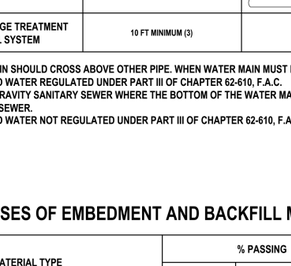
TRENCH AND BEDDING DETAILS

GENERAL NOTES

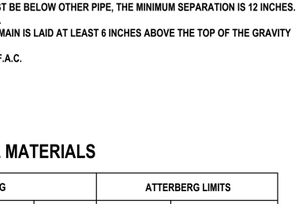
1. BEDDING SHALL BE DUMPED CLASS I-A WORKED BY HAND, OR CLASS I-B COMPACTED TO 85% STANDARD PROCTOR. LOCAL CODE PERMITTING WITH GEOTECHNICAL ENGINEER AND OWNER APPROVAL, NATIVE SOIL MAY BE USED FOR BEDDING PROVIDED IT MEETS THE EMBEDMENT AND BACKFILL MATERIALS IN TABLE 1 EXCLUDING CLASS IV-A.
2. HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I-A, OR CLASS I-B OR CLASS II COMPACTED TO 95% STANDARD PROCTOR. PEA GRAVEL SHALL NOT BE USED AS A HAUNCHING MATERIAL. CLASS III MATERIAL SHALL BE ALLOWED FOR RIGID PIPE COMPACTED AT 95% STANDARD PROCTOR.
3. INITIAL BACKFILL SHALL BE CLASS I-A WORKED BY HAND, OR CLASS I-B OR CLASS II COMPACTED TO 90% STANDARD PROCTOR, OR CLASS III COMPACTED 95% STANDARD PROCTOR. CLASS I & II MATERIAL SHALL BE USED FOR FLEXIBLE PIPE WHEN FILL HEIGHTS EXCEED 8'.
4. FINAL BACKFILL SHALL BE CLASS I-A WORKED BY HAND, OR CLASS I-B OR CLASS II COMPACTED TO 90% STANDARD PROCTOR, OR CLASS III COMPACTED TO 95% STANDARD PROCTOR.
5. FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS IV-A COMPACTED TO 95% STANDARD PROCTOR.
6. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321. (SEE TABLE 1)
7. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV-A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
8. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
9. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES.
10. DESIGN ENGINEER SHALL DESIGNATE ON THE PLANS WHERE WATERTIGHT JOINTS ARE TO BE REQUIRED.
11. REPLACE WET OR UNSUITABLE SOIL AS NECESSARY TO PROVIDE A SUITABLE BASE, AS DIRECTED BY GEOTECHNICAL ENGINEER OR OWNER.
12. WHERE GROUND WATER IS PRESENT CLASS I-A MATERIAL SHALL BE WRAPPED WITH A NON-WOVEN GEO-TEXTILE, EXCLUDING BEDDING MATERIAL BETWEEN 4" & 6" THICK.
13. CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT FOR SOIL TYPE AND CLASSIFICATIONS FOR THIS PROJECT.
14. CONTRACTOR SHALL REFER TO THE LATEST VERSION OF ASTM STANDARDS PRIOR TO CONSTRUCTION.



RIGID PIPE
N.T.S.
(RCP) OR (CMP & SPIRAL RIB ≤ 48"Ø)

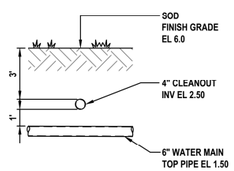


CONCRETE BOX CULVERT
N.T.S.



FLEXIBLE PIPE
N.T.S.
(HDPE) OR (PVC) OR (CMP > 48"Ø)

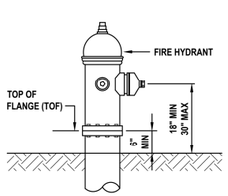
NOTE: MINIMUM TRENCH WIDTH (T.W.) SHALL BE THE GREATER OF (1.25 O.D. + 12") OR (O.D. + 16")



TYPICAL CONFLICT
POINTS 1, 2 & 3

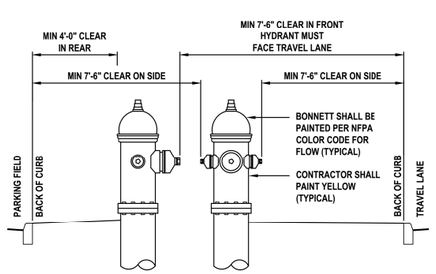
UTILITY CONFLICT DETAILS

NOT TO SCALE



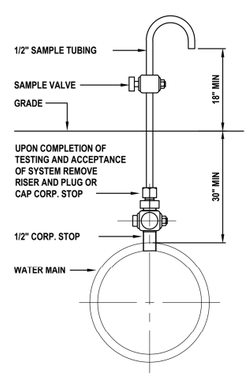
TOP OF FLANGE REFERENCE POINT DETAIL

NOT TO SCALE



TYPICAL FIRE HYDRANT CLEARANCE REQUIREMENT

NOT TO SCALE



BACTERIOLOGICAL SAMPLE POINT DETAIL

NOT TO SCALE

REVISIONS

DATE	DESCRIPTION
2/7/18	PER CITY COMMENTS

1230 North US1, Suite 3
Ormond Beach, Florida 32174
Phone (386) 872-7794
www.Newkirk-Engineering.com
C.A. # 30209
L.C. # 26000584

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Civil Engineering, Transportation, CEI & Landscape Architecture

NEWKIRK ENGINEERING INC.

UTILITY DETAILS AND NOTES

ANGLER'S COVE
3626 PENINSULA DRIVE
PORT ORANGE, FL 32127

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BRADLEY DONALD BAUKNECHT LICENSE NO. 75388 STATE OF FLORIDA PROFESSIONAL ENGINEER

BRADLEY D. BAUKNECHT, P.E. # 75388

PROJECT No:	2017-251
DATE:	JANUARY 2018
DESIGN BY:	BDB
DRAWN BY:	NWS
CHECKED BY:	BDB
SCALE:	

DRAWING NUMBER

9

REQUIREMENTS FOR AS-BUILT DRAWINGS

IN ORDER TO ENSURE THAT NEW SUBDIVISIONS AND SITE PLANS ARE CONSTRUCTED SUBSTANTIALLY IN ACCORDANCE WITH CITY REGULATIONS AND THE APPROVED DRAWINGS, THE FOLLOWING INFORMATION IS REQUIRED ON ALL SUBDIVSION AS-BUILT DRAWINGS.

1. INDIVIDUAL PLAN AND PROFILE SHEETS FOR ALL ROADS AND SANITARY SEWER LINES, SHOWING MANHOLES, INLETS, AND PIPE CROSSINGS. PLAN AND PROFILE SHEETS SHALL SHOW SANITARY LINES AND ALL OTHER BURIED UTILITIES THAT CROSS SEWER LINES, AND ANY THAT PARALLEL AND ARE WITHIN TEN FEET OF SANITARY SEWER LINES. PLAN VIEWS SHALL BE DRAWN AT A SCALE OF ONE (1) INCH EQUAL TO FORTY (40) FEET HORIZONTAL. PROFILES SHALL BE DRAWN AT ONE (1) INCH EQUAL TO FOUR (4) FEET VERTICAL.
2. PAVEMENT AND CURB WIDTHS SHALL BE VERIFIED AND DIMENSIONED FOR EACH STREET AT EACH BLOCK. (FOR SUBDIVISIONS) AND AS APPROPRIATE TO CONFIRM PAVING LIMITS (ON SITE PLANS).
3. ALL RADII AT INTERSECTIONS SHALL BE VERIFIED AND DIMENSIONED. THIS INFORMATION IS TO BE CLEARLY INDICATED ON THE AS-BUILT.
4. ROADWAY ELEVATIONS SHALL BE RECORDED AT ALL GRADE CHANGES, 100' INTERVALS LONG ROADWAY, AND OTHER INTERVALS AS NEEDED ALONG ALL STREETS. STREET CENTERLINE AND CURB INVERT ELEVATIONS SHALL BE RECORDED AS NOTED. THE AS-BUILT CENTERLINE PROFILE OF ALL STREETS SHALL ALSO BE SHOWN ON THE PLAN AND PROFILE SO IT MAY BE COMPARED TO THE DESIGN PROFILE GRADE LINES. IN THE EVENT THAT THE AS-BUILT CENTERLINE LONGITUDINAL GRADE DOES NOT MEET THE CITY MINIMUM STANDARDS, ADDITIONAL LONGITUDINAL GRADES OF THE ADJACENT CURBING AND SIMILAR ROADWAY CROSS-SECTION SURVEYS TO VERIFY THE CORRECT CROSS SLOPE, SHALL BE REQUIRED TO VERIFY THAT THE SYSTEM WILL FUNCTION AS ORIGINALLY DESIGNED.
5. STORM DRAINAGE STRUCTURES SHALL BE LOCATED AND / OR DIMENSIONED FROM CENTERLINES OR LOT LINES AS APPROPRIATE.
6. STORM DRAINAGE PIPE INVERT AND INLET ELEVATIONS SHALL BE RECORDED AND CLEARLY DENOTED AS AS-BUILT INFORMATION. DESIGN ELEVATIONS SHALL BE CROSSED OUT AND AS-BUILT INFORMATION WRITTEN NEXT TO IT.
7. STORM DRAINAGE PIPE MATERIAL, LENGTH, AND SIZE SHALL BE MEASURED AND / OR VERIFIED. THIS INFORMATION IS TO BE CLEARLY INDICATED AS BEING AS-BUILT INFORMATION.
8. ALL APPLICABLE TOPOGRAPHIC INFORMATION PERTINENT TO THE ON-SITE DRAINAGE SYSTEM, SUCH AS DITCHES, SWALES, LAKES, CANALS, ETC. THAT ARE DEEMED NECESSARY BY THE CITY TO VERIFY THE FUNCTIONAL PERFORMANCE OF THE STORMWATER SYSTEM, SHALL BE NOTED. NORMALLY, RECORDING ELEVATIONS EVERY 100 FEET AT THE TOP OF BANK AND TOE OF SLOPE WILL BE REQUIRED. MEASUREMENTS SHALL BE TAKEN AND RECORDED IN ORDER TO ACCURATELY TIE DOWN THESE FEATURES TO THE ROADWAY CENTERLINES AND TO PLAT LINES WHENEVER POSSIBLE, CONTOUR LINES SHALL BE UTILIZED TO GRAPHICALLY DESCRIBE THESE TOPOGRAPHIC FEATURES.
9. RETENTION AREAS SHALL HAVE THEIR TOP-OF BANK AND BOTTOM ELEVATIONS RECORDED. ACTUAL MEASUREMENTS SHALL BE TAKEN AND DIMENSIONS RECORDED OF THE SIZE OF ALL RETENTION AREAS. MEASUREMENTS SHALL BE DONE FROM TOP-OF-BANK TO TOP-OF-BANK WITH SIDE SLOPES INDICATED. SEPARATE CALCULATIONS SHALL BE SUBMITTED TO INDICATE REQUIRED AND PROVIDED RETENTION VOLUMES.
10. ACTUAL MATERIALS USED AND ELEVATIONS AND DIMENSIONS OF OVERFLOW WEIR STRUCTURES AND SKIMMERS SHALL BE NOTED ON THE AS-BUILT.
11. STORM DRAINAGE SWALE CENTERLINES SHALL BE LOCATED AND ELEVATIONS OF FLOW LINE AND TOP OF BANK SHALL BE RECORDED EVERY 100 FEET. SIDE SLOPES SHALL ALSO BE INDICATED.

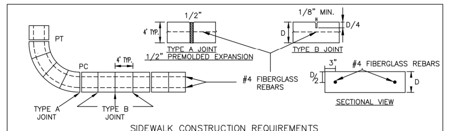
STANDARD CONSTRUCTION DETAIL
REQUIREMENTS FOR AS-BUILTS DRAWINGS
FILE NAME: M1.DOC | DETAIL REF: M-1 | REV. 12/08

REQUIREMENTS FOR AS-BUILT DRAWINGS (CONT'D)

IN ORDER TO ENSURE THAT NEW SUBDIVISIONS AND SITE PLANS ARE CONSTRUCTED SUBSTANTIALLY IN ACCORDANCE WITH CITY REGULATIONS AND THE APPROVED DRAWINGS, THE FOLLOWING INFORMATION IS REQUIRED ON ALL SUBDIVSION AS-BUILT DRAWINGS.

12. SANITARY SEWER MANHOLES SHALL BE VERIFIED AND DIMENSIONED FROM STREET CENTERLINES OR LOT LINES AS APPROPRIATE. ALL RIM AND INVERT ELEVATIONS SHALL BE VERIFIED AND RECORDED. THIS INFORMATION SHALL BE CLEARLY INDICATED AS BEING AS-BUILT INFORMATION. DESIGN ELEVATIONS SHALL BE CROSSED OUT AND AS-BUILT INFORMATION WRITTEN NEXT TO IT.
13. FOR SUBDIVISIONS, PROPOSED DESIGN FINISHED FLOOR ELEVATIONS SHALL APPEAR ON ALL SUBDIVISION LOTS ON THE APPROPRIATE PLAN AND PROFILE SHEET AS WELL AS ON THE MASTER DRAINAGE PLAN. SANITARY SEWER LINE LENGTHS, SIZES, MATERIAL, ETC., SHALL BE VERIFIED AND RECORDED. THIS INFORMATION IS TO BE CLEARLY INDICATED AS BEING AS-BUILT INFORMATION.
14. SEWER LATERALS SHALL BE VERIFIED AND RECORDED AT THEIR CLEAN-OUT LOCATIONS. STATIONING AND OFFSET DISTANCES SHALL BE MEASURED FROM DOWNSTREAM MANHOLES TOWARDS UPSTREAM MANHOLES.
15. LIFT STATIONS AND FORCE MAINS SHALL BE VERIFIED AND DIMENSIONED FROM STREET CENTERLINES OR LOT LINES AS APPROPRIATE. FORCE MAIN DEPTH AND LOCATION INCLUDING VALVES WILL BE PROVIDED AND TIED TO PERMANENT ABOVE GRADE FEATURES. DIMENSIONAL AND ELEVATION INFORMATION INDICATED ON THE APPROVED PLAN SHALL BE VERIFIED AND RECORDED. THIS INFORMATION SHALL BE CLEARLY INDICATED AS BEING AS-BUILT INFORMATION. BURIED ELECTRICAL SERVICE LINE SHALL BE CLEARLY DIMENSIONED, LOCATED, AND LABELED.
16. CURB CUTS OR METAL TABS, USED TO MARK SEWER LATERALS, WATER SERVICES AND WATER VALVES, SHALL BE VERIFIED FOR PRESENCE AND ACCURACY OF LOCATION.
17. POTABLE AND RECLAIMED WATER MAIN LINES SHALL BE DIMENSIONED OFF THE BACK OF CURB, OR EDGE OF PAVEMENT IF NO CURB IS PRESENT. WATER MAIN LINE MATERIAL SIZE, LENGTH AND DEPTH PLACED SHALL ALSO BE NOTED. LOCATIONS OF VALVES, TEES AND CROSSES SHALL BE TIED TO (3) THREE PERMANENT ABOVE GRADE FEATURES. THIS INFORMATION SHALL BE CLEARLY INDICATED AS BEING AS-BUILT INFORMATION.
18. POTABLE AND RECLAIMED WATER VALVES, TEES, BENDS, ALL SERVICES, AND FIRE HYDRANTS SHALL BE LOCATED BY TYING THEM TO SANITARY SEWER MANHOLES. SIMILARLY, FORCE MAIN VALVES, TEES, AND BENDS SHALL BE LOCATED IN THE SAME MANNER. STATIONING AND OFFSET DISTANCES SHALL BE MEASURED FROM DOWNSTREAM MANHOLES TO UPSTREAM MANHOLES.
19. FOR PERPENDICULAR CROSSINGS OF STORMWATER, SANITARY SEWER, POTABLE WATER, OR RECLAIMED WATER, THE AS-BUILT PLANS SHALL CLEARLY INDICATE WHICH UTILITIES ARE LOCATED OVER OR UNDER OTHER UTILITIES, AS NECESSARY.
20. ANY SPECIAL FEATURES SUCH AS, CONCRETE FLUMES, LAKE BANKS, WALLS, FENCING, ETC., WHICH WERE A PART OF THE APPROVED CONSTRUCTION DRAWINGS SHOULD ALSO BE LOCATED AND DIMENSIONED.
21. IF AN APPROVED SUBDIVISION PLAT OR SITE PLAN SHOWS A CONSERVATION EASEMENT, THE PROJECT SURVEYOR SHALL PROVIDE THE EXACT LOCATION OF THE SPECIMEN TREE(S) FROM THE RIGHT-OF-WAY OR PROPERTY LINES AND PROPOSED EASEMENT BOUNDARIES ON THE AS-BUILT DRAWING. THE AS-BUILT LOCATION OF THESE TREES WILL HELP VERIFY THE SUFFICIENCY OF THE CONSERVATION EASEMENT PRIOR TO PLAT RECORDING OR CERTIFICATE OF OCCUPANCY.

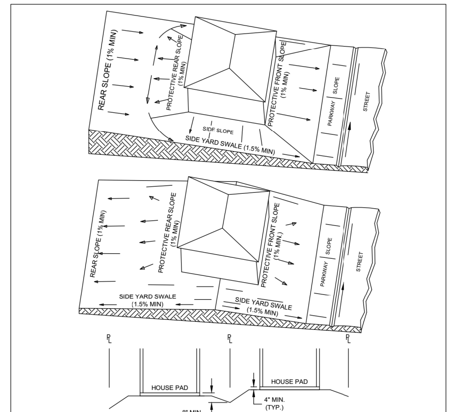
STANDARD CONSTRUCTION DETAIL
REQUIREMENTS FOR AS-BUILTS DRAWINGS
FILE NAME: M1.DOC | DETAIL REF: M-1 | REV. 12/08



SIDEWALK CONSTRUCTION REQUIREMENTS

1. ALL CONCRETE SIDEWALKS & BIKE PATHS IN PUBLIC RIGHT-OF-WAY, PRIVATE RIGHT-OF-WAY AND ON NON-RESIDENTIAL SITES SHALL CONTAIN FIBERGLASS REINFORCMENT EXCEPT REPAIRS TO NON-REINFORCED EXISTING SIDEWALKS. FIBERGLASS REINFORCEMENT SHALL NOT BE REQUIRED ON PRIVATE RESIDENTIAL SIDEWALKS.
2. SIDEWALKS, BIKEPATHS, RAMPS, AND DRIVEWAY APRONS SHALL BE CONSTRUCTED OF PLAIN PORTLAND CEMENT CONCRETE WITH FIBERGLASS REINFORCEMENT, HAVING A MAXIMUM SLUMP OF 3 INCHES, A MINIMUM DEVELOPED COMPRESSIVE STRENGTH OF 3000 P.S.I. IN 28 DAYS, AND A MINIMUM UNIFORM THICKNESS OF 4 INCHES WHERE INTENDED SOLELY FOR PEDESTRIAN TRAFFIC, AND 6 INCHES THICK WHERE MOTOR VEHICLES ARE LIKELY TO CROSS.
3. 2-#4 CONTINOUS FIBERGLASS BARS (6" OVERLAP REQUIRED) SHALL BE INSTALLED LONGITUDINALLY. 3" FROM THE EDGE OF ALL BIKEPATHS AND SIDEWALKS, TO CONTROL DIFFERENTIAL MOVEMENT AT JOINTS.
4. SIDEWALKS AND BIKEPATHS SHALL BE PLACED PARALLEL TO, AND ONE FOOT WITHIN THE RIGHT-OF-WAY LINE EXCEPT THAT THE CITY MAY APPROVE DEVIATIONS TO SAVE SPECIMEN TREES PROVIDED THAT THE SIDEWALK REMAINS WITHIN THE RIGHT-OF-WAY OR AN APPROVED SIDEWALK EASEMENT ABUTTING THE RIGHT OF WAY. SIDEWALKS AND BIKE PATHS SHOULD BE LOCATED AT LEAST 4 FEET FROM THE EDGE OF THE STREET PAVEMENT UNLESS OTHERWISE APPROVED BY THE CITY.
5. THE TOP OF THE CONCRETE SHALL BE AT AN ELEVATION NO LOWER THAN THE CROWN OF THE ADJACENT ROADWAY, AND NO HIGHER THAN 6 INCHES ABOVE THE CROWN UNLESS APPROVED BY THE CITY TO MAKE A MORE NATURAL TRANSITION WITH THE ADJACENT LAND.
6. ISOLATION JOINTS (TYPE A JOINTS) SHALL BE PROVIDED BETWEEN EXISTING SLABS OR STRUCTURES AND FRESH CONCRETE, TO SEPARATE PEDESTRIAN SECTIONS FROM SECTIONS WHICH WILL ENCOUNTER VEHICLE TRAFFIC, TO SEPARATE FRESH PLACEMENT FROM CONCRETE WHICH HAS SET FOR MORE THAN 60 MINUTES, AND NO FARTHER APART THAN 100 FEET IN SIDEWALKS AND BIKEPATHS. JOINT MATERIAL SHALL BE PREFORMED JOINT FILLER MEETING F.D.O.T. SPECIFICATIONS.
7. CONTROL JOINTS (TYPE B JOINTS) SHALL BE TOOLED INTO THE FRESH CONCRETE TO A DEPTH EQUAL TO 1/4 THE SLAB THICKNESS AND SPACED APART A DISTANCE EQUAL TO THE WIDTH OF THE SLAB OR 4 FEET WHICHEVER IS GREATEST.
8. THE SLAB SURFACE SHALL BE BROOM FINISHED TO BE SLIP RESISTANT, AND SHALL MATCH AS CLOSELY AS POSSIBLE THE FINISH OF EXISTING ADJACENT SLABS AND ALL EDGES SHALL BE TOOLED TO ELIMINATE SHARP CORNERS.
9. THE BEARING SUBSURFACE SHALL HAVE ALL ORGANIC, LOOSE, AND DELETERIOUS MATTER REMOVED, AND THE REMAINING CLEAN SOIL SHALL BE SMOOTH, SOUND, AND SOLID. ANY FILL MATERIAL SHALL BE COMPACTED TO A MINIMUM PROCTOR FIELD DENSITY OF 95 PERCENT.
10. ALL CONCRETE WORK IN THE RIGHT-OF-WAY SHALL BE INSPECTED BY THE CITY AFTER THE SUBSOIL IS PREPARED AND THE FORMS ARE SET, BUT BEFORE THE CONCRETE PLACEMENT BEGINS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE FINISHED SLAB FROM ALL DAMAGE AND VANDALISM UNTIL THE CITY ACCEPTS OR APPROVES THE SLAB, AFTER WHICH TIME THE OWNER OF THE ABUTTING LAND SHALL BE RESPONSIBLE FOR THE SLAB IN ACCORDANCE WITH THE CITY CODE. ANY SLAB SECTION DAMAGED OR VANDALIZED PRIOR TO ACCEPTANCE OR APPROVAL SHALL BE CUT OUT BETWEEN JOINTS AND REPLACED. REPAIRS ARE NOT ACCEPTABLE.
12. SIDEWALKS LOCATED WITHIN THE RIGHT-OF-WAY SHALL NOT BE TINTED, STAINED, COLORED, OR COATED.
13. ALL FORMS SHALL BE REMOVED PRIOR TO ACCEPTANCE OR APPROVAL AND THE DISTURBED GROUND SHALL BE BACKFILLED, REGRADED, AND SODDED SO THAT THE WEAR SURFACE OF THE CONCRETE IS REASONABLY FLUSH WITH THE ADJACENT GRADE.

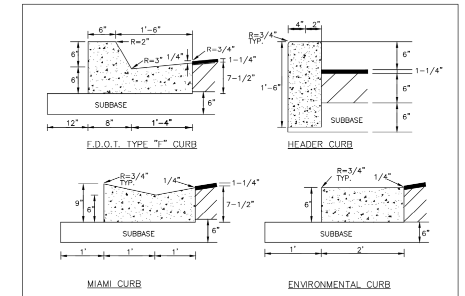
STANDARD CONSTRUCTION DETAIL
SIDEWALK CONSTRUCTION REQUIREMENTS
FILE NAME: M3.DWG | DETAIL REF: M-3 | REV. 12/08



NOTE:

1. ALL FINISHED FLOOR ELEVATIONS SHALL BE SET A MINIMUM OF 16 INCHES ABOVE THE CENTERLINE OF THE ADJACENT ROADWAY.
2. ALL FINISHED FLOOR ELEVATIONS ARE A MINIMUM OF 1 FOOT ABOVE THE LIMITS OF THE 100 YEAR FLOOD PLAIN AND/OR 1 FOOT ABOVE THE 100-YEAR DESIGN HIGH WATER LEVEL OF THE ADJACENT DETENTION/RETENTION AREA.
3. IN CASES WHERE THE ABOVE CONDITIONS CONFLICT, NOTE #2 SHALL TAKE PRECEDENCE.
4. SIDE YARD SWALE SHALL BE CENTERED ON THE COMMON PROPERTY LINE.

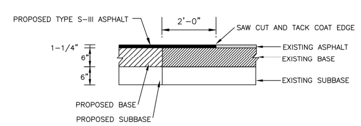
STANDARD CONSTRUCTION DETAIL
RESIDENTIAL GRADING
FILE NAME: M23.DWG | DETAIL REF: M-23 | REV. 12/08



NOTES:

1. ALL CURBS TO BE CONSTRUCTED OF 28 DAY, 3000 P.S.I. CONCRETE
2. 1/2" PRE-MOLDED EXPANSION JOINT REQUIRED EVERY 500', CONSTRUCTION JOINT REQUIRED EVERY 10' MAXIMUM (4' MINIMUM).
3. 1/2" PRE-MOLDED EXPANSION JOINT REQUIRED AT EACH SIDE OF ALL STORM INLET STRUCTURES AND AT ALL RADIUS POINTS.
4. 6" SUBBASE TO BE COMPACTED AND TESTED TO 98% DENSITY BASED ON AASHTO T-180 MODIFIED PROCTOR TEST AND SHALL BE STABILIZED TO A MINIMUM L.B.R. 40.
5. EXPANSION JOINT MATERIAL MUST COVER THE ENTIRE CROSS SECTION OF CURB.
6. IN NO INSTANCE SHALL EXTRUDED CURBS (DEFINED AS HEADER-TYPE CURBS INSTALLED DIRECTLY ON TOP OF PAVEMENT) BE PERMITTED.
7. ALL ASPHALT AND/OR PAVER DRIVEWAY APRONS LOCATED IN PUBLIC RIGHTS-OF-WAY, SHALL INCLUDE CURBING.

STANDARD CONSTRUCTION DETAIL
STANDARD CURB CONSTRUCTION
FILE NAME: R9.DWG | DETAIL REF: R-9 | REV. 12/08



STANDARD CONSTRUCTION DETAIL
PAVEMENT BUTT JOINT
FILE NAME: R11.DWG | DETAIL REF: R-11 | REV. 12/08

ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES

ALL MATERIALS AND INSTALLATION METHODS USED FOR LAND DEVELOPMENT CODE REQUIRED IMPROVEMENTS FOR SUBDIVISIONS AND SITE PLANS SHALL BE IN CONFORMANCE WITH THE CITY, FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), AND THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS (LATEST EDITION).

1. ALL RIGHT-OF-WAY OTHER THAN ROADWAY AREAS SHALL BE GRASSED AND MULCHED OR SODDED. ALL SLOPES STEEPER THAN 6:1 SHALL REQUIRE SODDING. THE CITY RESERVES THE RIGHT TO REQUIRE SODDING IN SPECIAL AREAS WHERE EROSION IS A CONCERN.
2. THE FOLLOWING WILL BE THE STANDARD PROTECTION FOR DITCHES UNLESS DRAINAGE CALCULATIONS INDICATE OTHERWISE:

SWALE PROFILE GRADES	PROTECTION REQUIRED
0.2%- 1.0%	GRASSING AND MULCHING
1.0%-4.0%	SODDING
4.0% AND GREATER	DITCH PAVING

3. THE PAVEMENT, BASE, AND SUBBASE THICKNESS PRESENTED ON DETAILS REPRESENTS THE MINIMUM REQUIREMENTS FOR LOCAL PUBLIC STREETS AND PRIVATE PARKING LOTS. THE CITY RESERVES THE RIGHT AT IT'S DISCRETION TO INCREASE THESE REQUIREMENTS FOR COLLECTOR AND ARTERIAL ROADWAYS AND PRIVATE PARKING LOTS SUBJECTED TO HEAVY VEHICULAR COMMERCIAL TRAFFIC.
4. THE DEVELOPER SHALL PROVIDE AT THEIR OWN EXPENSE A CERTIFIED SOILS ENGINEERING LABORATORY TO PERFORM ALL FIELD AND LABORATORY TESTING REQUIRED TO VERIFY THAT THE CONSTRUCTION IS IN COMPLIANCE WITH THE CITY'S MINIMUM STANDARDS. IT IS THE RESPONSIBILITY OF THE DEVELOPER TO ENSURE THAT COPIES OF ALL TEST REPORTS ARE PROVIDED TO THE CITY'S DESIGNATED SITE INSPECTOR PRIOR TO THE PROJECT FINAL INSPECTION IN ORDER TO ALLOW PROJECT ACCEPTANCE BY THE CITY.
5. THE LIMITS OF STABILIZED SUBBASE SHALL EXTEND TO A DEPTH OF SIX INCHES (6") BELOW THE BOTTOM OF THE BASE AND OUTWARD TO TWELVE INCHES (12") BEYOND THE CURB.
6. THE STABILIZING MATERIAL, IF REQUIRED, SHOULD BE A HIGH BEARING VALUE SOIL, SAND-CLAY, LIMEROCK, RECYCLED CONCRETE, SHELL, OR OTHER MATERIAL AS APPROVED BY THE CITY'S DESIGNATED SITE INSPECTOR AND A LICENSED SOILS ENGINEER.
7. THE SUBBASE SHALL BE STABILIZED NOT LESS THAN FORTY (40) POUNDS LIMEROCK BEARING RATIO (LBR) TO A 6" MINIMUM DEPTH. A COMPACTION OF NO LESS THAN NINETY-EIGHT (98 %) PERCENT DENSITY BASED ON AASHTO T-180 SHALL BE REQUIRED.
8. FOR ROADWAYS, TESTS FOR SUBBASE BEARING CAPACITY AND COMPACTION SHALL BE DONE AT A MINIMUM OF EVERY 300 FEET AND SHALL BE STAGGERED TO THE LEFT, RIGHT, AND AT CENTER LINE OF THE ROADWAY. FOR SITE PLANS, TEST SHALL BE PERFORMED FOR EVERY 600 SQUARE YARDS OF STABILIZED AREA, OR PORTIONS THEREOF.
9. BASES FOR ALL STREETS SHALL HAVE A MINIMUM SIX INCH (6") DEPTH. SOIL CEMENT BASES SHALL HAVE A STRENGTH OF 350 POUNDS PER SQUARE INCH AT 7 DAYS COMPACTED TO 98% DENSITY PER AASHTO T-99 STANDARD PROCTOR TEST IN CONFORMANCE WITH SECTION 270 OF STANDARD F.D.O.T. SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION). RECYCLED CONCRETE OR LIMEROCK BASES SHALL BE COMPACTED TO 98% MAXIMUM DENSITY BASED ON AASHTO T-180 MODIFIED PROCTOR TEST.

STANDARD CONSTRUCTION DETAIL
ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES
FILE NAME: R12.DWG | DETAIL REF: R-12 | REV. 12/08

ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES (CONTD.)

10. SOIL CEMENT AND RECYCLED CONCRETE MIX DESIGNS SHALL BE SUBMITTED BY A LICENSED SOILS ENGINEER TO THE CITY'S DESIGNATED SITE INSPECTOR PRIOR TO THE START OF SUBBASE PREPARATION. ALL MIX DESIGNS SHALL BE SUBJECT TO THE APPROVAL OF THE CITY.
11. CEMENT DELIVERY TICKETS SHALL BE PROVIDED TO THE CITY'S DESIGNATED SITE INSPECTOR AT THE TIME OF PLACEMENT. IF THE INSPECTOR IS NOT ON SITE THROUGHOUT THE ENTIRE INSTALLATION, ACCUMULATED DELIVERY TICKETS CAN BE PROVIDED TO THE INSPECTOR BY THE CONTRACTOR ON THE FOLLOWING DAY.
12. TESTING OF THE IN-PLACE BASE SHALL BE DONE AT INTERVALS EQUIVALENT TO SUBGRADE TESTING AND SHALL CONSIST OF, AS A MINIMUM, A MOISTURE CONTENT AND COMPACTION TEST.
13. PORTLAND CEMENT CONCRETE, LIMEROCK, RECYCLED CONCRETE, OR FULL DEPTH ASPHALT PAVEMENT MAY BE USED IN PLACE OF SOIL CEMENT BASE. ALL BASE AND ROADWAY DESIGNS SHALL BE SUBJECT TO THE APPROVAL OF THE CITY.
14. SOIL CEMENT BASE MATERIAL CONSTRUCTION SHALL BE CONTINUOUSLY SUPERVISED BY A SOILS TESTING LABORATORY AT THE DEVELOPER'S EXPENSE. THE TESTING LABORATORY SHALL PROVIDE AN ON-SITE TECHNICIAN CERTIFIED IN THE INSTALLATION OF SOIL CEMENT WITH THE CERTIFICATION RECOGNIZED BY F.D.O.T.
15. SOIL CEMENT PAVEMENT BASES WITH THE CURE COAT APPLIED SHALL BE ALLOWED TO CURE A MINIMUM OF SEVEN (7) DAYS UNDER NO TRAFFIC PRIOR TO PLACING ANY ASPHALT SURFACE. (TEST REPORTS ARE REQUIRED TO BE DELIVERED TO THE CITY'S DESIGNATED SITE INSPECTOR PRIOR TO TRAFFIC USAGE.)
16. RECYCLED CONCRETE CAN BE USED AS AN ALTERNATIVE BASE MATERIAL PROVIDED THE MATERIAL IS A MINIMUM OF 60% CARBONATE OF CALCIUM AND MAGNESIUM. THE MATERIAL SHALL BE LIMITED TO MAXIMUM OF 3% OF WATER SENSITIVE CLAY MATERIAL, LIQUID LIMIT SHALL NOT EXCEED 35 AND BE NON-PLASTIC, AND THE PLASTICITY INDEX SHALL NOT EXCEED 10. THE MATERIAL SHALL NOT CONTAIN ORGANIC MATERIAL, CHERTY OR OTHER EXTREMELY HARD PIECES, LUMPS, BALLS OR POCKETS OF SAND SIZE MATERIAL OF A QUANTITY AS TO BE DETRIMENTAL TO THE PROPER BONDING, FINISHING, OR STRENGTH OF THE RECYCLED CONCRETE BASE. FOR BASE APPLICATIONS, AT LEAST 97 % (BY WEIGHT) OF THE MATERIAL SHALL PASS A 1" SIEVE AND FOR SUBBASE APPLICATIONS, AT LEAST 97 % (BY WEIGHT) OF THE MATERIAL SHALL PASS A 1-1/2" SIEVE. FOR BOTH APPLICATIONS, THE MATERIAL SHALL BE GRADED UNIFORMLY DOWN TO DUST AND THE MINIMUM LBR VALUES ARE TO BE NOT LESS THAN 130. COARSE AGGREGATE USED IN THE RECYCLED CONCRETE SHALL HAVE A MAXIMUM LOSS OF 45% PER LOS ANGELES ABRASION TEST. ALL MATERIALS SHALL BE WELL GRADED IN ACCORDANCE WITH REQUIREMENTS SET FORTH IN SECTION 204, F.D.O.T., STANDARD SPEC. FOR ROAD AND BRIDGE CONSTRUCTION., (LATEST EDITION).
17. RECYCLED CONCRETE OR LIMEROCK FOR BASE OR SUBBASE APPLICATIONS SHALL BE ALLOWED ON CITY ROADWAYS ONLY WHERE THE LOWEST ELEVATION OF THE ROADWAY SUBBASE IS A MINIMUM OF 6" ABOVE THE SEASONAL HIGH GROUNDWATER TABLE AS CERTIFIED BY A FLORIDA LICENSED PROFESSIONAL SOILS ENGINEER AND SUBSEQUENTLY APPROVED FOR BY THE CITY. IN AREAS NOT MEETING THESE STANDARDS A SOIL CEMENT BASE WILL BE REQUIRED. ALL CRUSHING OF RECYCLED CONCRETE SHALL BE DONE PRIOR TO THE MATERIAL BEING PLACED IN THE ROADWAY. TESTING SHALL HAVE THE SAME REQUIREMENTS AND BE PERFORMED AT THE SAME LOCATION AND INTERVALS AS REQUIRED FOR LIMEROCK.

STANDARD CONSTRUCTION DETAIL
ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES
FILE NAME: R13.DWG | DETAIL REF: R-13 | REV. 12/08

ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES (CONTD.)

18. DESIGN MIXES AND PRODUCT GRADATION INFORMATION FOR ALL MATERIALS TO BE INSTALLED AS PART OF THE LAND DEVELOPMENT CODE REQUIRED IMPROVEMENTS SHALL BE SUBMITTED TO THE CITY'S DESIGNATED SITE INSPECTOR FOR ACCEPTANCE BY THE CITY. THE INFORMATION SHALL BE SUBMITTED NO LESS THAN THREE (3) WORKING DAYS PRIOR TO ANY CONSTRUCTION. SUBMITTALS SHALL INCLUDE, BUT NOT BE LIMITED TO, INFORMATION TO EVALUATE THE MATERIALS PROPOSED FOR INSTALLATION AS SUBBASE, BASE, AND PAVEMENT FOR ALL ROADWAY AND PARKING AREA SURFACES AS WELL AS SIMILAR INFORMATION FOR ALL OTHER CONCRETE SIDEWALKS, CURBING, AND COMPARABLE STRUCTURES AND APPLICATIONS.
19. ALL WEARING COURSE HOT MIX AGGREGATES SHALL BE VIRGIN MATERIAL. THE USE OF RECYCLED ASPHALT MATERIAL (RAP) IN WEARING COURSE MIXES IS NOT ALLOWED.
20. PRIOR TO PLACEMENT FLORIDA STATE CERTIFIED BATCH PLANTS MUST CERTIFY TO THE CITY'S RESIDENT PROJECT INSPECTOR THAT THE ASPHALT DELIVERED TO THE SITE IS IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
21. EXTRACTION AND GRADATION TESTS ON ASPHALT MIXES SHALL BE PROVIDED TO THE CITY'S DESIGNATED SITE INSPECTOR FOR EVERY 2500 SQUARE YARDS OF ASPHALT, OR PART THEREOF, TO ENSURE THAT DESIGN MIXES MEET THE CITY STANDARD SPECIFICATIONS.
22. FIELD TESTING OF THE ASPHALT PAVEMENT SHALL BE DONE AT INTERVALS EQUIVALENT TO SUBGRADE TESTING AND SHALL CONSIST OF, AS A MINIMUM, A COMPACTION TEST. ASPHALT PAVEMENT SHALL BE COMPACTED TO 98% DENSITY PER FM 1-T238 (METHOD B), NUCLEAR DENSITY TEST, "BACKSCATTER METHOD".
23. IN ADDITION TO THE FIELD DENSITY TESTS NOTED, THE CITY RESERVES THE RIGHT TO REQUIRE CORE SAMPLES OF PAVEMENT SECTIONS EXTRACTED AND TESTED BY A CERTIFIED SOILS ENGINEERING LABORATORY AT THE DEVELOPER'S EXPENSE. THE CITY'S DESIGNATED SITE INSPECTOR SHALL DESIGNATE THE LOCATIONS OF THE TEST CORE LOCATIONS.
24. THE ROADWAY CROWN SHALL HAVE A STANDARD ONE QUARTER INCH (1/4") PER FOOT SLOPE.
25. ALL ROADWAYS WITH CURB AND GUTTER SECTIONS SHALL HAVE AS A STANDARD A MINIMUM LONGITUDINAL SLOPE OF 0.30%. THE ROADWAY CENTERLINE SHALL BE CLEARLY MARKED ON THE DESIGN PLANS. AT A MINIMUM, DESIGN ROADWAY CENTERLINE ELEVATIONS SHALL BE NOTED AT ALL GRADE CHANGES AND AT 100' INTERVALS ALONG THE ROADWAY PROFILE ON BOTH THE DESIGN PLANS AND AS-BUILT DRAWINGS.
26. THE FINISHED PAVEMENT EDGE SHALL BE WITHIN ONE QUARTER INCH (1/4") ABOVE THE ADJACENT CONCRETE CURB FOR CURBS COLLECTING AND CONVEYING STORMWATER.
27. CONCRETE CURBS SHALL BE PROVIDED ON BOTH SIDES OF ALL STREETS AND ALL CONCRETE CURBS SHALL BE CONSTRUCTED WITH 3000 P.S.I. CONCRETE AT 28 DAYS.

STANDARD CONSTRUCTION DETAIL
ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES
FILE NAME: R14.DWG | DETAIL REF: R-14 | REV. 12/08

ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES (CONTD.)

27. CONCRETE CURBING, SIDEWALKS, PAVEMENT AND SIMILAR CONCRETE AREAS SHALL BE SAW CUT WITHIN 4 TO 18 HOURS OF PLACEMENT. SAW CUTS SHALL BE 1/4" IN WIDTH TO A DEPTH OF 1/4 OF THE TOTAL DEPTH OF CONCRETE OR 1-1/2", WHICHEVER IS LESS. SAW CUTS SHALL BE LOCATED AT INTERVALS OF TEN FEET (10') WITH EXPANSION JOINTS AT STREET INTERSECTIONS, RADIUS POINTS, STRUCTURES, AND ALONG CURVES AT SIXTY FEET (60') INTERVALS. ALL EXPANSION JOINT MATERIAL IS REQUIRED TO BE INSTALLED THROUGH THE ENTIRE DEPTH OF THE CONCRETE CURB. FOR LINEAL SECTIONS OF CURBS, EXPANSION JOINTS SHALL BE LOCATED AT A MAXIMUM SPACING OF FIVE-HUNDRED FEET (500') AND SHALL BE 1/2" IN WIDTH.
28. AN "X" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF WATER DISTRIBUTION SYSTEM VALVE.
29. A "V" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF ALL SEWER SERVICES.
30. A "⊥" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF ALL RECLAIMED WATER SERVICES.
31. A "Λ " SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF ALL POTABLE WATER SERVICES.
32. THREE (3) CONCRETE CYLINDERS SHALL BE TAKEN AND TESTED (1 IN 14 DAYS AND 1 IN 28 DAYS) FOR EVERY SEVENTY-FIVE (75) CUBIC YARDS OF CONCRETE OR LESS PLACED. TEST RESULTS SHALL THEN BE PROVIDED TO THE CITY'S DESIGNATED SITE INSPECTOR AS THEY BECOME AVAILABLE.
33. A CONCRETE SLUMP TEST SHALL BE REQUIRED WITHIN THE FIRST 30 CUBIC YARDS OF CONCRETE. THEREAFTER, SLUMP TESTS SHALL BE REQUIRED FOR EVERY THIRTY (30) CUBIC YARDS OF CONCRETE, OR FRACTION THEREOF, WITH COPIES OF THE RESULTS PROVIDED TO THE CITY'S DESIGNATED SITE INSPECTOR. THE SLUMP TEST SHALL MEET THE REQUIRED MIX DESIGN ON EACH LOAD DELIVERED.
34. THE DEVELOPER SHALL PROVIDE ALL REQUIRED PAVEMENT MARKINGS ON ALL ROADWAYS PER CITY, COUNTY, AND STATE REQUIREMENTS. CENTERLINE STRIPES SHALL BE PROVIDED ON EXTENSIONS OF CITY COLLECTOR OR ARTERIAL ROADS, COUNTY ROADS, STATE HIGHWAYS, AND ALONG LOCAL STREETS IN THE VICINITY OF THEIR INTERSECTION WITH THE ABOVE MENTIONED ROADWAYS.
35. A FDOT APPROVED STOP SIGN AND A 24"-WIDE WHITE THERMOPLASTIC STOP BAR ARE REQUIRED AT ALL ROADWAY INTERSECTIONS.
36. ALL TRAFFIC CONTROL DEVICES PLACED AT INTERSECTIONS, PRIVATE STREETS, PUBLIC STREETS, COUNTY ROADS, AND STATE HIGHWAYS WITHIN THE CITY LIMITS SHALL BE INSTALLED ACCORDING TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION. THE MAINTENANCE-OF-TRAFFIC (MOT) INSTALLATION AND SUBSEQUENT OPERATION SHALL BE OVERSEEN BY A CONTRACTOR CERTIFIED BY THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION, OR EQUIVALENT CERTIFICATION RECOGNIZED BY FDOT.

STANDARD CONSTRUCTION DETAIL
ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES
FILE NAME: R15.DWG | DETAIL REF: R-15 | REV. 12/08

ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES (CONTD.)

37. THE DEVELOPER IS RESPONSIBLE FOR PAYING FEES FOR TRAFFIC CONTROL DEVICES TO THE CITY FOR INSTALLATION. STREET SIGNS AND STOP SIGNS SHALL BE PLACED AT ALL INTERSECTIONS, INCLUDING BUT NOT LIMITED TO PRIVATE STREETS, PUBLIC STREETS, COUNTY ROADS, AND STATE HIGHWAYS WITHIN THE CITY LIMITS.
38. THE DEVELOPER IS RESPONSIBLE FOR PAYING FEES FOR ALL STREET LIGHTS PRIOR TO ACCEPTANCE OF THE PROJECT BY THE CITY.
39. FOUR FOOT (4') WIDE SIDEWALKS SHALL BE PROVIDED ON BOTH SIDES OF ALL RESIDENTIAL STREETS. (SEE DETAIL, INDEXES M-2 AND M-3)
40. BIKE PATHS SHALL BE CONSTRUCTED EIGHT FEET (8') IN WIDTH ALONG ARTERIAL HIGHWAYS AS DIRECTED BY THE CITY. (SEE DETAIL, INDEXES M-2 AND M-3)
41. STANDARD TURNING RADII FOR INTERSECTIONS:

RESIDENTIAL STREETS WITH STATE & COUNTY ROADWAYS OR MAJOR THOROUGHFARES WITHIN THE CITY	35-50 FT.
ENTRANCES TO COMMERCIAL SITES OFF OF CITY STREETS	35 FT.
INTERSECTIONS INTERIOR IN SUBDIVISIONS	35 FT.

SHOULD VOLUSIA COUNTY OR THE FLORIDA DEPARTMENT OF TRANSPORTATION (F.D.O.T.) DETERMINE THAT LARGER RADII ARE WARRANTED WITHIN THEIR RIGHT-OF-WAY, THE LARGER RADII SHALL PREVAIL.

42. CONSTRUCTION METHODS AND DESIGN FOR CONCRETE PAVEMENT SHALL CONFORM TO FDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
43. ALL CONTRACTORS THAT ARE PERFORMING THE CONSTRUCTION OF LAND DEVELOPMENT CODE REQUIRED IMPROVEMENTS (INCLUDING WATER MAINS, SANITARY SEWER MAINS, RECLAIMED WATER MAINS, STORM WATER PIPES AND INLETS, ROADWAYS, AND PARKING FACILITIES) SHALL BE CERTIFIED WITH THE STATE OF FLORIDA BOARD OF PROFESSIONAL REGULATIONS (BPR) FOR THE TYPE OF WORK THAT THEY PERFORM.
44. ALL CONTRACTORS THAT ARE PERFORMING THE CONSTRUCTION WORK OF LAND DEVELOPMENT CODE REQUIRED IMPROVEMENTS SHALL BE LICENSED BY THE STATE OF FLORIDA AND REGISTERED WITH THE CITY OF PORT ORANGE. THE LICENSE AND REGISTRATION SHALL PERTAIN DIRECTLY TO THE TYPE OF WORK BEING PERFORMED.
45. EXCEPT AS PROVIDED IN THE LAND DEVELOPMENT CODE, ALL ELECTRIC, TELEPHONE, TELEVISION LINES AND SIMILAR UTILITIES ARE REQUIRED TO BE INSTALLED UNDERGROUND AT THE EXPENSE OF THE OWNER, DEVELOPER, AND BUILDER.

STANDARD CONSTRUCTION DETAIL
ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES
FILE NAME: R16.DWG | DETAIL REF: R-16 | REV. 12/08

ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES (CONTD.)

46. UTILITY DEPTH:
    A. HIGH VOLTAGE UTILITIES SUCH AS POWER (FEEDER, SERVICE, AND DROPS) SHALL BE BURIED A MINIMUM OF 30 INCHES IN DEPTH.
    B. LOW VOLTAGE UTILITIES SUCH AS PHONE AND CABLE TV SHALL BE BURIED A MINIMUM OF 18 INCHES IN DEPTH FOR FEEDER AND SERVICES. SERVICE DROPS SHALL BE BURIED A MINIMUM OF 12 INCHES IN DEPTH.
    C. IN NO INSTANCE SHALL THE DEPTH OF COVER BE LESS THAN 30" FROM FINISHED GRADE TO THE TOP OF PIPE FOR POTABLE WATER MAINS, SANITARY SEWER MAINS, AND RECLAIMED WATER MAINS. HOWEVER, IN THE EVENT THAT THIS CONDITION CANNOT BE MET DUE TO UNANTICIPATED CONFLICTS DURING THE CONSTRUCTION PROCESS, DUCTILE IRON PRESSURE CLASS 350 OR CONCRETE ENCASEMENT MAY BE USED AS APPROVED BY THE CITY PUBLIC UTILITIES DEPARTMENT.
47. LANDSCAPE PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF UNDERGROUND AND OVERHEAD PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE IN ORDER TO EVALUATE POTENTIAL CONFLICTS.

STANDARD CONSTRUCTION DETAIL
ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES
FILE NAME: R17.DWG | DETAIL REF: R-17 | REV. 12/08

TECHNICAL SPECIFICATIONS FOR SITE PLANS AND SUBDIVISIONS TESTING

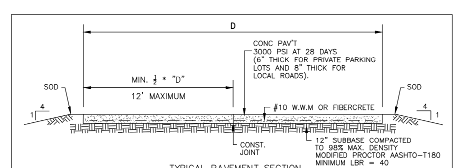
A. MATERIALS

THE INSPECTION AND TESTING OF MATERIALS AND FINISHED ARTICLES TO BE INCORPORATED IN THE WORK SHALL BE MADE BY BUREAUS, LABORATORIES, OR AGENCIES APPROVED BY THE ENGINEER OF RECORD. THE CONTRACTOR SHALL SUBMIT SUCH SAMPLES, OR SUCH SPECIAL OR TEST PIECES OF MATERIALS AS THE ENGINEER OF RECORD MAY REQUIRE. THE CONTRACTOR SHALL NOT INCORPORATE ANY MATERIAL OR FINISHED ARTICLE INTO THE WORK UNTIL THE RESULTS OF THE INSPECTIONS OR TESTS ARE KNOWN AND THE CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER OF RECORD THAT THE MATERIAL OR FINISHED ARTICLE IS ACCEPTED. ALL MATERIALS MUST BE OF THE SPECIFIED QUALITY AND BE EQUAL TO THE APPROVED SAMPLE IF A SAMPLE HAS BEEN SUBMITTED. CERTIFIED COPIES OF ALL TESTS MADE SHALL BE SUBMITTED TO THE ENGINEER OF RECORD AS WELL AS TO THE CITY'S DESIGNATED SITE INSPECTOR. THE CITY'S DESIGNATED SITE INSPECTOR MUST RECEIVE COPIES OF ALL TESTING REPORTS AND CERTIFICATES PRIOR TO THE ENGINEER OF RECORD REQUESTING A FINAL PROJECT INSPECTION FROM THE CITY.

B. LABORATORY CONTROL AND CERTIFICATES

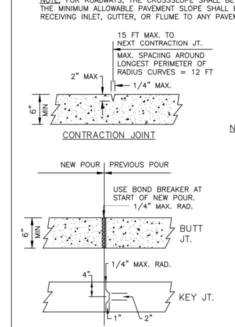
1. SPECIFICATIONS . SAMPLING, TESTING, AND LABORATORY METHODS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE AASHTO OR ASTM. WHERE AASHTO OR ASTM SPECIFICATIONS ARE USED, THE REFERENCE SHALL BE CONSTRUED TO BE THE MOST RECENT STANDARD SPECIFICATIONS OR TENTATIVE SPECIFICATIONS OF THE AASHTO OR ASTM IN FORCE ON THE DATE OF THE TEST.
2. TEST & CERTIFICATES. THE CONTRACTOR SHALL ENGAGE AN APPROVED TESTING LABORATORY TO PROVIDE THE FOLLOWING TESTS AND CERTIFICATIONS SIGNED BY A REGISTERED ENGINEER OF THE STATE OF FLORIDA. ALL TECHNICIANS PERFORMING THE TESTS SHALL BE STATE CERTIFIED FOR THE TESTING PERFORMED. ADDTIONAL TESTS THAT MAY BE REQUIRED BY EITHER THE ENGINEER OF RECORD OR THE CITY SHALL ALSO BE PROVIDED BY THE CONTRACTOR, AND THE FOLLOWING SHALL NOT BE TAKEN AS A COMPLETE AND EXHAUSTIVE LIST OF THE CONTRACTOR'S TESTING RESPONSIBILITIES.
    A. SOIL ANALYSIS FOR STRUCTURAL FILL MATERIAL PRIOR TO INSTALLATION.
    B. PROCTOR DENSITIES, MOISTURE CONTENT, COMPACTED FIELD DENSITIES, AND ATTERBERG LIMITS.
    C. SOIL CEMENT MIX DESIGNS AND COMPRESSIVE STRENGTH TESTS (FOR SOIL CEMENT ROAD BASE ONLY).
    D. SUPERVISION OF ALL SOIL CEMENT BASE CONSTRUCTION.
    E. ANALYSIS OF RECYCLED CONCRETE BASE MATERIAL PRIOR TO INSTALLATION.
    F. ASPHALT MIX DESIGN, BITUMEN CONTENT, SIEVE ANALYSIS, HUBBARD FIELD STABILITY TESTS, NUCLEAR DENSITY TESTS (BACKSCATTER METHOD), AND ANALYSIS OF CORE SAMPLES.
    G. CONCRETE MIX DESIGNS FOR ALL APPLICATIONS INCLUDING PAVEMENT, CAST-IN-PLACE STRUCTURES, CURBING, GUTTERS, SIDEWALKS, BIKE PATHS, APRONS AND DRIVEWAYS.
    H. COMPRESSIVE TEST CYLINDERS AND SLUMP TESTS FOR ALL APPLICATIONS OF CONCRETE, INCLUDING PAVEMENT, CAST-IN-PLACE STRUCTURES, CURBING, GUTTERS, SIDEWALKS, BIKE PATHS, APRONS, AND DRIVEWAYS.
    I. CHLORINE RESIDUAL AND BACTERIOLOGICAL TESTING OF WATER MAINS.
    J. PRESSURIZED LEAK TESTING OF WATER MAINS, FORCE MAINS, AND RECLAIMED WATER MAINS.

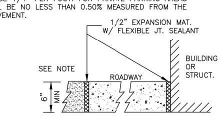
STANDARD CONSTRUCTION DETAIL
TECHNICAL SPECIFICATIONS FOR SITE PLANS AND SUBDIVISIONS TESTING
FILE NAME: R18.DWG | DETAIL REF: R-18 | REV. 12/08



TYPICAL PAVEMENT SECTION

NOTE: FOR ROADWAYS, THE CROSSSLOPE SHALL BE 1/4" PER FOOT. FOR PRIVATE PARKING AREAS THE MINIMUM ALLOWABLE PAVEMENT SLOPE SHALL BE NO LESS THAN 0.50% MEASURED FROM THE RECEIVING INLET, GUTTER, OR FLUME TO ANY PAVEMENT.





EXPANSION JOINT

NOTES:

1. CONTRACTION JTS. MAY BE HAND FORMED, SAWED OR CONSTRUCTED W/ A 1/4" PREMOLDED FILLER JT. JOINTS MUST BE SAWED BETWEEN 4 AND 18 HOURS AFTER CONCRETE HAS BEEN PLACED.
2. EXPANSION JOINTS TO BE PLACED BETWEEN ROADWAY AND CURB. ALSO AT ANY PERMANENT STRUCTURE ABUTTING OR WITHIN THE PAVED AREA INCLUDING SIDEWALKS.
3. USE OF WOOD IS NOT AN ACCEPTABLE ALTERNATIVE TO FLEXIBLE JOINT SEALANTS.
4. FINAL DETERMINATION OF CONSTRUCTION JOINT SELECTION AND APPLICATION SHALL BE MADE BY THE ENGINEER OF RECORD BASED ON PROJECT REQUIREMENTS AND LOCATION.
5. CONSTRUCTION JOINTS WITHIN THE SLAB AREA SHOULD NOT CONTAIN PREMOLDED EXPANSION JOINT FILLER.
6. CONCRETE PAVEMENT CONSTRUCTION SHALL BE IN ACCORDANCE WITH A.C.I. PUBLICATION ACI 330R-87.

STANDARD CONSTRUCTION DETAIL
CONCRETE PAVEMENT DETAILS
FILE NAME: R19.DWG | DETAIL REF: R-19 | REV. 12/08

SUBDIVISION TECHNICAL SPECIFICATIONS: SODDING, SEEDING AND MULCHING

A. SCOPE OF WORK THE WORK IN THIS SECTION CONSISTS OF FURNISHING AND COMPLETELY INSTALLING SOD, OR SEED AND MULCH OVER THE LIMITS CALLED FOR ON THE CONSTRUCTION DRAWINGS. AT A MINIMUM, ALL WORK SHALL MEET THE MINIMUM SPECIFICATIONS OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, AS OUTLINED IN SECTIONS 570 (GRASSING BY SEEDING) AND 575 (SODDING). IN ADDITION, ALL WORK SHALL MEET THE MINIMUM REQUIREMENTS OF THE CITY.

B. MATERIALS GRASS SEED SHALL BE A MIXTURE OF:

PENSACOLA BAHIA (USE 50 % SCARIFIED SEED)	50%
HULLED BERMUDA	25%
BROWN TOP MILLET	25%

IN THE FALL AND WINTER MONTHS, AND WITH THE APPROVAL OF THE CITY, ANNUAL RYE GRASS SHALL BE SUBSTITUTED IN EQUAL AMOUNTS FOR THE BROWN TOP MILLET. SEED SHALL BE PRE-MIXED BY A SEED COMPANY TO THE PERCENTAGES DESCRIBED ABOVE, WITH CERTIFICATION FROM THE SUPPLIER PROVIDED TO THE CITY'S DESIGNATED PROJECT LANDSCAPE INSPECTOR PRIOR TO USE.

MULCH USED SHALL BE STRAW OR HAY CONSISTING OF OATS, RYE, OR WHEAT STRAW, OR OF PANGOLA, PEANUT, COASTAL BERMUDA, OR BAHIA GRASS HAY. MULCH SHALL BE FREE FROM UNDESIRABLE WEED AND OTHER UNDESIRABLE GRASS.

C. METHODS. GRASSING SHALL BE DONE IMMEDIATELY UPON COMPLETION OF THE FINE GRADING OPERATION. HOWEVER, NO SEEDING SHALL BE DONE WHEN THE GROUND IS FROZEN OR UNDULY WET. THE RATE OF SPREAD FOR THE SEED MATERIAL SHALL BE ONE HUNDRED AND THIRTY (130) POUNDS PER ACRE.

APPROXIMATELY ONE INCH (1"), LOOSE THICKNESS, OF MULCH MATERIAL SHALL BE APPLIED UNIFORMLY OVER THE SEEDED AREAS (APPROXIMATELY ONE AND ONE-HALF (1-1/2) BALES PER 1000 SQUARE FEET). THE MULCH MATERIAL SHALL BE CUT INTO THE SOIL WITH A DISC HARROW OR OTHERWISE ANCHORED DOWN. UNDER PROPER CIRCUMSTANCES, CONTRACTOR MAY REQUEST OPTION TO INSTALL HYDRO-SEEDING SUBJECT TO THE APPROVAL OF THE PROJECT LANDSCAPE ARCHITECT AND THE CITY

STANDARD CONSTRUCTION DETAIL
SUBDIVISION TECHNICAL SPECIFICATIONS: SODDING, SEEDING AND MULCHING
FILE NAME: R20.DWG | DETAIL REF: R-20 | REV. 12/08

REVISIONS	
DATE	DESCRIPTION
2/7/18	PER CITY COMMENTS

1230 North US1, Suite 3
Ormond Beach, Florida 32174
Phone (386) 872-7794
www.Newkirk-Engineering.com
C.A. # 30209
L.C. # 26000584
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Civil Engineering, Transportation, CEI & Landscape Architecture
NEWKIRK ENGINEERING INC.

CITY DETAILS AND NOTES
ANGLER'S COVE
3626 PENINSULA DRIVE
PORT ORANGE, FL 32127

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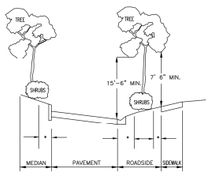
BRADLEY DONALD BAUKNECHT LICENSE NO. 75388 STATE OF FLORIDA PROFESSIONAL ENGINEER
BRADLEY D. BAUKNECHT, P.E. # 75388

PROJECT No:	2017-251
DATE:	JANUARY 2018
DESIGN BY:	BDB
DRAWN BY:	NWS
CHECKED BY:	BDB
SCALE:	

DRAWING NUMBER
10



ROADWAY CLEAR ZONES (*)

	DESIGN SPEED (MPH)				
TYPE FACILITY	25 & BELOW	30	35	40	45+
DISTANCE FROM EDGE OF PAVEMENT	6'	6' LOCAL 10' COLLECTOR 14' ARTERIAL	6' LOCAL 10' COLLECTOR 14' ARTERIAL	10' COLLECTOR 14' ARTERIAL	F.D.O.T. STANDARD
DISTANCE FROM SIDEWALK	1.5	1.5	1.5	1.5	F.D.O.T. STANDARD

* SEE NOTES ON SHEET R-21B *

STANDARD CONSTRUCTION DETAIL
ROADWAY AND MISCELLANEOUS LANDSCAPING
DESIGN AND CONSTRUCTION NOTES

FILE NAME: R21A.DWG
DETAIL REF: R-21A
REV. 12/08

ROADWAY AND MISCELLANEOUS LANDSCAPING DESIGN AND CONSTRUCTION NOTES (CONTD.)

NOTES:

1. THE CLEAR ZONE MAY BE REDUCED ON A CASE BY CASE BASIS IF THE MINIMUM OFFSET CANNOT BE REASONABLY OBTAINED OR IF A NON-MOUNTABLE CURBE TYPE IS INSTALLED.
2. TREES IN EXCESS OF 12" CALIPER AT MATURITY AND MULTI-TRUNKED PALMS SHALL BE SET BACK TO TWICE THE MINIMUM CLEAR ZONE (2 X *).
3. WHERE PAVEMENT WIDENING IN ACCORDANCE WITH FDOT STANCARDS IS NOT PROVIDED IN HORIZONTAL CURVES, ADDITIONAL CLEAR ZONE SHALL BE PROVIDED EQUAL TO THE REQUIRED PAVEMENT WIDENING.
4. CLEAR ZONES ON CURBED ROADS SHALL BE MEASURED FROM THE FACE OF CURB OR FROM THE EDGE OF THE THROUGH LANE ON RURAL ROADS. CURBED STREETS ARE FOR HIGH BACK CURBS ONLY.
5. SHRUBS ADJACENT TO SIDEWALKS AND WITHIN INTERSECTION SGHT TRANGLES CANNOT EXCEED 24" ABOVE THE LOWEST ADJACENT ROADWAY GRADE. ALL OTHER SHRUBS MUST BE LESS THAN OR EQUAL TO 30 INCHES IN HEIGHT.
6. INSTALLATION OF LANDSCAPING IN PUBLIC RIGHTS-OF-WAY REQUIRES EXECUTION OF A "USE AGREEMENT" BETWEEN THE DEVELOPER AND THE CITY. FOR INSTANCES WHERE THE STREETS AND PRIVATE AND PUBLIC UTILITY EASEMENTS ARE PROVIDED, THE DEVELOPER MAY BE REQUIRED TO OBTAIN A RELEASE FROM THE FRANCHISE UTILITIES IN ORDER TO INSTALL THE LANDSCAPING IMPROVEMENTS.
7. LANDSCAPING PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF UNDERGROUND AND OVERHEAD PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE IN ORDER TO EVALUATE POTENTIAL CONFLICTS.
8. SHRUBS, UNDERSTORY, TREES AND PALMS SHALL BE ALLOWED IN THE RIGHT-OF-WAY WITH EXISTING AND PROPOSED UTILITIES. SHADE TREES, ESPECIALLY THOSE WITH AGGRESSIVE ROOT SYSTEMS, WILL REQUIRE SPECIFIC CITY APPROVAL.
9. SHADE TREES MUST NOT BE PLANTED UNDER OR DIRECTLY ADJACENT TO OVERHEAD UTILITIES THAT WOULD REQUIRE EXCESSIVE PRUNING TO AVOID THE UTILTY LINES.
10. TREES WITH AGRESSIVE ROOT SYSTEMS SHALL REQUIRE SOME FORM OF ROOT GUIDING SYSTEM TO PREVENT THE UPHEAVAL OF ADJACENT ROADWAY PVMEMENT AND/OR SIDEWALKS.

STANDARD CONSTRUCTION DETAIL
ROADWAY AND MISCELLANEOUS LANDSCAPING
DESIGN AND CONSTRUCTION NOTES

FILE NAME: R21B.DWG
DETAIL REF: R-21B
REV. 12/08

SANITARY SEWER DESIGN NOTES

1. ALL GRAVITY SANITARY SEWER MAINS SHALL BE 8" DIAMETER MINIMUM. COMMERCIAL SERVICE LATERALS WITH MULITPLE CONNECTIONS SHALL BE GREEN 6" DIA. OR LARGER. ALL SINGLE FAMILY RESIDENTIAL SERVICE LATERALS SHALL BE 4" - SINGLE SERVICES.
2. ALL GRAVITY SANITARY SEWER LINES SHALL BE GREEN PVC SDR 26, ASTM D-3034. IN PLACES WHERE A MINIMUM COVER OF 4.0' CANNOT BE MAINTAINED, AWWA C-900 OR C-905 GREEN PVC DR-25, CLASS 100 OR CONCRETE ENCASEMENT SHALL BE USED. WATER LINES, RECLAIMED LINES, AND STORM DRAINAGE CROSSINGS SHALL ALSO FOLLOW THE CONCRETE ENCASEMENT REQUIREMENT PER THESE STANDARDS AND AS PER REGULATORY REQUIREMENTS.
3. MINIMUM GRAVITY SANITARY SEWER SLOPES ARE AS FOLLOWS:

   8" PIPE 0.40 %
   10" PIPE 0.30 %
   12" PIPE 0.22 %

4. MAXIMUM DEPTH OF SANITARY MANHOLES SHALL BE 15.0'. MAXIMUM DEPTH OF LIFT STATION WET WELLS SHALL BE 20.0'.
5. GRAVITY SANITARY SEWER LINES SHALL BE INSTALLED WHENEVER POSSIBLE UNDER PAVED AREAS WITHIN PUBLIC RIGHTS-OF-WAY. UTILITY EASEMENTS SHALL BE PROVIDED WHENEVER PUBLICLY-OWNED SEWER LINES ARE CONSTRUCTED OUTSIDE OF A PUBLIC RIGHT-OF-WAY.
6. ALL TESTING REQUIRED BY THE CITY SHALL BE PAID FOR BY THE CONTRACTOR / DEVELOPER.
7. ALL LOCAL COLLECTION SANITARY SEWER MANHOLES SHALL BE PRECAST WITH A MINIMUM INSIDE DIAMETER OF 4 FEET.
8. STANDARD MANHOLES SHALL BE LOCATED AT INTERVALS NOT EXCEEDING 350 FEET.
9. INDIVIDUAL SANITARY SERVICE ON NEW CONSTRUCTION SHALL NOT BE CONNECTED DIRECTLY INTO MANHOLES, AND MUST CONNECTED TO SEWER MAIN LINES BY USE OF WYE CONNECTIONS, UNLESS OTHERWISE APPROVED BY THE CITY.
10. FOR SINGLE FAMILY HOMES, SINGLE FOUR INCH SEWER SERVICES LATERALS SHALL BE CONSTRUCTED AT EACH LOT OR UNIT AND LOCATED ON THE DOWNSTREAM SIDE OF THE LOT CENTER LINE. THESE SERVICES SHALL BE EXTENDED 4 FEET ABOVE GROUND AT THE PROPERTY LINE WITH A PVC RISER AND PLUG BEING EASILY VISIBLE FROM THE ROAD. RUBBER SEAL FITTINGS SHALL BE USED ON ALL LINES. NO GLUED JOINTS ARE PERMITTED ON LATERALS.
11. FOR MULTI-FAMILY AND COMMERCIAL SITES, SIX INCH MINIMUM SEWER SERVICES AND CLEANOUTS SHALL BE PROVIDED AS APPROVED BY THE CITY.
12. SANITARY SEWER LIFT STATIONS AND FORCE MAINS, SIZE, MATERIAL, AND DESIGNS SHALL BE APPROVED BY THE CITY. LIFT STATIONS SHALL BE CONSTRUCTED WITH A MINIMUM WET WELL INTERIOR DIAMETER OF 6.0 FEET. FORCE MAINS SHALL BE A MINIMUM 6 INCH DIAMETER.
13. IT SHALL BE THE RESPONSIBILITY OF THE DESIGN ENGINEER TO PREPARE AND SUBMIT FLOATATION CALCULATIONS TO SIZE THE BASE OF THE WET WELL, AND ANY MANHOLES AS DEEMED NECESSARY BY THE CITY.
14. SANITARY SEWER DROP MANHOLES SHALL ONLY BE USED UNDER SPECIAL CONDITIONS AS APPROVED BY THE CITY. DROPS LESS THAN 2.0' SHALL NOT BE ALLOWED.
15. ALL SANITARY SEWER FORCE MAINS, INCLUDING FITTINGS, SHALL BE DIP WITH PROTECTO 401, PVC AWWA C-900, OR C-905 (COLOR "GREEN") (PRESSURE FITTINGS, PRESSURE CLASS 150 OR C-907).

STANDARD CONSTRUCTION DETAIL
SANITARY SEWER DESIGN NOTES

FILE NAME: S1.DOC
DETAIL REF: S-1
REV. 12/08

SANITARY SEWER CONSTRUCTION NOTES

1. THE CITY'S PUBLIC UTILITIES DEPARTMENT (386) 506-5750 SHALL BE GIVEN A MINIMUM OF 2 BUSINESS DAYS ADVANCE NOTICE (NOT INCLUDING HOLIDAYS OR WEEKENDS) PRIOR TO BEGINNING ANY SANITARY SEWER CONSTRUCTION.
2. ALL GRAVITY SANITARY SEWER LINES SHALL BE GREEN PVC SDR 26, ASTM D-3034. IN PLACES WHERE A MINIMUM COVER OF 4.0' CANNOT BE MAINTAINED, AWWA C-900 OR C-905 GREEN PVC DR-25, CLASS 100 OR CONCRETE ENCASEMENT SHALL BE USED. WATER LINES, RECLAIMED LINES, AND STORM DRAINAGE CROSSINGS SHALL ALSO FOLLOW THE CONCRETE ENCASEMENT REQUIREMENT PER THESE STANDARDS AND AS PER REGULATORY REQUIREMENTS.
3. GRAVITY SANITARY SEWER LINE CONSTRUCTION SHALL BE ACCOMPLISHED BY THE USE OF A LASER INSTRUMENT UNLESS ANOTHER METHOD IS PREVIOUSLY APPROVED BY THE CITY.
4. THE CONTRACTOR SHALL AT ALL TIMES, DURING PIPE LAYING OPERATIONS DEWATER THE GROUND SUFFICIENTLY TO KEEP THE GROUNDWATER ELEVATION A MINIMUM OF 6" BELOW THE PIPE BEING LAID WITHIN THE AREA OF THE TRENCH.
5. ALL PIPES SHALL BE LAID ON A FIRM FOUNDATION. SOFT OR SPONGY BEDDING FOR PIPES IS NOT ACCEPTABLE. ANY UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH A DRY, COMPACTED, GRANULAR MATERIAL SATISFACTORY TO THE CITY.
6. ON ALL EXCAVATION AND BACKFILLING THE CONTRACTOR SHALL PROVIDE ADEQUATE SHEETING AND BRACING IN ACCORDANCE TO O.S.H.A. GUIDELINE IN ORDER TO PROVIDE FOR THE SAFETY OF WORKMEN, AS WELL AS REPRESENTATIVES OF THE CITY, THE DESIGN ENGINEER, AND THE DEVELOPER.
7. ALL TRENCHES SHALL BE BACKFILLED WITH ACCEPTABLE MATERIAL AND COMPACTED TO THE SPECIFIED MINIMUM COMPACTION (95% IN UNPAVED AREAS AND 98% IN PAVED AREAS) OF THE OPTIMUM DENSITY OF THAT MATERIAL BASED ON THE AASHTO T-180 MODIFIED PROCTOR TEST.
8. THE CONTRACTOR SHALL EMPLOY AN INDEPENDENT TESTING LABORATORY AT HIS OWN EXPENSE TO INSURE THAT COMPACTION OF ALL FILL MATERIAL IS COMPLETED PROPERLY. TESTS SHALL BE DONE ONE FOOT ABOVE THE PIPE AND THEN AT ONE FOOT VERTICAL INTERVALS UNTIL FINAL GRADE IS REACHED. TESTING SHALL BE COMPLETED AND TEST DOCUMENTS SUBMITTED TO THE CITY AT A MINIMUM FREQUENCY OF ONE SET OF TESTS BETWEEN EACH MANHOLE AND ONE ADDITIONAL SET OF TESTS AT EVERY MANHOLE. IDENTIFICATION OF TEST LOCATIONS SHALL BE CLEARLY INDICATED ON TEST REPORTS. TEST RESULTS SHALL BE FORWARDED PROMPTLY TO THE CITY'S DESIGNATED SITE INSPECTOR.
9. THE CONTRACTOR SHALL INSTALL A METALLIZED FOIL LOCATOR TAPE, OR SIMILAR DEVICE AS MAY BE APPROVED BY THE CITY FOR THE FULL LENGTH OF ALL PVC SEWAGE FORCE MAINS. THIS PIPE LOCATOR AID SHALL BE INSTALLED BETWEEN 15" AND 24" BELOW FINISHED GRADE OR AS DIRECTED BY THE MANUFACTURER. TAPE SHALL BE COLOR CODED GREEN FOR SANITARY SEWER AND FORCE MAIN. A CONTINUOUS NO. 10 COPPER HEAD WIRE SHALL BE INSTALLED WITH WIRE BROUGHT UP AT ALL VALVES.
10. ALL TESTING REQUIRED BY THE CITY SHALL BE PAID FOR BY THE CONTRACTOR / DEVELOPER.
11. MANHOLE RIMS SHALL MATCH FLUSH WITH THE FINISH GRADE ELEVATION IN PAVED AREAS AND A MINIMUM OF 0.2 FEET AND MAXIMUM OF 0.5 FEET ABOVE GRADE GENERALLY IN UNPAVED AREAS.
12. THE CONTRACTOR SHALL CONSTRUCT SANITARY SEWER MANHOLES IN SUCH A WAY THAT SEWER LINES DO NOT INTERSECT SEALED JOINTS BETWEEN SECTIONS OF THE MANHOLE.
13. RUBBER BOOTS AND 316 STAINLESS STEEL BANDS SHALL BE UTILIZED IN THE CONNECTION OF THE SEWER MAIN TO THE MANHOLES (SEE STANDARD MANHOLE AND BOOT DETAILS).

STANDARD CONSTRUCTION DETAIL
SANITARY SEWER CONSTRUCTION NOTES

FILE NAME: S2.DOC
DETAIL REF: S-2
REV. 12/08

City of Port Orange Public Utilities Department
List of Approved Products

Sanitary Sewer & Force Main 12/08

Air Release Valves

MANUFACTURER	MODEL #
A.R.I.	D-025P (Plastic)

Gate Valves and Tapping Valves – Resilient Seated (AWWA C509 and C515) 24" or Smaller

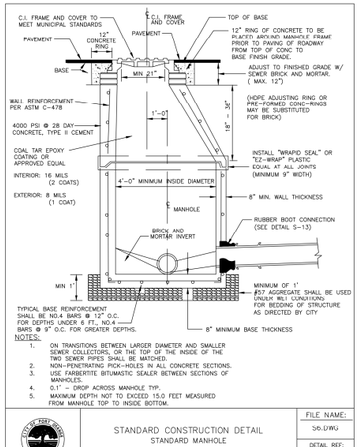
MANUFACTURER	MODEL #
American AVK Co.	Series 3, 18, 25, 45, 55, & 66
Clow	Model 2638 and 2639
Mueller	A-2360, A-2361, T-2360 & T-2361
American Flow Control	Series 2500

Joints Restrained – PVC Only

MANUFACTURER	MODEL #
EBBA Iron Inc	Series 1500/1600 2000/2500/2800
Star Pipe	Stargrip Series 1000/1100/1200/4000
Sigma	One-Lock SLC PV-Lok for PVC
Smith-Blair	Cam-Lock (111 & 120) & Bell-Lock (115 & 165)

STANDARD CONSTRUCTION DETAIL
SANITARY SEWER & FORCE MAIN
APPROVED PRODUCTS

FILE NAME: S5.DOC
DETAIL REF: S-5

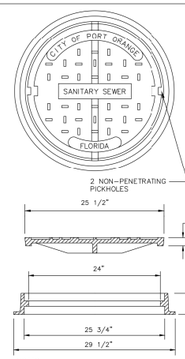


NOTES:

1. ON TRANSITIONS BETWEEN LARGER DIAMETER AND SMALLER SEWER COLLECTORS, OR THE TOP OF THE INSIDE OF THE TWO SEWER PIPES SHALL BE MATCHED.
2. NON-PENETRATING PICK-HOLES IN ALL CONCRETE SECTIONS.
3. USE FARBERITE BITUMASTIC SEALER BETWEEN SECTIONS OF MANHOLES.
4. 0.1' - DROP ACROSS MANHOLE TYP.
5. MAXIMUM DEPTH NOT TO EXCEED 15.0 FEET MEASURED FROM MANHOLE TOP TO INSIDE BOTTOM.

STANDARD CONSTRUCTION DETAIL
STANDARD MANHOLE

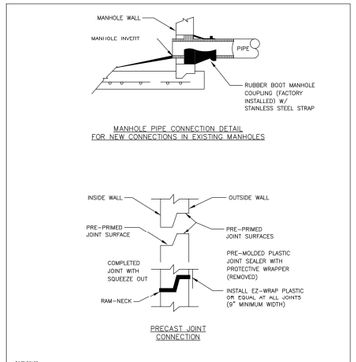
FILE NAME: S6.DWG
DETAIL REF: S-6
REV. 12/08



NOTES:
1- MATERIAL: ASTM-A48 CLASS 35B GRAY IRON
2- RING WT: 85 LBS. APP
3- COVER WT: 120 LBS. APP.

STANDARD CONSTRUCTION DETAIL
SANITARY SEWER COVER & GENERAL NOTES
USF 117 RING & BL COVER

FILE NAME: S7.DWG
DETAIL REF: S-7
REV. 12/08

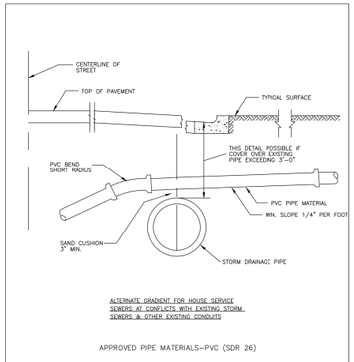


NOTES:

1. ALL NEW CONNECTIONS TO EXISTING SANITARY SEWER MANHOLES SHALL UTILIZE A CORING METHOD AND THE IN-FIELD INSTALLATION OF A RUBBER BOOT INTO THE MANHOLE.

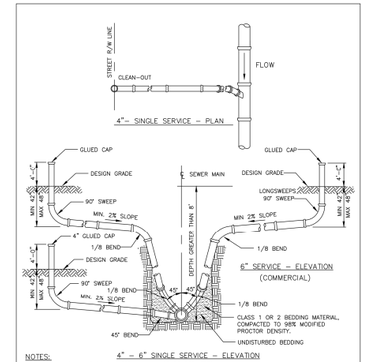
STANDARD CONSTRUCTION DETAIL
RUBBER BOOT AND PRECAST JOINT CONNECTION.

FILE NAME: S13.DWG
DETAIL REF: S-13
REV. 12/08



STANDARD CONSTRUCTION DETAIL
STORM DRAINAGE CROSSING / SANITARY LATERAL PIPE CROSSING

FILE NAME: S14.DWG
DETAIL REF: S-14
REV. 12/08



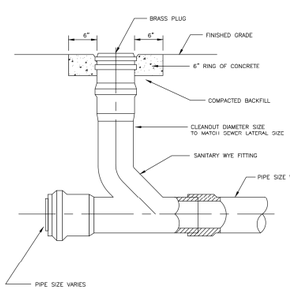
NOTES: 4" - 6" SINGLE SERVICE - ELEVATION

1. USE OF STYRENE MATERIAL WILL NOT BE PERMITTED.
2. ALL JOINTS TO BE RUBBER GASKET (NO GLUED FITTINGS) TYPICAL.
3. USE ALL HARCO SDR-26 FITTINGS OR CITY APPROVED EQUAL.
4. APPROVED EQUAL IS: MULTI FITTINGS 8" X 6" OR 8" X 4" T-WYE AND 8" X 6" OR 8" X 4" WYE WITH A DATE STAMP.

4" - RESIDENTIAL
6" - COMMERCIAL

STANDARD CONSTRUCTION DETAIL
SEWER LATERAL

FILE NAME: S15.DWG
DETAIL REF: S-15
REV. 12/08

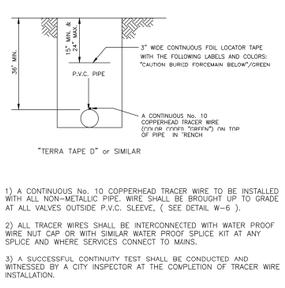


NOTE:

1. CLEANOUT SIZE SHOULD ALWAYS MATCH MAIN LINE SIZE TO ALLOW FOR PROPER CLEANING

STANDARD CONSTRUCTION DETAIL
CLEANOUT

FILE NAME: S16.DWG
DETAIL REF: S-16
REV. 12/08



NOTE:

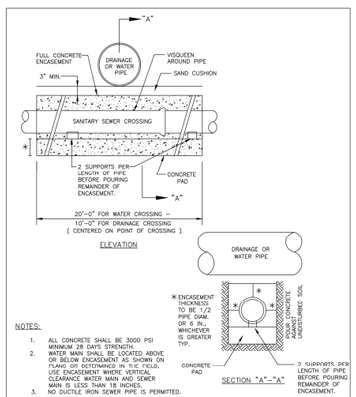
1) A CONTINUOUS No. 10 COPPERHEAD TRACER WIRE TO BE INSTALLED WITH ALL NON-METALLIC PIPE. WIRE SHALL BE BROUGHT UP TO GRADE AT ALL VALVES OUTSIDE P.V.C. SLEEVE, (SEE DETAIL W-6).

2) ALL TRACER WIRES SHALL BE INTERCONNECTED WITH WATER PROOF WIRE NUT CAP OR WITH SIMILAR WATER PROOF SPLICE KIT AT ANY SPLICE AND WHERE SERVICES CONNECT TO MAINS.

3) A SUCCESSFUL CONTINUITY TEST SHALL BE CONDUCTED AND WITNESSED BY A CITY INSPECTOR AT THE COMPLETION OF TRACER WIRE INSTALLATION.

STANDARD CONSTRUCTION DETAIL
LOCATOR TAPE/ TRACERWIRE INSTALLATION FOR SEWER FORCE MAIN, PIPELINES

FILE NAME: S17.DWG
DETAIL REF: S-17
REV. 12/08

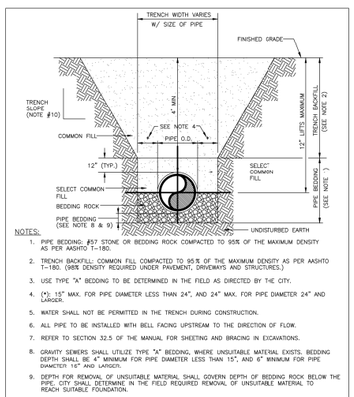


NOTES:

1. ALL CONCRETE SHALL BE 3000 PSI MINIMUM 28 DAYS STRENGTH.
2. WATER MAIN SHALL BE LOCATED ABOVE OR BELOW ENCASEMENT AS SHOWN ON PLANS OR DETERMINED IN THE FIELD, USE ENCASEMENT WHERE VERTICAL CLEARANCE WATER MAIN AND SEWER MAIN IS LESS THAN 18 INCHES.
3. NO DUCTILE IRON SEWER PIPE IS PERMITTED.

STANDARD CONSTRUCTION DETAIL
SEWER / WATER / DRAINAGE CROSSING

FILE NAME: S18.DWG
DETAIL REF: S-18
REV. 12/08

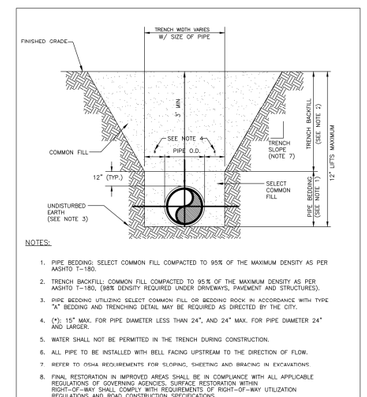


NOTES:

1. PIPE BEDDING: #57 STONE OR BEDDING ROCK COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-180. (98% DENSITY REQUIRED UNDER PAVEMENT, DRIVEWAYS AND STRUCTURES.)
3. USE TYPE "A" BEDDING TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CITY.
4. (*): 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF FLOW.
7. REFER TO SECTION 32.5 OF THE MANUAL FOR SHEETING AND BRACING IN EXCAVATIONS.
8. GRAVITY SEWERS SHALL UTILIZE TYPE "A" BEDDING. WHERE UNSUITABLE MATERIAL EXISTS. BEDDING DEPTH SHALL BE 4" MINIMUM FOR PIPE DIAMETER LESS THAN 15", AND 6" MINIMUM FOR PIPE DIAMETER 18" AND LARGER.
9. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF BEDDING ROCK BELOW THE PIPE. CITY SHALL DETERMINE IN THE FIELD REQUIRED REMOVAL OF UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION.
10. REFER TO OSHA REQMTS. FOR SLOPING, SHEETING AND BRACING IN EXCAVATONS.

STANDARD CONSTRUCTION DETAIL
TYPE "A" BEDDING AND TRENCH
(SPECIAL GRAVITY SEWER INSTALLATIONS)

FILE NAME: S27.DWG
DETAIL REF: S-27
REV. 12/08



NOTES:

1. PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-180. (98% DENSITY REQUIRED UNDER DRIVEWAYS, PAVEMENT AND STRUCTURES).
3. PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE "A" BEDDING AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY THE CITY.
4. (*): 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF FLOW.
7. REFER TO OSHA REQUIREMENTS FOR SLOPING, SHEETING AND BRACING IN EXCAVATIONS.
8. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES. SURFACE RESTORATION WITHIN RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.

STANDARD CONSTRUCTION DETAIL
TYPE "B" BEDDING AND TRENCH
(TYPICAL FOR WATER, SEWER, FORCE MAIN, STORM DRAIN AND RECLAIMED WATER MAIN INSTALLATIONS)

FILE NAME: S28.DWG
DETAIL REF: S-28
REV. 12/08

REVISIONS

DATE	DESCRIPTION
2/7/18	PER CITY COMMENTS

1230 North US1, Suite 3
Ormond Beach, Florida 32174
Phone (386) 872-7794
www.Newkirk-Engineering.com
C.A. # 30209
L.C. # 26000584
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Civil Engineering, Transportation, CEI & Landscape Architecture
NEWKIRK ENGINEERING INC.

CITY DETAILS AND NOTES
ANGLER'S COVE
3626 PENINSULA DRIVE
PORT ORANGE, FL 32127

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BRADLEY DONALD BAUKNECHT LICENSE NO. 75388 STATE OF FLORIDA PROFESSIONAL ENGINEER

BRADLEY D. BAUKNECHT, P.E. # 75388

PROJECT No:	2017-251
DATE:	JANUARY 2018
DESIGN BY:	BDB
DRAWN BY:	NWS
CHECKED BY:	BDB
SCALE:	

DRAWING NUMBER

11

STORM DRAINAGE DESIGN AND CONSTRUCTION NOTES

ALL MATERIALS AND INSTALLATION METHODS USED FOR LAND DEVELOPMENT CODE REQUIRED IMPROVEMENTS FOR SUBDIVISIONS AND SITE PLANS SHALL BE IN CONFORMANCE WITH THE CITY, FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), AND THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS (LATEST EDITION).

1. ALL STORM SEWERS AND CULVERTS LOCATED IN ROADWAY RIGHTS-OF-WAY AND ROADWAY EASEMENTS SHALL BE A MINIMUM OF CLASS III REINFORCED CONCRETE PIPE. OUTSIDE OF ROADWAY EASEMENTS AND R.O.W., PIPE MAY BE MADE OF ALTERNATE MATERIALS INCLUDING:
   A. SMOOTH INNER WALL HIGH DENSITY POLYETHYLENE (HDPE) IN ACCORDANCE WITH AASHTO M-294, AASHTO MP7, ASTM D3350 AND ASTM D2412 FOR SIZES UP TO 42" IN DIAMETER OR
   B. PVC IN ACCORDANCE WITH THE PROVISION NOTED IN THE "SEWER DETAILS" OF THESE SPECIFICATIONS.
2. ALL STORM SEWER PIPE JOINTS LOCATED IN ROADWAY RIGHTS-OF-WAY AND ROADWAY EASEMENTS SHALL BE ENTIRELY WRAPPED WITH FILTER FABRIC WITH A MINIMUM WIDTH OF 24" AND A MINIMUM OF 24" OVERLAP SECURED WITH PLASTIC OR STAINLESS BANDS. GASKETS ARE NOT PERMITTED AS AN EQUIVALENT SUBSTITUTE FOR MEETING THIS REQUIREMENT. THIS PRACTICE IS ENCOURAGED ON PRIVATE SITES ADDITIONALLY, ALL JOINTS SHALL BE RUBBER GASKETED FOR BOTH ROUND AND ELLIPTICAL PIPE.
3. DEPTH OF COVER MEASURED TO THE TOP OF PIPE (NOT INCLUDING THE BELL JOINT) SHALL BE A MINIMUM OF 1 FOOT. DEVIATION FROM THIS REQUIREMENT MAY BE ALLOWED BY INCREASING THE PIPE'S STRUCTURAL CAPACITY. THIS DEVIATION MUST BE SPECIFIED ON THE PLANS APPROVED FOR CONSTRUCTION AND SUBSEQUENTLY REFLECTED ON THE SHOP DRAWINGS AND AS-BUILT PLANS.
4. ALL STORM DRAINAGE PIPES LOCATED IN ROADWAY RIGHTS-OF-WAY AND ROADWAY EASEMENTS SHALL BE A MINIMUM OF FIFTEEN INCH (15") DIAMETER OR EQUIVALENT AND BE DESIGNED FOR A MINIMUM OF A TWENTY-FIVE (25) YEAR STORM OF TWENTY-FOUR (24) HOUR DURATION. STORM DRAINAGE PIPES SMALLER THAN 15" ARE PERMITTED ON PRIVATE SITE PLANS PROVIDING THAT MAINTENANCE SHALL BE PERFORMED BY THE OWNER.
5. STORM INLETS, MANHOLES, AND CATCH BASINS SHALL BE EITHER POURED IN PLACE OR PRECAST REINFORCED CONCRETE. STRUCTURES SHALL BE REQUIRED AT EACH CHANGE OF PIPE SIZE OR CHANGE IN PIPE DIRECTION. ALL STRUCTURES SHALL BE IN COMPLIANCE WITH ASTM C-478 AND SHALL HAVE 8" THICK WALLS. 6" THICK WALLS MAY BE PERMITTED PROVIDING THAT THE PLANS SPECIFY INCREASED REINFORCEMENT IN ACCORDANCE WITH FDOT STANDARD INDEX NO. 201 IN ADDITION, THIS REQUIREMENT MUST BE REFLECTED ON BOTH THE SHOP DRAWING AND AS-BUILT PLANS.
6. STORM INLETS SHALL BE SPACED IN SUCH A MANNER AS TO ACCEPT ONE HUNDRED (100) PERCENT OF THE DESIGN STORM RUNOFF WITHOUT IMPEDING THE FLOW OF TRAFFIC. FOR ROADWAY SECTIONS WITH DESIGN SPEEDS OF 45 MPH AND LESS AND WITHOUT FULL WIDTH SHOULDERS, SPREAD RESULTING FROM A RAINFALL INTENSITY OF FOUR INCHES (4") PER HOUR SHALL NOT EXCEED ONE-HALF OF THE TRAVEL LANE ADJACENT TO THE GUTTER. FOR SITE PLANS, INLET SPACING SHALL BE DESIGNED TO ACCEPT ONE HUNDRED (100) PERCENT OF THE RUNOFF FROM A RAINFALL INTENSITY OF FOUR INCHES (4") PER HOUR WITHOUT RESULTING IN PONDING OF WATER AROUND THE INLET.
7. RETENTION AREA WATER DEPTHS SHALL BE FOUR FEET(4') MINIMUM TO TWELVE FEET(12') MAXIMUM, MEASURED FROM THE N.W.L. (NORMAL WATER LEVEL)

STANDARD CONSTRUCTION DETAIL
STORM DRAINAGE DESIGN AND CONSTRUCTION NOTES
REV. 12/08 | FILE NAME: ST4.DWG | DETAIL REF: ST-4

STORM DRAINAGE DESIGN AND CONSTRUCTION NOTES (CONTD.)

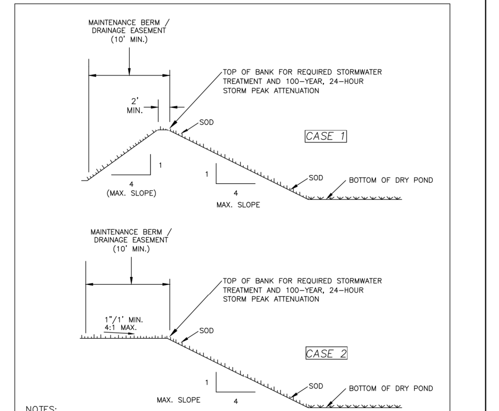
8. FOR CONNECTIONS BETWEEN INLETS WITH PIPING 15" IN DIAMETER AND LARGER, THE MAXIMUM DISTANCES BETWEEN INLETS AND / OR CLEAN-OUT JUNCTION BOXES SHALL BE 300 FEET. CULVERTS SHALL BE SLOPED TO MAINTAIN A MINIMUM SELF-CLEANING VELOCITY OF 3 FEET PER SECOND USING A MANNING'S 'n' OF 0.012. SPACING FOR CLEAN-OUTS AND INLETS FOR SMALLER PIPING SHALL BE REDUCED AND EVALUATED ON A CASE BY CASE BASIS.
9. THE MAXIMUM PERMISSIBLE SLOPE OF ANY NEW SITE GRADING IS 3:1 (HORIZONTAL:VERTICAL). THIS LIMIT SHALL BE APPLIED TO ALL AREAS EXCEPT STORMWATER CONVEYANCE AND TREATMENT SYSTEMS WHICH HAVE A MAXIMUM SLOPE OF 4:1 (EXCEPT BELOW THE WATER TABLE WHERE SHARPER SLOPES ARE PERMISSIBLE.)
10. PIPED STORMWATER SYSTEMS SHALL HAVE A MINIMUM DRAINAGE MAINTENANCE EASEMENT WIDTH OF 20 FEET, AND MAY BE INCREASED DEPENDING UPON THE SIZE AND DEPTH OF PIPE.
11. NORMAL ROADSIDE SWALES ARE PERMITTED TO BE CONSTRUCTED TO A MAXIMUM DEPTH OF 18" BELOW THE OUTSIDE EDGE OF PAVEMENT OR CONCRETE CURB.
12. CONCRETE EROSION CONTROL MUST BE PROVIDED WHERE SWALES OR CULVERTS INTERCEPT DRAINAGE DITCHES.
13. LAKE INFLOW AND OUTLET STRUCTURES SHALL GENERALLY BE CONSTRUCTED WITH REINFORCED CONCRETE AND SHALL BE SUBJECT TO THE APPROVAL OF THE CITY. SKIMMERS FOR WET PONDS SHALL BE CONSTRUCTED SUCH THAT THE BOTTOM EXTENDS 6" BELOW THE NORMAL WATER LEVEL AND 6" ABOVE THE OVERFLOW. FOR DRY PONDS, THE SKIMMER BOTTOM SHALL BE SET 6" BELOW THE LOWEST OVERFLOW ELEVATION AND 6" ABOVE THE HIGHEST POINT OF OVERFLOW. ALL SKIMMERS SHALL BE CONSTRUCTED OF MINIMUM 1/4" THICK ALUMINUM OR FIBERGLASS ADEQUATELY SUPPORTED TO PREVENT DEFLECTION.
14. SOIL EROSION CONTROL MEASURES, SATISFACTORY TO THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT AND THE CITY, SHALL BE EMPLOYED DURING CONSTRUCTION.
15. THE CITY MAY REQUEST THAT THE DEVELOPER SUBMIT A REPORT BY A QUALIFIED HYDROLOGIS ON THE IMPACT THE LAKE WILL HAVE ON NEIGHBORING WATER TABLE ELEVATIONS BOTH DURING CONSTRUCTION AND AFTER LAKE COMPLETION. THE CITY MAY REQUIRE GROUNDWATER MONITORING DURING THE LAKE EXCAVATION.
16. ADEQUATE MAINTENANCE EASEMENTS OR RIGHTS-OF-WAY AS APPROVED BY THE CITY SHALL BE PROVIDED AROUND THE ENTIRE PERIMETER OF ALL LAKES AND ASSOCIATED OUTFALLS DISCHARGING INTO AND OUT OF LAKES. APPLICABLE CROSS SECTIONS SHALL BE INCLUDED ON FINAL DEVELOPMENT PLANS.
17. DEVELOPMENT PLANS FOR ALL STORMWATER MANAGEMENT SYSTEMS SHALL CONTAIN POP-OFF DATA (OVERFLOW), BOTTOM ELEVATION, NORMAL WATER LEVELS, MEAN ANNUAL SEASONAL HIGH WATER TABLE ELEVATION, TREATMENT VOLUME AND CORRESPONDING ELEVATION, 100 YEAR HIGH WATER LEVELS, AND THE DESIGN TAILWATER ELEVATION (IF APPLICABLE).

STANDARD CONSTRUCTION DETAIL
STORM DRAINAGE DESIGN AND CONSTRUCTION NOTES
REV. 12/08 | FILE NAME: ST5.DWG | DETAIL REF: ST-5

STORM DRAINAGE DESIGN AND CONSTRUCTION NOTES (CONTD.)

18. IN GENERAL, ALL RETENTION / DETENTION SITES MUST BE CONSTRUCTED ON ALL PROJECTS PRIOR TO ANY ROAD, PARKING LOT, OR BUILDING CONSTRUCTION COMMENCING OR AS CURRENT PERMIT CONDITIONS DICTATE. SEWER AND WATER MAINS MAY BE INSTALLED PRIOR TO RETENTION/DETENTION SITE CONSTRUCTION IF DEWATERING IS NOT REQUIRED.
19. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ANY AND ALL DEWATERING PERMITS THAT MAY BE REQUIRED.
20. WHEN CULVERTS ARE INSTALLED TO MAINTAIN THE FLOW OF EXISTING DRAINAGE WAYS WHERE NEWLY PROPOSED ROADS WOULD OTHERWISE SEVER THE DRAINAGE WAY, THEN CULVERTS CROSSING RIGHTS-OF-WAY SHALL EXTEND FROM RIGHT-OF-WAY LINE TO RIGHT-OF-WAY LINE UNDER THE ROADWAY. CULVERTS SHALL BE DESIGNED TO ACCOMODATE THE FLOW FROM THE 100 YEAR - 24 HOUR STORM EVENT WITHOUT FLOODING ADJACENT PROPERTY OR SURCHARGING THE SAID ROADWAY.
21. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW AND MAINTAIN A COPY OF THE SJRWMD PERMIT AND THE NPDES PERMIT AT THE CONSTRUCTION SITE, AND ABIDE BY ALL CONDITIONS OF THE PERMIT.
22. LANDSCAPE PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE IN ORDER TO EVALUATE POTENTIAL CONFLICTS.

STANDARD CONSTRUCTION DETAIL
STORM DRAINAGE DESIGN AND CONSTRUCTION NOTES
REV. 12/08 | FILE NAME: ST6.DWG | DETAIL REF: ST-6



NOTES:
1. SOD IS TO BE PLACED TO BOTTOM OF DRY POND.
2. BOTTOM OF DRY POND TO BE SEEDED AND MULCHED (EXCEPT WHERE "A"-TYPE SOILS ARE PRESENT WHICH REQUIRES SODDING OF ENTIRE BOTTOM OF POND).
3. CASE 1 BERM SHALL REQUIRE THE INSTALLATION OF IMPERVIOUS SOILS OR OTHER MATERIALS TO PREVENT TRANSMISSION OF WATER.

STANDARD CONSTRUCTION DETAIL
DRY RETENTION POND
REV. 12/08 | FILE NAME: ST9.DWG | DETAIL REF: ST-9

POTABLE WATER DESIGN NOTES

1. ALL SINGLE RESIDENTIAL WATER SERVICES SHALL BE 1", DOUBLE RESIDENTIAL SERVICES SHALL ALSO BE 1", AND COMMERCIAL SERVICES SHALL BE 1" OR 2". NO 1 1/2" SERVICES ARE ALLOWED. POLYETHYLENE TUBING SHALL BE USED, IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS: POLYETHYLENE TUBING SHALL BE CTS 3408 HIGH DENSITY TUBING, BLUE IN COLOR, AND RATED FOR A MINIMUM OF 200 P.S.I. WITH SDR OF 9 (CTS). THE TUBING SHALL HAVE A VIRGIN HIGH DENSITY POLYETHYLENE CENTER FOR WHICH THE MANUFACTURER SHALL FURNISH A CERTIFICATE OF PURITY. THE TUBING SHALL HAVE UV PROTECTION AND SHALL NOT BE AFFECTED BY DIRECT SUNLIGHT. THE TUBING SHALL COMPLY WITH OR EXCEED THE APPLICABLE STANDARDS OF A.S.T.M. D1248, D3350, D2239, D2737, N.S.F. 14 AND A.W.W.A. C901 AND SHALL COME WITH A LIFETIME WARRANTY. ACCEPTABLE MANUFACTURERS: ENDOT ENDOPURE.
2. WATER VALVES SHALL BE PLACED AT ALL STREET INTERSECTIONS AND AT MAXIMUM SPACINGS OF 1,000.0 FEET.
3. AT ALL WATER MAIN TEES AND CROSSES, VALVES SHALL BE INSTALLED ON ALL LEGS EXCEPT ONE.
4. APPROVED WATER VALVE TYPES ARE THE FOLLOWING:
   A. RESILIENT SEATED GATE VALVES EQUAL TO OR LESS THAN 24" DIAMETER (AWWA C-515)
   B. BUTTERFLY VALVES GREATER THAN 24" (AWWA C-504)
   C. TAPPING VALVES WITH MECHANICAL TAPPING SLEEVE
5. TYPICALLY, A MINIMUM OF ONE FIRE HYDRANT SHALL BE LOCATED AT EVERY INTERSECTION. OTHER FIRE HYDRANTS SHALL BE LOCATED SO AS TO PRODUCE A MAXIMUM 250.0 FEET AND/OR MEETING THE LATEST NFPA CODE HOSE LAY ALONG THE STREET FOR ALL RESIDENTIAL BUILDINGS. ALL BUILDINGS WITH FIRE PROTECTION SPRINKLER SYSTEM, THE FIRE DEPARTMENT CONNECTION (FDC) MUST BE WITHIN 50.0 FEET OF UNOBSTRUCTED DISTANCE TO AN APPROVED FIRE HYDRANT LOCATION BY THE FIRE MARSHALL AND OR PUBLIC UTILITIES ENGINEER.
6. AS STANDARD PRACTICE, WATER MAINS SHALL BE INSTALLED 4 FEET OFF THE BACK OF CURB OR AS APPROVED BY THE CITY.
7. ALL WATER MAINS SHALL BE NSF AND/OR AWWA APPROVED FOR POTABLE WATER USE, AND SHALL HAVE A MINIMUM COVER OF 36 INCHES (3.0 FEET) AND A MAXIMUM DEPTH OF 48 INCHES (4.0 FEET) FROM FINAL GRADE EXCEPT AT LOCATIONS OF UTILITY CROSSINGS OR WITH SPECIAL APPROVAL WHEN IT IS DETERMINED TO BE IN THE BEST INTEREST OF THE CITY.
8. WATER MAINS SHALL BE C-900 PVC OR C-905 CL 150 (COLOR"BLUE") OR D.I.P. PRESSURE CLASS 350 STANDARD CEMENT LINED UNLESS OTHERWISE APPROVED BY THE CITY.
9. WATER DISTRIBUTION SYSTEM SHALL BE DESIGNED TO COMPLY WITH THE CITY'S LATEST FIRE (WATER) FLOW CODE. ALL DEDICATED FIRE LINES SHALL BE INDEPENDENT OF ALL OTHER DOMESTIC WATER SERVICES.
10. MEGALUGS, BOLTLESS RESTRAINED JOINTS OR GRIPPER GASKETS SHALL BE USED ON ALL RESTRAINED JOINT INSTALLATIONS. MINIMUM DEPTH OF BURY ON PIPES NOT MEETING REQUIRED COVER REQUIREMENTS SHALL FOLLOW THE MOST RECENT DIPRA THRUST RESTRAINT DESIGN GUIDELINES USING TORQUE WRENCHES PER MANUFACTURERS RECOMMENDATION.
11. WATER SERVICES SHALL BE NORMALLY DOUBLE 1" SERVICES LOCATED AT SIDE LOT LINES. INSTANCES WHERE SERVICES NEED TO BE OFFSET, 1" SINGLE SERVICES SHALL BE SPECIFIED. THESE SERVICES MAY BE OFFSET A MAXIMUM OF 2.0' FROM SIDE LOT LINES.
12. THE CITY REQUIRES DOUBLE WATER SERVICE INSTALLATIONS WHEREVER FEASIBLE. WHEN DESIGN CONFLICTS EXIST, SINGLE WATER SERVICES MAY BE ALLOWED. THIS MAY APPLY AT STORMWATER INLETS, FIRE HYDRANTS, FPL TRANSFORMERS, ETC. AND OTHER LOCATIONS DEEMED APPROPRIATE BY THE CITY.

STANDARD CONSTRUCTION DETAIL
POTABLE WATER DESIGN NOTES
REV. 12/08 | FILE NAME W1.DOC | DETAIL REF: W-1

POTABLE WATER CONSTRUCTION NOTES

1. THE CITY'S PUBLIC UTILITIES DEPARTMENT (386) 506-5750 SHALL BE GIVEN A MINIMUM OF 2 BUSINESS DAYS ADVANCE NOTICE (NOT INCLUDING HOLIDAYS OR WEEKENDS) PRIOR TO BEGINNING ANY POTABLE WATER SYSTEM CONSTRUCTION.
2. DEWATERING SHALL BE PROVIDED TO KEEP GROUNDWATER ELEVATION A MINIMUM OF 6 INCHES BELOW WATER MAIN BEING LAID.
3. ALL WATER MAINS SHALL BE LAID ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL.
4. TRENCHES SHALL BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE CITY WITH A MINIMUM COMPACTION OF 98% IN PAVED AREAS AND 95% IN UNPAVED AREAS IN ACCORDANCE WITH AASHTO T-180.
5. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT TRENCH COMPACTION TESTS BE PROVIDED AT POINTS 1 FOOT ABOVE THE PIPE AND AT 1 FOOT VERTICAL INTERVALS TO FINISH GRADE, AT A MINIMUM SPACING OF EVERY 300 FEET.
6. 3" METALLIZED PIPE LOCATION TAPE SHALL BE LOCATED BETWEEN 15" AND 24" BELOW FINISHED GRADE OR AS SPECIFIED BY MANUFACTURER FOR ALL PVC LINES. MARKER TAPE SHALL BE USED ON ALL DUCTILE IRON PIPE, AS WELL.
7. ALL WATER SERVICE ENDINGS SHALL BE MARKED WITH A 2" X 4" LUMBER (PRESSURE TREATED) EXTENDING 4 FEET ABOVE GRADE, WITH WATER SERVICES SECURED 12" MAXIMUM ABOVE THE GROUND. ALL SERVICES SHALL BE LOCKED AT THE TIME OF FINAL INSPECTION BY THE CONTRACTOR IN THE PRESENCE OF THE CITY INSPECTOR OR CITY PERSONNELL, AFTER THEY HAVE BEEN INSPECTED AND VERIFIED TO OPERATE PROPERLY.
8. AT ALL WATER MAIN TEES AND CROSSES, VALVES SHALL BE INSTALLED ON ALL LEGS EXCEPT ONE.
9. ALL WATER VALVES SHALL BE ADJUSTED TO FINISHED GRADE AND THE CAPS PAINTED BLUE TO MAKE THEM PLAINLY VISIBLE.
10. UPON FINAL ACCEPTANCE OF NEW WATER SYSTEMS, WATER VALVES SHALL BE COMPLETELY OPENED BY PUBLIC UTILITIES PERSONNEL. AT NO TIME SHALL CONTRACTOR OPERATE ANY EXISTING VALVES.
11. ALL FIRE HYDRANTS SHALL BE CONSTRUCTED TO MAKE THEM EASILY ACCESSIBLE TO FIRE PERSONNEL IN CASE OF A FIRE. THE PRIMARY HYDRANT PORT SHOULD ALWAYS FACE THE STREET.
12. AS STANDARD PRACTICE, WATER MAINS SHALL BE INSTALLED 4 FEET OFF THE BACK OF CURB OR AS APPROVED BY THE CITY.
13. ALL WATER MAINS SHALL BE NSF AND/OR AWWA APPROVED FOR POTABLE WATER USE, AND SHALL HAVE A MINIMUM COVER OF 36 INCHES (3.0 FEET) AND A MAXIMUM DEPTH OF 48 INCHES (4.0 FEET) FROM FINAL GRADE EXCEPT AT LOCATIONS OF UTILITY CROSSINGS OR WITH SPECIAL APPROVAL WHEN IT IS DETERMINED TO BE IN THE BEST INTEREST OF THE CITY.
14. WATER MAINS SHALL BE C-900 PVC OR C-905 CL 150 (COLOR"BLUE") OR D.I.P. PRESSURE CLASS 350 STANDARD CEMENT LINED UNLESS OTHERWISE APPROVED BY THE CITY.
15. UPON CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE SYSTEM, IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO ENSURE THAT THE SYSTEM IS PROPERLY CERTIFIED AND ACCEPTED BY THE DEPARTMENT OF HEALTH AND AS-BUILTS ARE PROVIDED TO THE CITY PRIOR TO ANY PUBLIC USE OF THIS SYSTEM.
16. IN AREAS WHERE RECLAIMED WATER IS NOT AVAILABLE THE CONTRACTOR SHALL BE REQUIRED TO (UPON SATISFACTORY COMPLETION OF THE PRESSURE TEST) TRANSFER THE WATER FROM THE POTABLE WATER LINES TO THE RECLAIMED WATER LINES FOR UTILIZATION IN THEIR PRESSURE TEST.
17. ALL POTABLE WATER MAINS SHALL USE A THRUST RESTRAINT JOINT METHOD IN COMPLIANCE WITH THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) GUIDELINES. IN THE EVENT THAT PVC PIPE IS SPECIFIED, THE

STANDARD CONSTRUCTION DETAIL
POTABLE WATER CONSTRUCTION NOTES
REV. 12/08 | FILE NAME W2.DOC | DETAIL REF: W-2

City of Port Orange Public Utilities Department
List of Approved Products

Potable Water 12/08

Fire Hydrant (5 ¼" Barrel)

MANUFACTURER	MODEL #
Mueller	A423 Super Centurion 250
American AVK Co.	Series #2780
American Darling	5 ¼" B-84-B5
Clow	Medallion # F-2545 SS

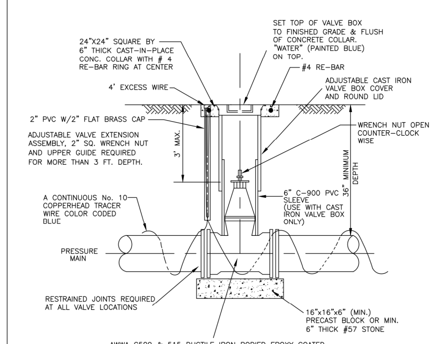
Air Release Valves

MANUFACTURER	MODEL #
Val-Matic	Series 38

Gate Valves and Tapping Valves – Resilient Seated (AWWA C509 and C515) 24" or Smaller (Valve wedge to be complete enclosed with EPDM rubber)

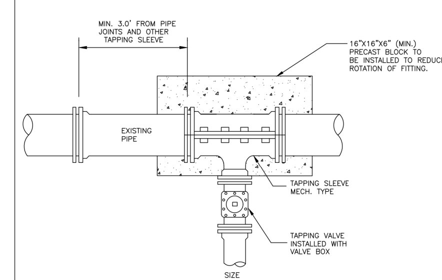
MANUFACTURER	MODEL #
American AVK Co.	Series 3, 18, 25, 45, 55, & 66
Clow	Model 2638 and 2639
Mueller	A-2360, A-2361, T-2360 & T-2361
American Flow Control	Series 2500

STANDARD CONSTRUCTION DETAIL
POTABLE WATER APPROVED PRODUCTS
FILE NAME W3.DOC | DETAIL REF: W-3



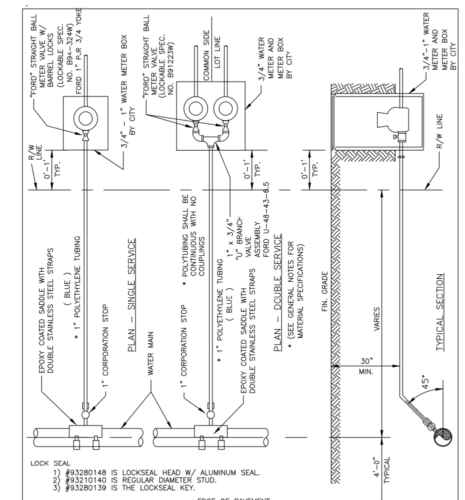
NOTE:
1. BOLT VALVES TO TEE OR CROSS WHEREVER AND WHENEVER APPLICABLE.
2. A CONTINUOUS TRACER WIRE TO BE COLOR CODED "BLUE" FOR WATER, LAYED ON TOP IN TRENCH
3. GATE VALVE WEDGE SHALL BE COMPLETELY ENCAPSULATED WITH EPDM RUBBER.
4. ALL OUTSIDE HEX NUTS, BOLTS AND HARDWARES (EXCEPT MECHANICAL BOLTS SUCH AS "T" BOLTS) SHALL BE MIN. 316 STAINLESS STEEL GRADE.

STANDARD CONSTRUCTION DETAIL
POTABLE WATER
VALVE AND VALVE BOX
(4" - 16" VALVE SIZES)
REV. 12/08 | FILE NAME: W5.DWG | DETAIL REF: W-5

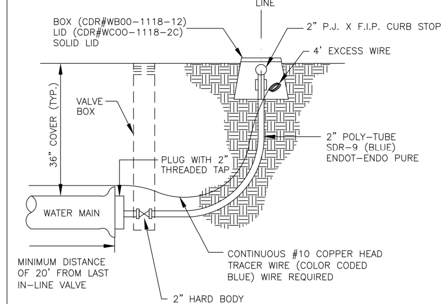


NOTES:
1. EPOXY COATED STEEL, STAINLESS STEEL SLEEVES WITH 316 STAINLESS STEEL BOLTS ARE PERMITTED FOR ALL TYPES OF PIPE MATERIALS.
2. INSTALL REQUIRED RESTRAINED JOINTS. IN NO INSTANCE SHALL THRUST BLOCK BE PERMITTED.
3. ALL TAPPING OF MAINS SHALL BE PERFORMED BY THE CITY AND BILLED IN ACCORDANCE WITH WITH THE ADOPTED FEE RESOLUTION. ALL MATERIALS TO BE PROVIDED BY DEVELOPER / CONTRACTOR
4. ALL VALVES 2" OR GREATER SHALL BE GATE VALVES. CORPORATION STOPS ARE NOT ALLOWED ON VALVES 2" OR GREATER EXCEPT ON BLOW-OFFS.
5. CITY ONLY PERFORMS 1", 2", 4", 6", 8", 10", 12" TAPS. PLEASE SPECIFY ACCORDINGLY.

STANDARD CONSTRUCTION DETAIL
TAPPING VALVE AND SLEEVE
REV. 12/08 | FILE NAME: W6.DWG | DETAIL REF: W-6



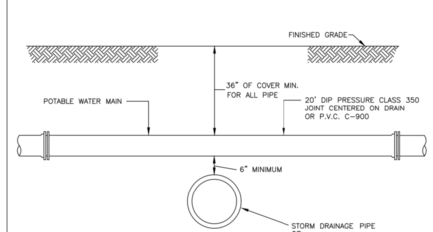
STANDARD CONSTRUCTION DETAIL
WATER SERVICE
(METER SIZES 3/4"-1")
REV. 12/08 | FILE NAME: W9.DWG | DETAIL REF: W-9



NOTE: BLOW-OFF BOXES FOR POTABLE AND RECLAIMED WATER WILL BE CDR#WB00-1118-12 (11"X18"X12") THE LID FOR BOTH POTABLE AND RECLAIMED WATER BLOW-OFF BOXES WILL BE CDR #WC00-1118-2C. THIS LID IS 11" X 18" AND HAS A CAST IRON READER LID. BOTH THE WATER AND THE RECLAIMED WATER BLOW-OFF BOX COMPONENTS SHALL BE NATURAL GREY IN COLOR

NOTE: PROVIDE AT LEAST ONE RESTRAINED JOINT IMMEDIATELY UPSTREAM OF BLOW-OFF AS PER LATEST DIPRA RESTRAINED JOINT CALCULATIONS.

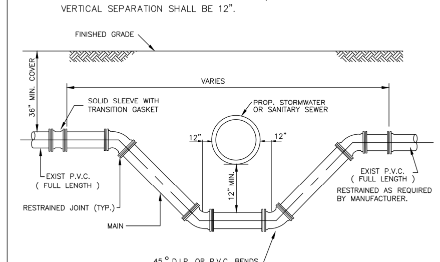
STANDARD CONSTRUCTION DETAIL
POTABLE WATER
BLOW-OFF ASSEMBLY
REV. 12/08 | FILE NAME: W13.DWG | DETAIL REF: W-13



NOTE:
1. THIS DETAIL DOES NOT APPLY TO WATER OR SEWER SERVICES.

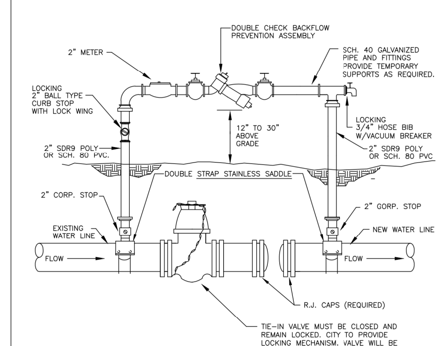
STANDARD CONSTRUCTION DETAIL
STORM DRAINAGE PIPE
OR SANITARY SEWER MAIN CONFLICT
REV. 12/08 | FILE NAME: W19.DWG | DETAIL REF: W-19

CONCRETE ENCASEMENT OF SANITARY SEWER IS AN ALTERNATIVE METHOD OF ADDRESSING A CONFLICT WHEN UNABLE TO MAINTAIN 18" VERTICAL SEPARATION DISTANCE. IN SUCH INSTANCES, THE MINIMUM PIPE VERTICAL SEPARATION SHALL BE 12".



NOTES:
1. LOWERING OF EXISTING WATER MAIN & FORCE MAIN BY DEFLECTION METHOD ACCEPTABLE IF EXISTING FIELD CONDITIONS PERMIT.
2. LENGTH OF SECTION BASED ON MINIMUM LENGTH AS DETERMINED BY DIPRA RESTRAINED JOINT MANUAL.
3. INSTALL RESTRAINED JOINTS, AS REQUIRED, FROM DEFLECTION POINT IN BOTH DIRECTIONS.

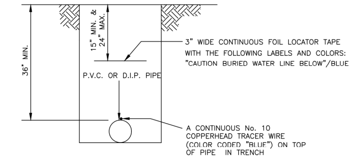
STANDARD CONSTRUCTION DETAIL
STORM DRAINAGE PIPE
OR SANITARY SEWER MAIN
CONFLICT
REV. 12/08 | FILE NAME: W20.DWG | DETAIL REF: W-20



* DIRECT TIE-IN METHOD ALLOWED WHEN TIE-IN UNDER EXISTING PAVEMENT LIMITS.

NOTES:
1. THIS DETAIL SHALL BE UTILIZED ON ALL WATERLINE EXTENSIONS. THE CITY WILL ALLOW A DIRECT CONNECTION TO THE CITY'S DRINKING WATER SYSTEM AT ONLY ONE POINT OF CONNECTION. FINAL SECONDARY TIE-INS SHALL BE PERFORMED AFTER CLEARANCE FROM THE D.E.P.
2. PROVIDE SUPPORT AND/OR PROTECTIVE MEASURES TO PREVENT ABOVE GROUND PIPE BEING BROKEN.

STANDARD CONSTRUCTION DETAIL
TEMPORARY JUMPER CONNECTION
REV. 12/08 | FILE NAME: W27.DWG | DETAIL REF: W-27



"TERRA TAPE D" or SIMILAR

NOTE:

1) A CONTINUOUS No. 10 COPPERHEAD TRACER WIRE TO BE INSTALLED WITH ALL NON-METALLIC PIPE. WIRE SHALL BE BROUGHT UP TO GRADE AT ALL VALVES OUTSIDE P.V.C. SLEEVE, (SEE DETAIL W-6).

2) ALL TRACER WIRES SHALL BE INTERCONNECTED WITH WATER PROOF WIRE NUT CAP OR WITH SIMILAR WATER PROOF SPLICE KIT AT ANY SPLICE AND WHERE SERVICES CONNECT TO MAINS.

3) A SUCCESSFUL CONTINUITY TEST SHALL BE CONDUCTED AND WITNESSED BY A CITY INSPECTOR AT THE COMPLETION OF TRACER WIRE INSTALLATION.

STANDARD CONSTRUCTION DETAIL
LOCATOR TAPE/ TRACERWIRE INSTALLATION FOR WATER MAIN, PIPELINES
REV. 12/08 | FILE NAME: W29.DWG | DETAIL REF: W-29

REVISIONS

DATE	DESCRIPTION
2/7/18	PER CITY COMMENTS

1230 North US1, Suite 3
Ormond Beach, Florida 32174
Phone (386) 872-7794
www.Newkirk-Engineering.com
C.A. # 30209
L.C. # 26000584
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Civil Engineering, Transportation, CEI & Landscape Architecture
NEWKIRK ENGINEERING INC.

CITY DETAILS AND NOTES
ANGLER'S COVE
3626 PENINSULA DRIVE
PORT ORANGE, FL 32127

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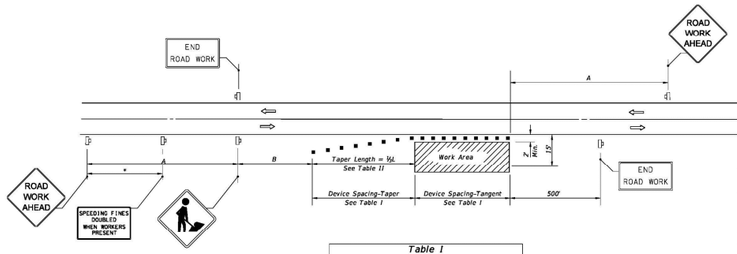
BRADLEY DONALD BAUKNECHT LICENSE NO. 75388 STATE OF FLORIDA PROFESSIONAL ENGINEER
BRADLEY D. BAUKNECHT, P.E. # 75388

PROJECT No:	2017-251
DATE:	JANUARY 2018
DESIGN BY:	BDB
DRAWN BY:	NWS
CHECKED BY:	BDB
SCALE:	

DRAWING NUMBER
12



DISTANCE BETWEEN SIGNS		
Speed	Spacing (ft.)	
	A	B
40 mph or less	200	200
45 mph	350	350
50 mph or greater	500	500

*Midway between signs.

Table I Device Spacing				
Speed (mph)	Max. Distance Between Devices (ft.)			
	Cones or Tubular Markers		Type I or Type II Barricades or Vertical Panels or Drums	
	Taper	Tangent	Taper	Tangent
25	25	50	25	50
30 to 45	25	50	30	50
50 to 70	25	50	50	100

Table II Taper Length - Shoulder				
Speed (mph)	½L (ft)			Notes
	8' Shldr.	10' Shldr.	12' Shldr.	
25	28	35	42	$L=\frac{WS^2}{60}$
30	40	50	60	
35	55	68	82	
40	72	90	107	
45	120	150	180	L=WS
50	133	167	200	
55	147	183	220	
60	160	200	240	
65	173	217	260	
70	187	233	280	

W minimum shoulder width

½L = Length of shoulder taper in feet

W = Width of total shoulder in feet (combined paved and unpaved width)

S = Posted speed limit (mph)

SYMBOLS

- Work Area
- Channelizing Device (See Index No. 600)
- Work Zone Sign
- Lane Identification + Direction of Traffic

GENERAL NOTES

1. When four or more work vehicles enter the through traffic lanes in a one hour period or less (excluding establishing and terminating the work area), the advanced FLAGGER sign shall be substituted for the WORKERS sign. For location of flaggers and FLAGGER signs, see Index No. 603.
2. SHOULDER WORK sign may be used as an alternate to the WORKER symbol sign only on the side where the shoulder work is being performed.
3. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
4. For general TCZ requirements and additional information, refer to Index No. 600.

DURATION NOTES

1. Signs and channelizing devices may be omitted if all of the following conditions are met:
   a. Work operations are 60 minutes or less.
   b. Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.

CONDITIONS

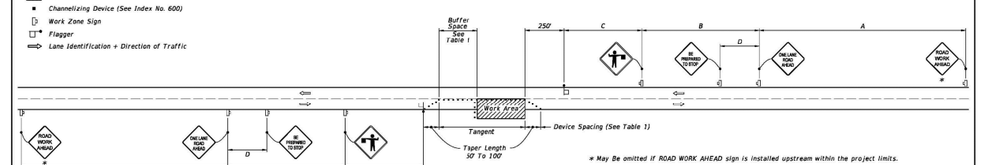
WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH THE AREA CLOSER THAN 15' BUT NOT CLOSER THAN 2' TO THE EDGE OF TRAVEL WAY.

10/12/2016 1:06:03 PM

LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
07/01/15			FDOT FY 2017-18 DESIGN STANDARDS	TWO-LANE, TWO-WAY, WORK ON SHOULDER	602	1 of 1

SYMBOLS:

- Work Area
- Channelizing Device (See Index No. 600)
- Work Zone Sign
- Flagger
- Lane Identification + Direction of Traffic



WITHOUT TEMPORARY RAISED RUMBLE STRIPS

GENERAL NOTES:

1. Special Conditions may be required in accordance with these notes and the following sheets:
   A. Railroad Crossings:
      a. If an active railroad crossing is located closer to the Work Area than the queue length plus 300 feet, extend the Buffer Space as shown on Sheet 3.
      b. If the queuing of vehicles across an active railroad crossing cannot be avoided, provide a uniformed traffic control officer or flagger at the highway-rail grade crossing to prevent vehicles from stopping within the highway-rail grade crossing, even if automatic train warning devices are in place.
   B. If the Work Area encroaches on the Centerline, use the Layout for Temporary Lane Shift to Shoulder on Sheet 3 only if the Existing Paved Shoulder width is sufficient to provide for an 11' lane between the Work Area and the Edge of Existing Paved Shoulder. Reduce the posted speed when appropriate.
2. Temporary Raised Rumble Strips:
   A. Use when both of the following conditions are met concurrently:
      a. Existing Posted Speed is 55 mph or greater;
      b. Work duration is greater than 60 minutes.
   B. Use a consistent Strip color throughout the work zone.
   C. Place each Rumble Strip Set transversely across the lane at locations shown.
   D. Use Option 1 or Option 2 as shown on Sheet 3. Use only one option throughout work zone.
3. Additional one-way control may be provided by the following means:
   A. Flag-carrying vehicle;
   B. Official vehicle;
   C. Pilot vehicles;
   D. Traffic signals.

   When flaggers are the sole means of one-way control, the flaggers must be in sight of each other or in direct communication at all times.
4. When a side road intersects the highway within the TTC zone, place additional TTC devices in accordance with other applicable TCZ Indexes.
5. The two channelizing devices directly in front of the work area may be omitted provided vehicles in the work area have high-intensity rotating, flashing, oscillating, or strobe lights operating.
6. When Buffer Space cannot be attained due to geometric constraints, use the greatest attainable length, not less than 200 ft, for posted speeds greater than 25 mph.
7. ROAD WORK AHEAD and the BE PREPARED TO STOP signs may be omitted if all of the following conditions are met:
   A. Work operations are 60 minutes or less.
   B. Speed limit is 45 mph or less.
   C. There are no sight obstructions to vehicles approaching the work area for a distance equal to the Buffer Space shown in Table 1.
   D. Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.
   E. Volume and complexity of the roadway has been considered.
   F. If a railroad crossing is present, vehicles will not queue across rail tracks.
   G. AFADs are not in use.
8. See Index 600 for general TCZ requirements and additional information.
9. Automated Flagger Assistance Devices (AFADs) may be used in accordance with Specifications Section 102, 990 and the APL vendor drawings.

TABLE 1 DEVICE SPACING									
Posted Speed	Maximum Spacing of Cones or Tubular Markers		Maximum Spacing of Type I or Type II Barricades/Panels/Drums		Distance Between Signs				Buffer Space
	On a Taper	On a Tangent	On a Taper	On a Tangent	A	B	C	D	
25	20'	50'	20'	50'	200'	200'	200'	100'	155'
30	20'	50'	20'	50'	200'	200'	200'	100'	200'
35	20'	50'	20'	50'	200'	200'	200'	100'	250'
40	20'	50'	20'	50'	200'	200'	200'	100'	305'
45	20'	50'	20'	50'	350'	350'	350'	175'	360'
50	30'	50'	20'	100'	500'	500'	500'	250'	425'
55	20'	50'	20'	100'	2640'	1500'	1000'	500'	495'
60	20'	50'	20'	100'	2640'	1500'	1000'	500'	570'
65	20'	50'	20'	100'	2640'	1500'	1000'	500'	645'
70	20'	50'	20'	100'	2640'	1500'	1000'	500'	730'

CONDITIONS

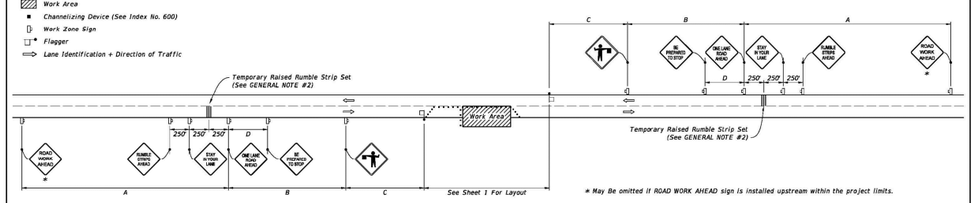
WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH THE AREA BETWEEN THE CENTERLINE AND A LINE 2' OUTSIDE THE EDGE OF TRAVEL WAY.

10/12/2016 1:07:14 PM

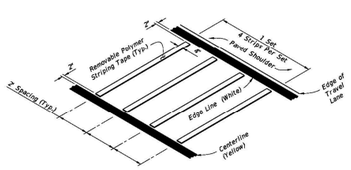
LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
01/01/16			FDOT FY 2017-18 DESIGN STANDARDS	TWO-LANE, TWO-WAY, WORK WITHIN THE TRAVEL WAY	603	1 of 3

SYMBOLS:

- Work Area
- Channelizing Device (See Index No. 600)
- Work Zone Sign
- Flagger
- Lane Identification + Direction of Traffic

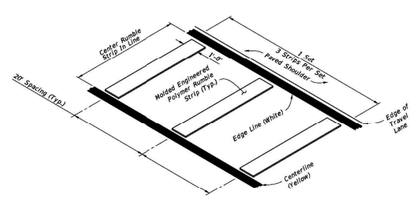


WITH TEMPORARY RAISED RUMBLE STRIPS
(When Required See GENERAL NOTE #2)



REMOVABLE POLYMER STRIPING TAPE

RUMBLE STRIP SET
OPTION - 1



MOLDED ENGINEERED POLYMER SET

RUMBLE STRIP SET
OPTION - 2

TEMPORARY RAISED RUMBLE STRIPS

4/6/2017 9:04:15 AM

LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
02/04/16			FDOT FY 2018-19 DESIGN STANDARDS	TWO-LANE, TWO-WAY, WORK WITHIN THE TRAVEL WAY	603	2 of 3

REVISIONS

DATE	DESCRIPTION
2/7/18	PER CITY COMMENTS

1230 North US1, Suite 3
Ormond Beach, Florida 32174
Phone (386) 872-7794
www.Newkirk-Engineering.com
C.A. # 30209
L.C. # 26000584
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Civil Engineering, Transportation, CEI & Landscape Architecture
NEWKIRK ENGINEERING INC.

MAINTENANCE OF TRAFFIC

ANGLER'S COVE

3626 PENINSULA DRIVE
PORT ORANGE, FL 32127

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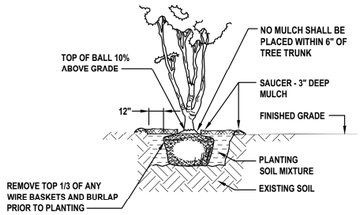
BRADLEY DONALD BAUKNECHT
LICENSE
NO. 75388
STATE OF FLORIDA
PROFESSIONAL ENGINEER

BRADLEY D. BAUKNECHT, P.E. # 75388

PROJECT No:	2017-251
DATE:	JANUARY 2018
DESIGN BY:	BDB
DRAWN BY:	NWS
CHECKED BY:	BDB
SCALE:	

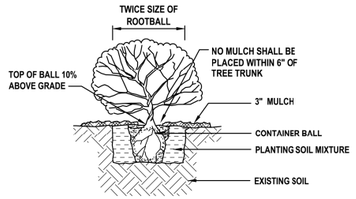
DRAWING NUMBER

13



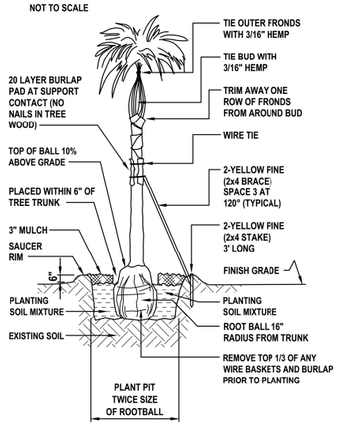
MULTI-TRUNK PLANTING DETAIL

NOT TO SCALE



SHRUB PLANTING DETAIL

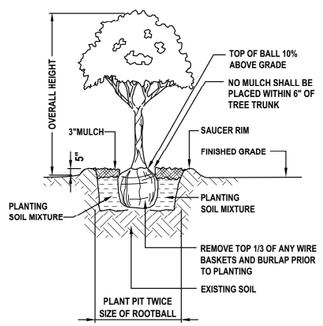
NOT TO SCALE



PALM TREE PLANTING DETAIL

NOT TO SCALE

NOTE:
WHEN TREE OCCURS IN SOD AREA INSTALL MULCH IN 3' RADIUS AROUND TRUNK.



TREE PLANTING DETAIL

NOT TO SCALE

TREE REQUIREMENTS:

REQUIRED: 1 TREE PER 2,500 SF = 57,551 LF / 2,500 = 24 TREES

PROVIDED: 13 TREES + 3 TREES PER LOT ON BUILD OUT
= 28 TREES PROVIDED

NOTE:
NO SPECIMEN TREES EXISTING ON SITE.

BUFFER CALCULATIONS:

NORTH BUFFER: 5' WIDE 348.01' - 32.68' = 315.33 (2 TREES, 2 UNDERSTORY, 20 SHRUBS / 100')
7 TREES REQUIRED, 7 PROVIDED
7 UNDERSTORY REQUIRED, 7 PROVIDED
64 SHRUBS REQUIRED, 101 PROVIDED

WEST BUFFER: 5' WIDE 175.14' - 36.34' = 138.80' (2 TREES, 2 UNDERSTORY, 20 SHRUBS / 100')
3 TREES REQUIRED, 3 PROVIDED
3 UNDERSTORY REQUIRED, 3 PROVIDED
28 SHRUBS REQUIRED, 33 PROVIDED

* EAST BUFFER: 5' WIDE PERIMETER BUFFER NATURAL VEGETATION TO REMAIN

* SOUTH BUFFER: 5' WIDE PERIMETER BUFFER NATURAL VEGETATION TO REMAIN

* WITH THE CONSTRUCTION OF EACH HOUSE, THE FOLLOWING LANDSCAPING SHALL BE REQUIRED ON EACH LOT: THREE SHADE TREES, OR ONE SHADE TREE PER 2,500 SF OF LOT AREA, WHICHEVER IS GREATER, AND 12 SHRUBS

PLANT LIST

CODE	NO.	SCIENTIFIC NAME	COMMON NAME	SIZE REQUIREMENTS
CANOPY TREES				
MGB	6	MAGNOLIA GRANDIFOLIA	BRAKEN'S BROWN MAGNOLIA	10' - 12' HGT., 2.5" CAL. @ 6"
SRP	12	SYAGRUS ROMANZOFFIANA	QUEEN PALM	14' OA - ALL
SUBTOTAL	18			
UNDERSTORY TREES				
LI	10	LAGERSTROEMIA INDICA	CRAPE MYRTLE (PURPLE) STD.	8'-10' HGT., 2" CAL. @ 6" FULL
SUBTOTAL	10			
SHRUBS				
HIB	70	HIBISCUS SSP	RED HIBISCUS	3 GAL., 20" HGT., FULL, 36" O.C.
VS	64	VIBURNUM SUSPENSUM	SANDANKWA	3 GAL., 24" HGT., 36" O.C.
SUBTOTAL	134			
TOTAL	162			

NOTE:

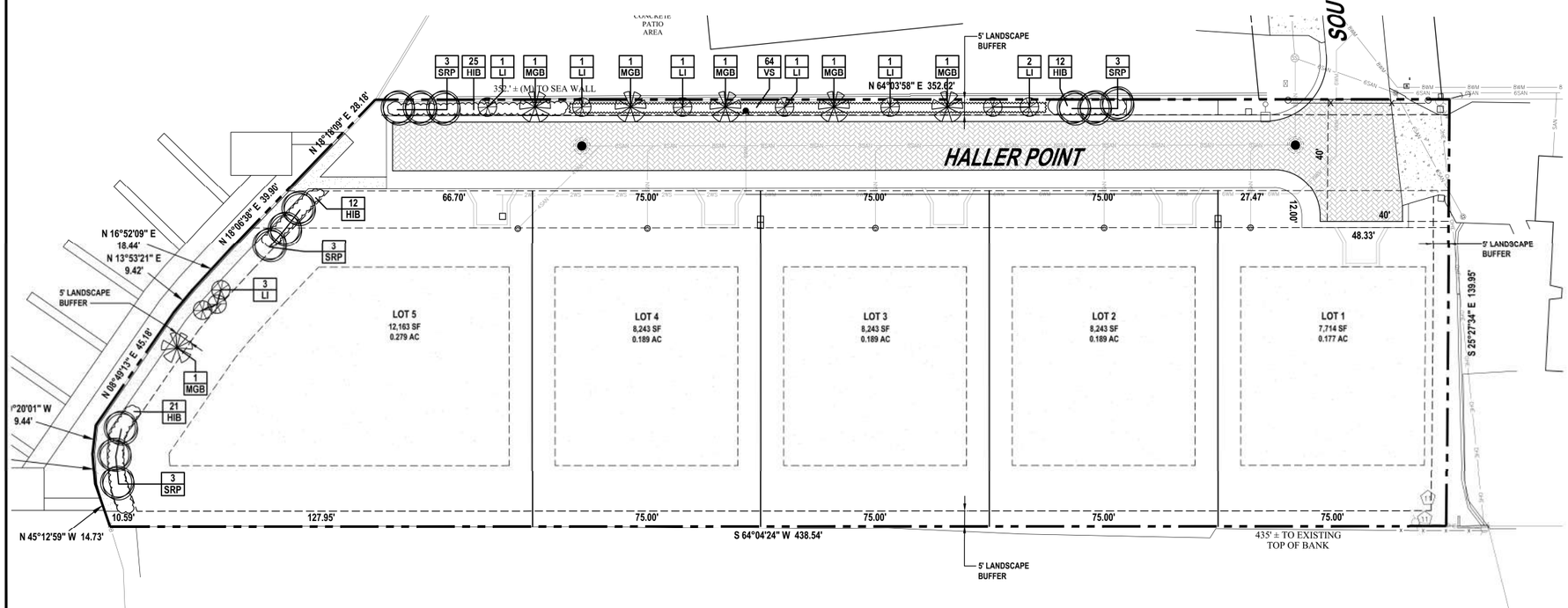
1. ALL TREES (NEW AND EXISTING) ARE TO HAVE A 3' DIAMETER MULCHED CIRCLE AROUND THE BASE UNLESS IT IS IN A PLANTING BED.

LEGEND

ST. AUGUSTINE SOD

SEED

35 — QUANTITY OF PLANTS
NS — PLANT CODE (SEE SCHEDULE)



LANDSCAPE PLAN

LANDSCAPE NOTES:

1. ALL PLANT MATERIAL SHALL CONFORM TO THE STANDARDS FOR FLORIDA #1 OR BETTER AS DESCRIBED IN THE CURRENT "GRADES AND STANDARDS FOR NURSERY PLANTS", STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE, TALLAHASSEE, OR THEIR EQUAL AS DETERMINED BY THE LANDSCAPE ARCHITECT.
2. ALL MULCH SHALL BE ALL NATURAL WOOD (NO CYPRESS).
3. SOD SPECIFIED AS ST. AUGUSTINE "FLORITAM" SHALL BE 95% WEED-FREE. SOD SPECIFIED AS BAHIA SHALL BE 85% WEED-FREE. ALL SOD SHALL BE INSTALLED WITH TIGHT JOINTS, ROLLED AND FERTILIZED.
4. SEED, IF ANY, TO MEET SOUTHERN SEED CERTIFICATION ASSOCIATION.
5. ALL DIMENSIONS SHALL BE FIELD-CHECKED BY THE LANDSCAPE CONTRACTOR PRIOR TO CONSTRUCTION, WITH ANY DISCREPANCIES REPORTED IMMEDIATELY TO THE LANDSCAPE ARCHITECT.
6. THE PLANT MATERIALS SCHEDULE IS PROVIDED FOR THE CONVENIENCE OF THE LANDSCAPE CONTRACTOR; SHOULD THERE BE ANY DISCREPANCY BETWEEN THE PLAN AND THE PLANT LIST, THE PLAN WILL PREVAIL.
7. ALL MATERIALS MUST BE AS SPECIFIED ON THE LANDSCAPE PLAN. IF MATERIALS OR LABOR DO NOT ADHERE TO THE SPECIFICATIONS, THEY WILL BE REJECTED AT NO ADDITIONAL COST TO THE OWNER.
8. ALL PLANTING BEDS SHALL BE TREATED WITH 'ROUND-UP' AND 'RONSTAR'. USE AS DIRECTED BY MANUFACTURERS.
9. NO SUBSTITUTIONS OR CHANGES OF ANY KIND WILL BE ALLOWED AT THE TIME OF BIDDING SO AS TO PROVIDE FOR FAIR COMPARISON.
10. EXISTING IRRIGATION SYSTEM SHALL BE REVAMPED TO PROVIDE 100% COVERAGE.
11. THE CONTRACTOR SHALL VERIFY EXISTENCE AND LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND CONDITIONS PRIOR TO HIS COMMENCEMENT OF THE ANY WORK.
12. ALL BUILDING MATERIALS AND LABOR SHALL CONFORM TO THE SOUTHERN BUILDING CODE AND ALSO TO ALL LOCAL CODES THAT HAVE JURISDICTION.
13. ALL PERMIT AND VARIANCE APPLICATIONS SHALL BE MADE BY THE CONTRACTOR.
14. PRIOR TO CONSTRUCTION OF PLANTING BEDS, ALL AREAS ARE TO HAVE SOIL TESTS CONDUCTED TO DETERMINE pH AND SOIL FERTILITY. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO AMEND THE SOIL TO MEET ADEQUATE FERTILITY AND pH FOR CORRESPONDING PLANT MATERIAL. ALL TEST RESULTS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT.
15. EQUIPMENT SHALL BE OPERATED IN A MANNER AS NOT TO INJURE OR DESTROY ANY TREES SHOWN TO REMAIN. CONTRACTOR SHALL NOT CAUSE OR ALLOW THE CLEANING OF EQUIPMENT OR MATERIAL WITHIN THE DRIP LINE OF ANY TREE OR GROUPS OF TREES TO BE RETAINED OR THOSE PROPOSED. NOR SHALL THE CONTRACTOR ALLOW THE DISPOSAL OF WASTE MATERIAL, SUCH AS PAINT, OIL SOLVENTS, ASPHALT, CONCRETE, MORTAR OR ANY OTHER MATERIAL HARMFUL TO THE LIFE OF A TREE WITHIN THE DRIP LINE OF ANY TREE OR GROUP OF TREES. NO ATTACHMENT, WIRES (OTHER THAN PROTECTIVE GUY WIRES), SIGNS, OR PERMITS MAY BE FASTENED TO A TREE.
16. ANY EXISTING TREES CREDITED TOWARDS REQUIRED BUFFERS OR LANDSCAPE REQUIREMENTS REMOVED FOR ANY REASON SHALL BE REPLACED WITH TREES MEETING CITY APPROVAL WITH REGARDS TO SPECIES AND SIZE.
17. ALL QUESTIONS CONCERNING THE PLAN AND/OR SPECIFICATIONS SHALL BE DIRECTED TO THE LANDSCAPE ARCHITECT AT NEWKIRK ENGINEERING, INC. (386) 872-7794.
18. ALL SHADE TREES AND SINGLE TRUNK UNDERSTORY TREES SHALL BE STAKED USING ARBORGUY STAKING SYSTEM FOR SINGLE STEM TREE AND ALL MULTI-TRUNK UNDERSTORY TREES SHALL BE STAKED WITH ARBORGUY MULTI-TRUNK SYSTEM.
19. ANY CHANGE IN STAKING SYSTEM MUST BE APPROVED IN WRITING BY THE LANDSCAPE ARCHITECT BEFORE BEING INSTALLED.
20. ALL UNIMPROVED AREA NOT OTHERWISE PLANTED OR MULCHED SHALL BE SODDED WITH ST. AUGUSTINE FLORITAM UNLESS OTHERWISE NOTED ON THE LANDSCAPE PLAN.
21. PLANT MATERIAL SHALL BE CLEARLY IDENTIFIED AS FLORIDA #1 OR BETTER ON EITHER LABELS OR INVOICES.
22. ALL PLANT MATERIAL SHALL BE GUARANTEED ONE YEAR AFTER ACCEPTANCE BY OWNER.
23. ALL TREES IN SOD TO BE IN A (4) FOOT MINIMUM-MULCHED RING AROUND.
24. TREES SHALL BE PLANTED SO THAT THE TRUNK FLARE IS EXPOSED AND TOPMOST ROOT IN THE ROOTBALL ORIGINATING FROM THE TRUNK IS AT SOIL SURFACE OR WITHIN THE TOP INCH OF SOIL ON THE ROOTBALL.
25. ALL PLANT SPECIFICATIONS MUST BE MET OR EXCEEDED.
26. PLANT TREE SO THAT ROOTBALL IS 1"-2" ABOVE FINISH GRADE.
27. REMOVAL OF ALL CONSTRUCTION DEBRIS, LIMEROCK, EXCESS OF BUILDERS SAND, CONCRETE AND MORTAR DEBRIS, EXISTING WEEDS AND GRASS, AND ALL FOREIGN MATERIALS IN THE PLANTING BED AND SOD AREAS SHALL BE REMOVED AND A MINIMUM OF 3' OF CLEAN SAND WITH A pH 5.5-6.5 SHALL BE INSTALLED PRIOR TO ANY INSTALLATION OF PLANTS OR TREES.
28. FOR ALL NEW DEVELOPMENT, OR REDEVELOPMENT OF EXISTING PROPERTY, THE APPLICANT SHALL BE REQUIRED TO REMOVE ALL INVASIVE NONNATIVE PLANT SPECIES FROM THE PROPERTY PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.
29. ALL EXISTING TREES AND PALMS WILL BE PROPERLY PRUNED AND CLEANED OF DEADWOOD, BROKEN BRANCHES, DEAD FROND AND VINES AS NEEDED.

TREE PRUNING NOTE:

REMOVE ALL EXISTING UNDERBRUSH AND GROUND COVERS WITHIN LANDSCAPE BUFFERS. PRUNE ALL TREES TO REMAIN IN ACCORDANCE WITH ANSI A 300 PRUNING STANDARDS AS PERFORMED BY AN ARBORIST CERTIFIED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) OR A REGISTERED CONSULTING ARBORIST WITH THE AMERICAN SOCIETY OF CONSULTING ARBORISTS (ASCA).

20 10 0 20 40
GRAPHIC SCALE
1"=20'

WARNING !!
CONTRACTOR SHALL TAKE ALL PRECAUTIONS DURING CONSTRUCTION TO AVOID CONTACT WITH EXISTING UNDERGROUND UTILITIES, GAS MAINS AND OVERHEAD ELECTRIC IN THE RIGHT-OF-WAY.

REVISIONS

DATE	DESCRIPTION
2/7/18	PER CITY COMMENTS

1230 North US1, Suite 3
Ormond Beach, Florida 32174
Phone (386) 872-7794
www.Newkirk-Engineering.com
C.A. # 30209
L.C. # 26000584
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Civil Engineering, Transportation, CEI & Landscape Architecture
NEWKIRK ENGINEERING INC.

LANDSCAPE PLAN
ANGLER'S COVE
3626 PENINSULA DRIVE
PORT ORANGE, FL 32127

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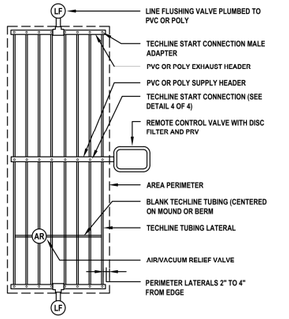
REGISTERED LANDSCAPE ARCHITECT
RICHARD L. POORE
LA533
STATE OF FLORIDA
RICHARD L. POORE, L.A. # LA533

One Nation... One Number... 811
Know what's below. Call before you dig.

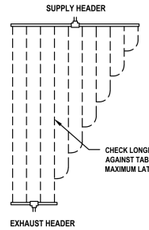
PROJECT No:	2017-251
DATE:	JANUARY 2018
DESIGN BY:	RLP
DRAWN BY:	NWS
CHECKED BY:	RLP
SCALE:	1" = 20'

DRAWING NUMBER

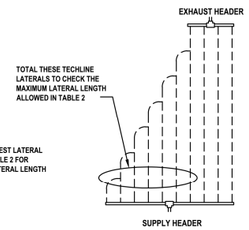
14



TECHLINE CENTER FEED LAYOUT



JOINING TECHLINE TUBING



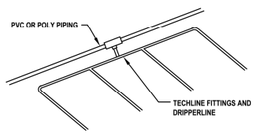
BRANCHING OUT TECHLINE TUBING

CENTER FEED LAYOUTS:

- WHERE LAYOUT FLEXIBILITY EXISTS, IT IS RECOMMENDED THAT CENTER FEED LAYOUTS BE USED. THIS ALLOWS FOR THE MOST EVEN FLOW OF WATER THROUGHOUT THE ZONE.
- CENTER FEED LAYOUTS ALSO ALLOW YOU TO MAXIMIZE THE LENGTHS OF TECHLINE THAT CAN BE RUN.

OTHER PIPING LAYOUTS:

- WHEN BRANCHING OUT, OR JOINING TECHLINE, ONE OF TWO RULES APPLY. RULE 1 - WHEN BRANCHING OUT TECHLINE FROM THE SUPPLY HEADER, TOTAL ALL "BRANCHED OUT" DRIPPERLINE AND CHECK THE SUM AGAINST THE MAXIMUM LATERAL LENGTH IN TABLE 2. RULE 2 - WHEN JOINING DRIPPERLINE LATERALS FROM THE SUPPLY HEADER, CHECK ONLY THE LONGEST LATERAL AGAINST THE MAXIMUM ALLOWABLE IN TABLE 2.
- TO REDUCE THE NUMBER OF GLUE JOINTS, SADDLES OR INSERT FITTINGS IN A HEADER, TRANSITION TO TECHLINE AND TECHLINE FITTINGS TO MAKE UP SUB-HEADERS, MAKING SURE TO FOLLOW THE GUIDELINE OF A MAXIMUM OF 0.5 GPM IN THE "SUB-HEADER" ZONE.



CREATING SUB-HEADERS TO REDUCE GLUE/SADDLE JOINTS

ZONE WATER REQUIREMENTS:

ONCE YOU HAVE LAID OUT THE TECHLINE, YOU NEED TO IDENTIFY HOW MANY DRIPPERS THERE ARE, AND THEIR TOTAL OUTPUT. THIS WILL HELP YOU DETERMINE MAINLINE, SUBMAIN AND SUPPLY/EXHAUST HEADER SIZING. VALVE, FILTER, AND REGULATOR SELECTION.,

NETAFIM DETAIL

NOT TO SCALE

IRRIGATION LEGEND

(USE THE FOLLOWING IRRIGATION EQUIPMENT OR EQUAL)

15 SERIES MPR	FLOW RATE (GPM)		FLOW RATE (GPM)
Ⓐ ADJUSTABLE 15' RADIUS	VARIES	☐ 15' EST	0.61
Ⓠ QUARTER	0.92	☒ 15' SST	1.21
Ⓗ HALF	1.85	☒ 9' SST	1.73
Ⓣ THREE QUARTER	2.78	■ 15' CST	1.21
Ⓕ FULL	3.70		
△ TREE BUBBLER	1.50		

ZONE NUMBER
2 | 15 — NUMBER OF HEADS (* DENOTES NETAFIM)
35± — APPROX. GALLONS PER MINUTE

1" LOOPED IRRIGATION MAIN (MUST BE SCH 40 PIPE)

SLEEVE UNDER PAVEMENT FOR WIRE (1")

SLEEVE UNDER PAVEMENT FOR PIPE (SEE SCHEDULE FOR SIZE REQUIREMENTS)

BACK OF CURB — 12" MIN.

DRIP IRRIGATION (NETAFIM OR APPROVED EQUAL)

Ⓑ BACKFLOW PREVENTER (1" REDUCED PRESSURE ZONE)

Ⓒ CONTROLLER - RAINBIRD ESPLXM - (1) 8 STATION OUTSIDE MOUNT TO BE MOUNTED ON A PEDESTAL

Ⓡ RAIN SENSOR SHUTOFF (ON TOP OF CONTROL BOX OR PEDESTAL MOUNT)

Ⓦ 4' DIA DEEP WELL

ZONE CONTROL VALVE (HARDIE 216B) (1" ANGLE- PRESSURE REDUCING)

WELL NOTES:

1. 4" DIAMETER DEEP WELL
2. PUMP MUST PROVIDE A MINIMUM OF 50 GALLONS PER MINUTE @ 50 PSI AT HEADS.
3. CONTRACTOR SHALL DRILL NEW WELL TO A DEPTH OF GROUNDWATER TO ACHIEVE SPECIFIED FLOW.
4. GROUNDWATER SOURCE SHALL BE FREE OF STAIN PRODUCING IRON MINERALS.
5. COVER WELL AND BACKFLOW PREVENTER WITH ARTIFICIAL STONE WELL COVER.

GENERAL NOTES:

1. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH THE CITY AND COUNTY WATER WISE ORDINANCE REQUIREMENTS. THE IRRIGATION CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IF THERE ARE ANY DEVIATIONS TO THE DRAWING.
2. IRRIGATION LINES ARE SHOWN DIAGRAMMATICALLY AND ARE INTENDED TO SHOW DISTRIBUTION ZONES ONLY. ALL VALVES SHALL BE LOCATED WITHIN PLANTING AREAS (NOT WITHIN PAVEMENT). LINES LOCATED UNDER PAVEMENT SHALL BE KEPT TO A MINIMUM AND ALL PIPING UNDER PAVED AREAS SHALL BE SLEEVED.
3. WHEN INSTALLING IRRIGATION PIPING IN ISLAND AND OTHER NARROW PLANTING AREAS RUN PIPING CLOSE TO CURB AND NOT DOWN THE MIDDLE OF THE PLANTING AREA. (BEFORE DOING IRRIGATION GET A COPY OF THE LANDSCAPE PLAN AND KEEP IRRIGATION LINES OUT OF PLANTING AREAS WHERE POSSIBLE.)
4. NO SIGNIFICANT IRRIGATION OVERTHROW SHALL BE ALLOWED ONTO IMPERVIOUS SURFACES.
5. 25% OR MORE OF IRRIGATION IS LOW VOLUME.

IRRIGATION SCHEDULE:

RUN SYSTEM EVERY TUESDAY AND FRIDAY

1. ZONES: 1, 4 & 6 TO RUN NO MORE THAN 45 MINUTES.
2. BUBBLER ZONE 2, 3 & 5 TO RUN NO MORE THAN 20 MINUTES.

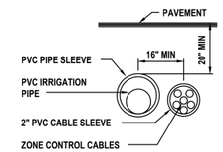
PIPE SIZING INFORMATION

GALLONS PER MINUTE (GPM)	PIPE SIZE
0-6	1/2"
7-10	3/4"
11-16	1"
17-28	1 1/4"
29-35	1 1/2"
35-55	2"

PIPE SLEEVE SCHEDULE

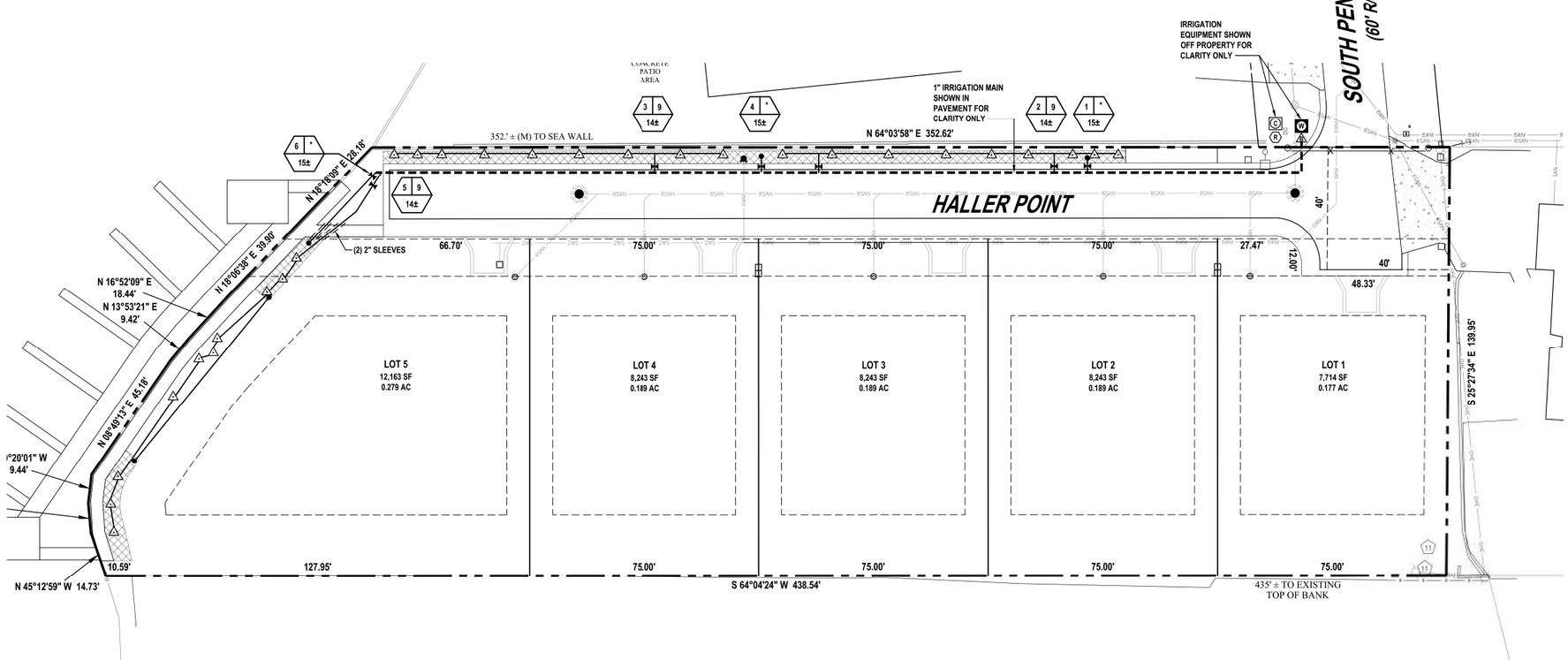
PIPE SIZE	SLEEVE SIZE
2 1/2"	6"
1" THRU 2"	4"
1/2" AND 3/4"	3"

NOTE:
AT THE DISCRETION OF THE IRRIGATION CONTRACTOR, THE DIAMETER OF THE SLEEVE PIPE MAY BE REDUCED.

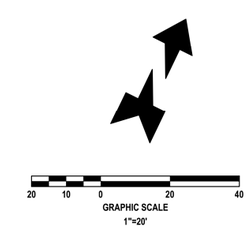


IRRIGATION NOTES:

1. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL EXISTING UTILITIES AND CONDITIONS PRIOR TO ITS COMMENCEMENT OF THE IRRIGATION WORK.
2. *CHECK PRESSURE AND GPM OF WATER SUPPLY BEFORE BEGINNING JOB AND REPORT FINDING TO LANDSCAPE ARCHITECT. LANDSCAPE ARCHITECT WILL MAKE ANY ADJUSTMENT NECESSARY TO MAKE SYSTEM WORK AT ITS BEST.*
3. THE PLAN IS SCHEMATIC ONLY. THE CONTRACTOR SHALL INSTALL PIPING IN A MINIMUM NUMBER OF TRENCHES AND SHALL INSTALL PIPE IN A MINIMUM LENGTH.
4. QUANTITIES FOR IRRIGATION MATERIALS ARE NOT GIVEN. THE CONTRACTOR SHALL DETERMINE THIS FROM THE PLAN.
5. INSTALL SLEEVE PIPING WHERE SHOWN ON THE DRAWINGS AT THE PROPER DEPTH.
6. ALL SLEEVE PIPE SHALL BE SCHEDULE 40 PVC PIPE INSTALLED A MINIMUM OF 20" BELOW FINISHED PAVING GRADES.
7. ALL SLEEVES WHEN PLACED IN FIELD ARE TO BE LOCATED BY A METAL PIPE AT EACH END AND LOCATED FROM TWO STATIONARY POINTS BY TAPE MEASUREMENTS.
8. ALL PIPE SHALL BE INSTALLED A MINIMUM OF 20" BELOW GRADE.
9. ALL TRENCHING SHALL BE KEPT OUT OF THE DRIP LINE AREA OF ALL EXISTING TREES. USE RADIAL LINES OR TUNNELING WHEN NECESSARY TO ENCROACH INTO THE DRIP LINE AREA OF TREES.
10. LOCATE ALL VALVES AND OTHER IRRIGATION EQUIPMENT IN PLANT BED AREAS WITHIN THE PROJECT LIMITS FOR CONCEALMENT PURPOSES.
11. RISERS ARE TO BE HIDDEN COMPLETELY IN SHRUBBERY OR PAINTED BLACK AND IN NO CASE BE HIGHER THAN THE SHRUBBERY INSTALLED.
12. ALL PIPE EXPOSED ABOVE GRADE AND TO VIEW SHALL BE SCHEDULE 40 GALVANIZED STEEL PIPE OF THE NOTED SIZE.
13. ALL IRRIGATION EQUIPMENT (PUMP, CONTROLLER, ETC.) SHALL BE PLACED WITHIN FENCED ENCLOSURE.
14. ALL VALVES SHALL BE INSTALLED IN METER TYPE SIZE BOXES EQUAL TO AMETEK POLY-IRON.
15. PROVIDE A 6" GRAVEL SUMP AT THE BOTTOM OF ALL METER BOXES AND INSTALL 1/2" TO 1" DIAMETER GRAVEL AT THE BOTTOM OF THE VALVE PIT.
16. IRRIGATION SHALL MEET ALL APPLICABLE CURRENT MUNICIPAL, COUNTY, STATE OR FEDERAL CODES, ORDINANCES AND REGULATIONS THAT HAVE JURISDICTION.
17. ALL PIPE 1/2" TO 2 1/2" IN SIZE SHALL BE PRESSURE RATED 160 PVC (EXCEPT MAIN).
18. ALL FITTINGS SHALL BE SCHEDULE 40 PVC.
19. ALL SPRAY HEADS ARE TO BE A MINIMUM OF 6" POP-UP AND ALL HEADS IN PLANTING AREAS TO BE 12" POP-UP OR RISERS. RISERS SHALL BE PAINTED GREEN OR BLACK.
20. ELECTRICAL TO CONTROLLER SHALL BE SUPPLIED BY ELECTRICAL CONTRACTOR (NOT IRRIGATION CONTRACTOR).
21. *PURPLE IRRIGATION EQUIPMENT MUST BE USED FOR ALL IRRIGATION IF REUSE WATER IS BEING USED.*
22. *IF YOU HAVE ANY QUESTIONS CALL LANDSCAPE ARCHITECT AT NEWKIRK ENGINEERING (386) 872-7794.*



IRRIGATION PLAN



WARNING !!

CONTRACTOR SHALL TAKE ALL PRECAUTIONS DURING CONSTRUCTION TO AVOID CONTACT WITH EXISTING UNDERGROUND UTILITIES, GAS MAINS AND OVERHEAD ELECTRIC IN THE RIGHT-OF-WAY.

REVISIONS

DATE	DESCRIPTION
2/7/18	PER CITY COMMENTS

1230 North US1, Suite 3
Ormond Beach, Florida 32174
Phone (386) 872-7794
www.Newkirk-Engineering.com
C.A. # 30209
L.C. # 26000584
© 2013
Civil Engineering, Transportation, CEI & Landscape Architecture
NEWKIRK ENGINEERING INC.

IRRIGATION PLAN
ANGLER'S COVE
3626 PENINSULA DRIVE
PORT ORANGE, FL 32127

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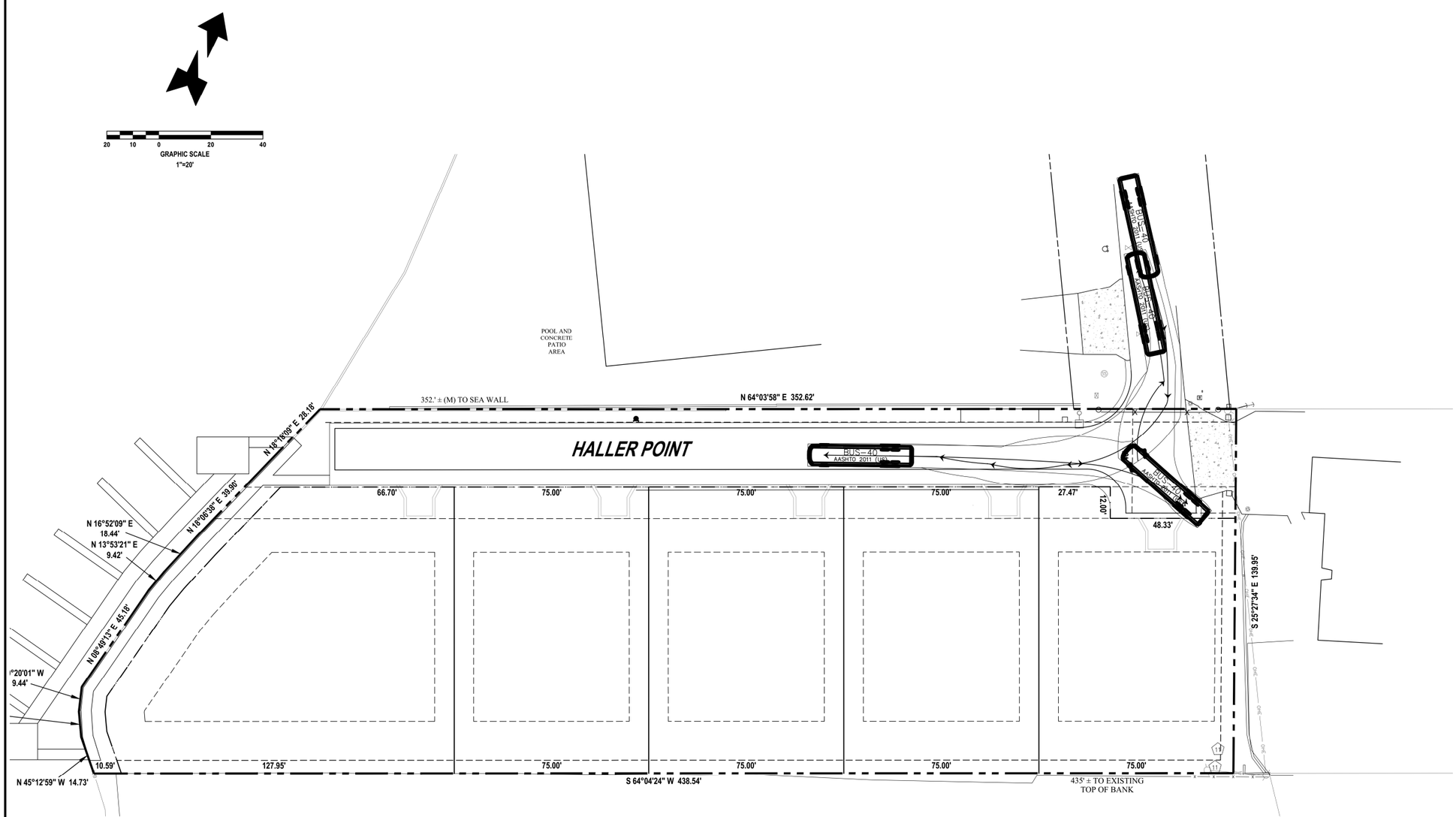
REGISTERED LANDSCAPE ARCHITECT
RICHARD L. POORE
LA533
STATE OF FLORIDA
RICHARD L. POORE, L.A. # LA533

PROJECT No:	2017-251
DATE:	JANUARY 2018
DESIGN BY:	RLP
DRAWN BY:	NWS
CHECKED BY:	RLP
SCALE:	1" = 20'

DRAWING NUMBER

15



FIRE TRUCK TRUCK PATH

SCALE: 1" = 20'

REVISIONS

DATE	DESCRIPTION
2/7/18	PER CITY COMMENTS

1230 North US1, Suite 3
Ormond Beach, Florida 32174
Phone (386) 872-7794
www.Newkirk-Engineering.com
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L.C. # 26000584
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Civil Engineering,
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NEWKIRK ENGINEERING INC.

AUTOTURN TRUCK EXHIBIT

ANGLER'S COVE

3626 PENINSULA DRIVE
PORT ORANGE, FL 32127

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BRADLEY DONALD BAUKNECHT
LICENSE
NO. 75388
STATE OF FLORIDA
PROFESSIONAL ENGINEER

BRADLEY D. BAUKNECHT, P.E. # 75388

PROJECT No:	2017-251
DATE:	JANUARY 2018
DESIGN BY:	BDB
DRAWN BY:	NWS
CHECKED BY:	BDB
SCALE:	1" = 20'

DRAWING NUMBER

16

STAFF REPORT
LDC TEXT AMENDMENT/PC-A ZONING DISTRICT
CASE NO. 18-25000002

REQUEST:	To amend the Land Development Code (LDC) to increase the percentage of the Planned Community-Agriculture (PC-A) Workplace District allowed to be developed as multi-family, and amend the rear buffer and minimum living area requirements.
APPLICANT:	Robert A. Merrell III, Esquire, on behalf of Port Orange Holdings II, LLC (a.k.a. CBL)
STAFF RECOMMENDATION:	**Approval**
STAFF CONTACT:	Penelope Cruz, AICP, Principal Planner
PLANNING COMMISSION DATE:	March 22, 2018

BACKGROUND

The PC-A zoning district was adopted in 2002 to provide a flexible way to create a master planned mixed-use community on the west side of I-95. The PC-A zoning district was divided into four districts with specific development guidelines for each district (Figure 1):

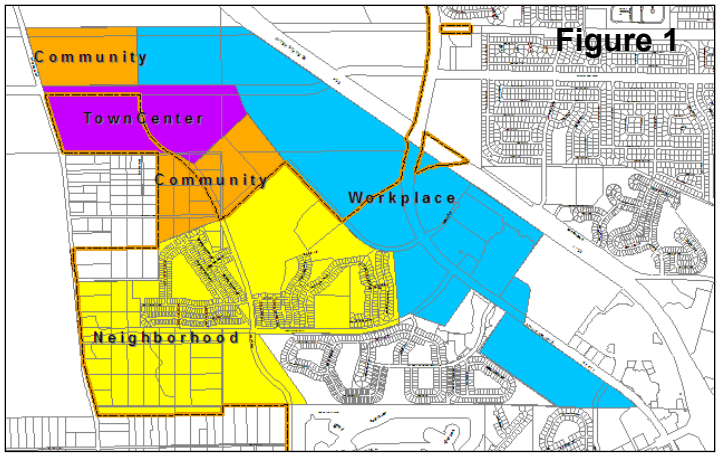


Figure 1

1. *West Town Center District* — Intended to create a mixed-use area in a pedestrian-oriented town center.
2. *Community District* — Intended to function as a transition area between the West Town Center and the Neighborhood and Workplace districts. The primary land use is residential. Recreational, institutional, commercial, and conservation/open space uses are also allowed in this district in areas specifically designated on the macro and micro Conceptual Development Plans (CDPs).
3. *Neighborhood District* — Intended to accommodate a variety of standard suburban residential housing types at varying densities, as well as neighborhood-scale office and commercial developments in areas specifically designated on the macro and micro CDPs.
4. *Workplace District* — Intended to provide regional employment to support local and regional markets, while creating a link between the various uses within the district and the other districts, especially the West Town Center and Community districts. The primary use of this district is for commercial and industrial purposes.

The PC-A zoning district was designed a decade ago and covers approximately 1,200 acres. It is common to make modifications to the concepts and development regulations as larger master planned areas develop. Although there is some integration of uses planned for the West Town Center and Community districts of the PC-A area, the Neighborhood and Workplace districts generally function as large single purpose districts, similar to traditional zoning patterns.

In 2012, the PC-A Workplace District regulations were amended to add multifamily dwellings at a maximum of 16 units per acre as a permitted use. The 2012 amendment included a limitation that multifamily developments could only be developed on 7% of the total acreage of the Workplace District. The Workplace District is approximately 420 acres; therefore only 29.4 acres could be developed as multifamily. At a maximum density of 16 units per acre, the maximum number of units allowed on the 29.4 acres is 470 units.

In 2013, the Whitepalm Apartments were developed at 5400 S. Williamson Boulevard, within the PC-A Workplace District. This multi-family development consists of 306 units on 27 acres (11.3 units/acre). Therefore, based on the LDC, only 2.4 acres remain in the PC-A Workplace District that could be developed as multi-family.

PROPOSED AMENDMENT

The proposed amendment includes three items:

1) To increase the percentage of the Planned Community-Agriculture (PC-A) Workplace District allowed to be developed as multi-family;
2) To amend the rear buffer requirement; and
3) To reduce the minimum living area requirement for a multi-family dwelling unit.

If approved, the applicant intends to submit a site plan for a 292-unit multi-family complex with two commercial outparcels on 29.5 acres, located on the west side of Williamson Boulevard, between Summer Trees Road and the Whitepalm Apartments (Figure 2). The current zoning permits the multi-family use; however, the development proposal requires approval of the LDC text amendment.

Figure 2

1) *Percentage of the Planned Community-Agriculture (PC-A) Workplace District allowed to be developed as multi-family*

The applicant's proposed LDC Amendment is to increase the maximum number of residential units allowed in the PC-A Workplace District by increasing the percentage of the total acreage in the Workplace District permitted to be developed as multi-family. According to the proposed language prepared by the applicant, multi-family development could only be developed on 13% of the total acreage in the PC-A Workplace District. This would increase the area that could be developed as multi-family from 29.4 acres (7%) to 54.6 acres (13%).

Applicant Justification: According to a market study the applicant had prepared, there is still a demand for multifamily developments in Port Orange, specifically in the area west of I-95. The study indicated the senior age and working age groups are currently in the market to rent residential units in multi-family developments.

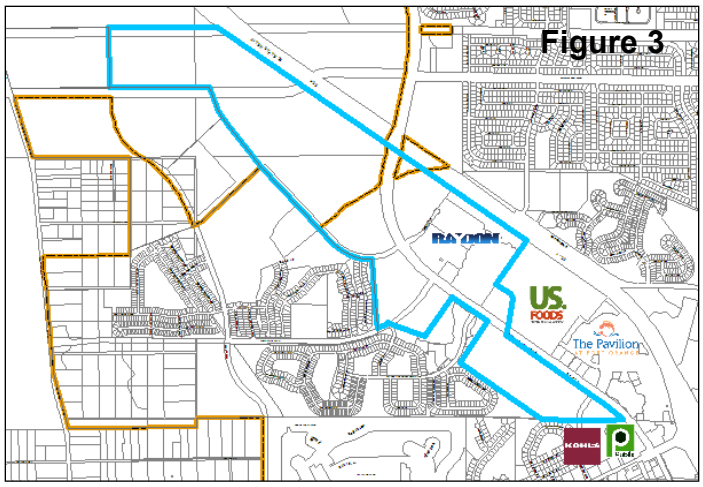
The applicant cites the resident base on the west side of Port Orange is currently dominated by young families because of the schools, retail opportunities, proximity to the interstate, and proximity to employment opportunities. The applicant sees the presence of young families continuing to increase due to these features. However, the applicant anticipates more families will be seeking rental apartments instead of purchasing a single-family home due to affordability constraints. The applicant also states that young professionals will like the proposed development due to its location in a growing, vibrant area with employment, shopping and entertainment nearby.

The market study also indicates the senior population is looking for rental apartments in this area due to its proximity to retail, entertainment, medical and dining. Another reason rental apartments are becoming more attractive to the senior age group is because there are no HOA fees, insurance or property taxes associated with renting an apartment unit; and they can remain in their communities without the concern of maintaining a single-family home. The applicant stated that this age group particularly favors the developer's product due to its townhome style design and private ground-floor entrances

The applicant (who is also the owner of The Pavilion at Port Orange) views multi-family residential in the Workplace District as a perfect complement to the shop, dine and play environment created at The Pavilion. The applicant has stated that additional multi-family development located close to The Pavilion could help drive sales and initiate additional development within The Pavilion.

A traffic analysis was conducted to evaluate the impact that the proposed LDC amendment could have on area roadways. According to the analysis, if the proposed LDC amendment is approved and multi-family is developed, there is potential to *reduce* the net p.m. peak-hour vehicular trips created by 2,754 trips when compared to potential commercial development on a ±29.5-acre site (Exhibit 1). Transportation Concurrency and any required mitigation to support a proposed development plan for any uses developed in the PC-A zoning district will be assessed in greater detail during the site plan review process.

Typically, multifamily developments are located near major demand generators such as schools, employment centers, retail, entertainment and suburban areas with quality schools. The Workplace District and adjacent land currently provides regional employment centers (i.e. Raydon, US Foods) and is adjacent to regional and local shopping centers (i.e. The Pavilion at Port Orange and Westport Square), making it an appropriate location for multi-family development. There is also undeveloped land within the Workplace District that is planned for additional employment centers. The limitation on the area and amount of multi-family that is proposed to be allowed (i.e. one additional development) retains the majority of the undeveloped land in the Workplace District to be developed with employment generating uses.



Allowing for limited additional multifamily development (±54 acres of the ±420-acre area) in the Workplace District also creates an opportunity for a better transition between the existing single-family subdivisions (i.e. Royal Palm, Windsor Hill, and The Vineyards) and some of the more intense commercial and industrial uses allowed in the Workplace District. Although some commercial development will ultimately develop (as planned) adjacent to these residential areas, the proposed amendment could reduce the impact.

2) *Rear Buffer Requirement*

When the 2012 LDC text amendment was adopted, detailed requirements for a rear buffer between a multi-family use and a single-family subdivision was included at the request of the Royal Palm neighborhood. The requirements include a 20’ wide rear landscape buffer with a berm at least 3’ high and a 6’ high vinyl shadowbox fence on top of the berm except where accessory structures abut the buffer or where the property abuts an existing conservation easement area. The proposed amendment includes language that if the landscape buffer provided is 50' wide or greater, then a berm and opaque fence is not required between a multi-family development and a single-family or duplex subdivision.

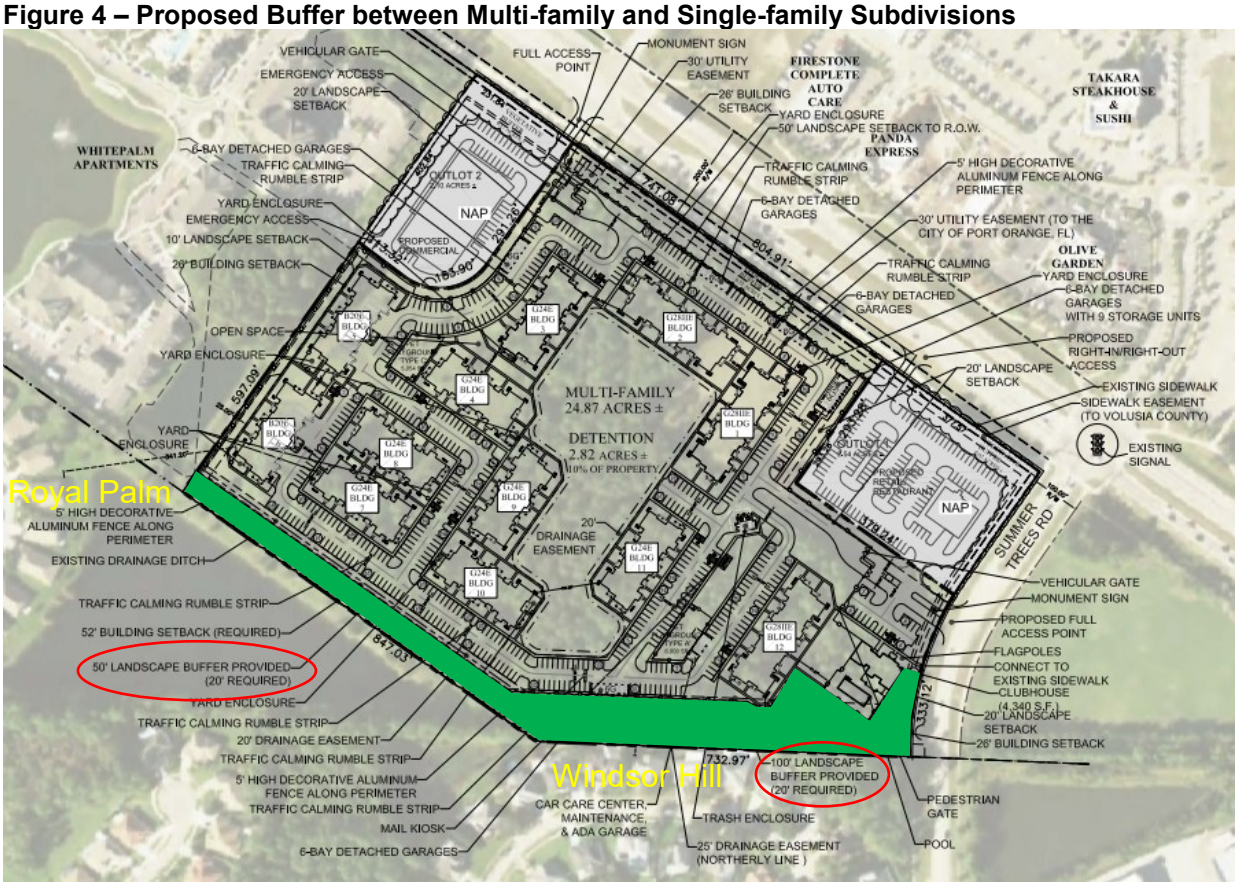
According to the LDC, the buffer and screening requirement in any other zoning district can be modified by the administrative official in situations where the adjoining development is separated from one another by, but not limited to, any of the following: a retention pond, a common area, a golf course, a soccer/ball field, a significant change in slope, a bufferyard design type in excess of that which is required by code, or an existing fence/wall or living wall of a character which complies with the requirements of this code [LDC, Ch. 13, Sec. 3(a)(3)].

The developer for the proposed multi-family development adjacent to Whitepalm is proposing to provide a 50’ natural buffer adjacent to the retention pond west of the site and a 100’ natural buffer adjacent to the Windsor Hill subdivision along with an aluminum

picket fence for security. The buffers proposed exceed the 20' buffer required by the LDC between a multi-family development and a single-family subdivision.

Applicant Justification: To demonstrate that a 50' buffer can provide the necessary screening, the applicant conducted a "balloon survey" to collect a series of adjacent site buffer photographs. The purpose of the survey was to determine visibility of the proposed development from adjoining properties. The survey was conducted during the winter time when visibility should be the highest due to the lack of leaves on deciduous vegetation. Heights of proposed buildings were determined and a group of 3 highly reflective mylar balloons were used for reference (Exhibit 2). According to the study provided by the applicant, the results of the balloon survey demonstrate that the 50' and 100' wide buffers consisting of existing vegetation will provide sufficient screening, as the berm and fence would, from adjacent properties.

Figure 4 – Proposed Buffer between Multi-family and Single-family Subdivisions



3) *Minimum Living Area*

The proposed amendment by the applicant also includes a change to the minimum living area for a multi-family unit from 600 square-feet to 500 square-feet.

Applicant Justification: According to the applicant, studio apartments ranging in size from 500 to 600 SF have a higher than average occupancy rate. The applicant also stated that rent growth rates are significantly higher than market rate for these studio apartments, which indicates a higher demand for this type of living space. Studies show that the target

market for these units is predominantly young professional singles, typically under 30 years of age, but that couples and older single empty nesters are also interested in these types of units. The appeal of these units is largely about economics and location. These renters are looking for a living space that is sufficient for them, at a price point they can afford, in a development with amenities (fitness center, pool, clubhouse), located near grocery stores, restaurants, entertainment, and work/education institutions.

The minimum living area for the R-3H (High density multi-family residential) zoning district, which is the most comparable zoning district, also has a minimum living area of 600 square-feet. Nearby cities breakdown the minimum living area based on the number of bedrooms (Table 1). The requested 500 SF minimum living area is comparable to the minimum living area for multi-family dwelling units in nearby cities.

Table 1. Multi-family Minimum Living Area Comparison

City	No. of Bedrooms	Minimum Living Area
Proposed PC-A Workplace District Amendment	n/a	500 SF
Port Orange (PC-A, R-3L, R-3M, and R-3H zoning)	n/a	600 SF
New Smyrna Beach	1 Bedroom 2 Bedrooms 3 Bedrooms	450 SF 550 SF 700 SF
Daytona Beach	1 Bedroom 2 Bedrooms 3 Bedrooms ≥4 Bedrooms	450 SF 550 SF 700 SF 900 SF
DeLand	Efficiency 1 Bedroom 2+ Bedrooms	425 SF 575 SF 725 SF, plus 150 SF per each additional bedroom
Ormond Beach	1 Bedroom 2 Bedrooms 3 Bedrooms Each additional bedroom	750 SF 900 SF 1,050 SF 150 SF

CONSISTENCY WITH THE COMPREHENSIVE PLAN

The proposed amendment is consistent with the City's Comprehensive Plan and the purpose and intent of the *Planned Community-Westside* Future Land Use designation. The City's Comprehensive Plan states that the *Planned Community-Westside*, is intended to create a mixed-use, pedestrian-friendly community that increases the available inventory of commercial, industrial, and institutional land uses by integrating them with residential uses, minimizes automobile trips, and promotes environmental protection. The density and type of residential proposed, limitation on the number of multifamily units allowed in the Workplace District (i.e. one additional development), as well as the locational criterion, are consistent with and further promote the goal of creating a mixed-used area that minimizes automobile trips by:

1. Allowing multifamily developments within walking and biking distance of employment and shopping centers;
2. Providing an opportunity for multifamily development to be a transitional use between the commercial and industrial uses allowed in the Workplace District and the single-family subdivisions on the west side of Williamson Blvd.; and

3. Further encouraging the development of additional employment and shopping centers within the Workplace District by allowing for an additional site to be developed with a multifamily development, creating more housing options for employees and customers of these centers.

RECOMMENDATION

Staff recommends **approval** of the request to amend the Land Development Code to allow an increase in the percentage of the PC-A Workplace District that may be developed with multi-family residential uses, amend the landscape buffer requirements for a multi-family development abutting single-family residential zoned property, and change the minimum living area requirement for a multi-family dwelling unit.

ATTACHMENTS

Exhibit 1 – Traffic Analysis
Exhibit 2 – Balloon Survey

EXHIBIT 1

LTG Engineering & Planning

RECEIVED
2-14-18
CITY OF PORT ORANGE
Community Development

REVISED

Ref: 4446.01

TECHNICAL MEMORANDUM

To: Robert A. Merrell III, Cobb Cole

From: Matthew West, AICP

Subject: Land Development Code Amendment

Date: February 9, 2018

INTRODUCTION

LTG, Inc. (LTG) has been retained by Continental Properties to prepare a traffic analysis in support of a Land Development Code Amendment in the City of Port Orange, FL. The Land Development Code Amendment will convert approximately 24.87 acres of Workplace District land in the Planned Community – Agriculture District from commercial retail to high density residential. This would increase the percentage of residential land in the Workplace District from 7 percent to 13 percent. The subject property which will be converted from Commercial to Residential is located at the northwest corner of Williamson Boulevard and Summer Trees Road.

The methodology and procedures used in this analysis are consistent with the guidelines for the City of Port Orange, and the River to Sea Transportation Planning Organization's (R2CTPO) Transportation Impact Analysis Guidelines.

TRIP GENERATION FOR THE EXISTING COMMERCIAL USE AND THE PROPOSED RESIDENTIAL USE

The trip generation for the maximum development scenarios of both an existing commercial use and the proposed residential use were calculated using the nationally accepted trip generation software, the *TripGen (*10th Edition), prepared by the Institute of Transportation Engineers (ITE).

The existing commercial use analysis is based on a maximum floor area ratio (FAR) of 1.0. Using this FAR, the maximum development scenario under the existing commercial use is 1,083,337 square feet of shopping center use. As indicated in Table 1, the maximum development of the property under commercial use would generate 3,168 p.m. peak-hour trips.

Next, the maximum development potential of the requested residential use was calculated. As proposed, the maximum number of dwelling units permitted on the property sixteen (16) dwelling units per acre. This density cap yields a maximum of 397 dwelling units. As indicated in Table 1, the proposed maximum residential development program produces 175 p.m. peak-hour trips.

Pass-by capture was calculated for the existing commercial development program. The pass-by percentage of 34% per the ITE Trip Generation Handbook, 3rd Edition was applied to the shopping land use. The pass-by capture is limited to fourteen (14) percent of the adjacent roadway volume which in this case is Williamson Boulevard. Therefore, the maximum pass-by capture utilized for the p.m. peak-hour is 240 trips based on the 2016 Volusia County counts. As indicated in Table 1, the resulting trip generation associated with the existing commercial use is 2,929 net new external p.m. peak-hour trips.

Table 1
P.M. Peak-Hour Trip Generation Comparison
Continental Properties – LDC Amendment

Scenario	Land Use	Land Use Code	Trip Rate Equation	Size	Units	Percent Entering	Percent Exiting	Trips Entering	Trips Exiting	Total Trips	Pass-by Trips			New External Trips		
											Enter	Exit	Total	Enter	Exit	Total
Proposed Use	Multifamily (mid-rise)	221	T=0.44(X)	397	DU	61%	39%	107	68	175	0	0	0	107	68	175
Existing Use	Commercial	820	Ln(T)=0.74 Ln(X)+2.89	1083	KSF	48%	52%	1,521	1,648	3,168	115	125	240	1,406	1,523	2,929
													Difference	-1,299	-1,455	-2,754

The net change between the proposed residential use and the existing commercial use is determined as the trips generated by the commercial subtracted from the trips generated by the proposed residential use. The proposed LDC amendment will reduce the potential net p.m. peak-hour trips by 2,754 when compared to the existing program.

CONCLUSION

The study was conducted to evaluate the impact the proposed LDC amendment would have on area roadways. Based on the preceding analysis, there will be no net increase in traffic over what is currently allowed by the City's LDC. Therefore, this LDC amendment is recommended for adoption. Concurrency and any required mitigation to support a proposed development plan will be assessed in greater detail during the final development permitting process.

I affirm, by affixing my signature below, that the findings contained herein are, to my knowledge, accurate and truthful and were developed using current procedures standard to the practice of professional planning.

Name: Matthew West, AICP

Signature:

Date: February 9, 2018

LTG Engineering & Planning

ZEVCOHEN & ASSOCIATES INC

300 Interchange Blvd., Suite C
Ormond Beach, FL 32174
386-677-2482 · Fax: 386-677-2505
www.ZevCohen.com

EXHIBIT 2

MEMORANDUM

RECEIVED
2-14-18
CITY OF PORT ORANGE
Community Development

REVISED

To: **Elizabeth Adler**

Cc: **File**

From: **Nate Goddard**

Date: **February 12, 2018**

Re: **Springs at Port Orange Adjacent Site Buffer Exhibit**

Field Notes

ZC # 17067

A survey to collect a series of adjacent site buffer photographs was conducted on the Springs of Port Orange Property located off of Williamson Ave in Port Orange Florida on February 08, 2018. The purpose of the survey was to determine view scape and visibility of proposed development from adjoining properties. The survey was conducted during winter time when visibility should be the highest due to the lack of leaves on deciduous vegetation.

Heights of proposed buildings were determined and a group of 3 highly reflective mylar balloons were used as for reference. Included are photos detailing the Photo Station from which each image was taken, and the Balloon Station at which the survey balloon was positioned.

Balloon Survey Map
Summer Tree Apartments
Port Orange, Florida

Date Saved: 2/12/2018 Created by: ereyes
Path: Z:\PROJECTS\2017\17067 - Springs at Port Orange by Continental\Balloon Survey Map_SitePlan.mxd

230 115 0 230 Feet

ZEVCOHEN & ASSOCIATES INC
300 Interchange Blvd
Ormond Beach, FL 32174
ph 386-677-2482

300 Interchange Blvd., Suite C
Ormond Beach, FL 32174
386-677-2482 • Fax: 386-677-2505
www.ZevCohen.com

Photo Station: 01 Balloon Station: 01 Balloon Height: 20 feet Visibility: Majority Obstructed

Photo Station 01: Balloon Station 01 could be partially seen through trees, but only when the wind blew. The majority of the balloon was obstructed from view.

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Ormond Beach, FL 32174
386-677-2482 • Fax: 386-677-2505
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Photo Station: 02 Balloon Station: 01 Balloon Height: 20 feet Visibility: None

Photo Station 02: Balloon Station 01 was not visible due to excessive vegetation obstructing the view.

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Ormond Beach, FL 32174
386-677-2482 • Fax: 386-677-2505
www.ZevCohen.com

Photo Station: 03 Balloon Station: 01 Balloon Height: 20 feet Visibility: None

Photo Station 03: Balloon Station 01 was not visible from due to excessive vegetation.

300 Interchange Blvd., Suite C
Ormond Beach, FL 32174
386-677-2482 • Fax: 386-677-2505
www.ZevCohen.com

Photo Station: 03 Balloon Station: 02 Balloon Height: 30 feet Visibility: Clear

Photo Station 03: The Balloon Station 02 was clearly visible.

300 Interchange Blvd., Suite C
Ormond Beach, FL 32174
386-677-2482 • Fax: 386-677-2505
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Photo Station: 04 Balloon Station: 02 Balloon Height: 30 feet Visibility: Clear

Photo Station 04: Balloon Station 02 was clearly visible.

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Ormond Beach, FL 32174
386-677-2482 • Fax: 386-677-2505
www.ZevCohen.com

Photo Station: 04 Balloon Station 03 Balloon Height: 30 feet Visibility: Majority Obstructed

Photo Station 04: Balloon Station 03 could be seen through the vegetation only when the wind blew.

300 Interchange Blvd., Suite C
Ormond Beach, FL 32174
386-677-2482 • Fax: 386-677-2505
www.ZevCohen.com

Photo Station: 05 Balloon Station: 04 Balloon Height: 30 feet Visibility: Majority Obstructed

Photo Station 05: Balloon Station 03 could be seen through the vegetation 05 only when the wind blew.

300 Interchange Blvd., Suite C
Ormond Beach, FL 32174
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www.ZevCohen.com

Photo Station: 06 Balloon Station: 04 Balloon Height: 30 feet Visibility: None

Photo Station 06: Balloon Station 04 was not visible.

Photo Station: 06 Balloon Station: 05 Balloon Height: 30 feet Visibility: None

Photo Station 06: Balloon Station 05 was not visible.

Photo Station: 07 Balloon Station: 05 Balloon Height: 30 feet Visibility: Majority Obstructed

Photo Station 07: Balloon Station 05 was visible from Photo Station 07 when wind blew.

Photo Station: 08 Balloon Station: 05 Balloon Height: 30 feet Visibility: Majority Obstructed

Photo Station 08: Balloon Station 05 was visible from Photo Station 08 only when wind blew.

Photo Station: 09 Balloon Station: 05 Balloon Height: 30 feet Visibility: None

Photo Station 09: Balloon Station 05 was not visible due to excessive vegetative obstruction.

300 Interchange Blvd., Suite C
Ormond Beach, FL 32174
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Photo Station: 09 Balloon Station: 06 Balloon Height: 30 feet Visibility: None

Photo Station 09: Balloon Station 06 was not visible due to vegetative obstruction.

300 Interchange Blvd., Suite C
Ormond Beach, FL 32174
386-677-2482 • Fax: 386-677-2505
www.ZevCohen.com

Photo Station: 10 Balloon Station: 06 Balloon Height: 30 feet Visibility: Partially Obstructed

Photo Station 10: Balloon Station 06 was visible was partially obstructed by vegetation.

Photo Station: 11 Balloon Station: 06 Balloon Height: 30 feet Visibility: Visible

Photo Station 11: Balloon Station 06 was clearly visible.

STAFF REPORT
CASE NO. 18-25000003
LDC Amendments/Chapter 17, Section 1

REQUEST:	To amend the Land Development Code (LDC) to codify the regulations for interim agriculture uses
APPLICANT:	City of Port Orange
STAFF RECOMMENDATION:	**Approval**
STAFF CONTACT:	Penelope Cruz, Principal Planner (386) 506-5671
PLANNING COMMISSION DATE:	March 22, 2018

SUMMARY OF PROPOSED AMENDMENTS

The proposed amendment is intended to codify the City's policy for interim agriculture uses on properties rezoned to a non-agriculture zoning for future development. The City's policy has been to allow existing agriculture uses to continue on a property that has been rezoned to a non-agricultural zoning district for future development. Said agricultural use shall cease after approval of a final site plan and/or subdivision. This would apply to all zoning districts listed in the LDC.

The proposed amendment adds the following text to Chapter 17, Section 1 of the LDC, to codify this policy and provide better transparency and predictability for land owners and the general public.

> *Interim permitted use for agriculture uses*. Any property that is in agricultural use at the time of rezoning shall be allowed to continue said agriculture uses, including Agriculture: field crops/wholesale nurseries and/or Agriculture: pasture/forestry, as an interim use on land that has not received final site plan or subdivision approval. However, livestock feeding pens, livestock feed lots, and poultry operations to include any feathered animals (e.g. chickens, emus, ducks, ostriches, etc.) are prohibited within 1,000 feet of proposed or existing development. Agricultural uses on any portion of land rezoned to a non-agriculture zoning category that has received final site plan and/or subdivision approval shall cease within 90 days after such approval.

CONSISTENCY WITH THE COMPREHENSIVE PLAN

The proposed amendment is generally consistent with the pertinent Goals, Objectives, and Policies of the City's Comprehensive Plan. Objective 3.7 of the Future Land Use Element of the Comprehensive Plan includes policies regarding allow a reasonable interim use of existing agricultural land and support of the State's preferential property tax treatment for agricultural lands.

RECOMMENDATION

Staff recommends **approval** of the request to amend Chapter 17, Section 1 of the Land Development Code to codify the regulations for interim agriculture uses.

STAFF REPORT
SECOND AMENDMENT TO THE MDA & CDP FOR THE RESTATED NOVA DEPOT PCD
CASE NO. 18-40000001

Request:	Amend the Master Development Agreement (MDA) and Conceptual Development Plan (CDP) for the Nova Depot Planned Commercial Development (PCD)
Location:	3730 Nova Rd.
Owner:	Nova Port Orange, LLC
Applicant:	Mike Woods, Cobb Cole
Staff Recommendation:	**Approval**
Staff Contact:	Gwen Perney, Planner (386) 506-5673
Planning Commission Date:	March 22, 2018

DISCUSSION:
The proposed Second Amendment to the Restated Master Development Agreement (MDA) and Conceptual Development Plan (CDP) for the Nova Depot Planned Commercial Development (PCD) is to provide the regulatory framework to create one new commercial lot. The development proposal is to subdivide Lot 2 (the Family Dollar retail store) into two lots (Lot 2 and 2A). If approved, Lot 2A would remain vacant until it is developed and at this time a tenant has not been identified. The location of the proposed new lot (Lot 2A) and the modified Lot 2 is shown in Figure 1 below.

Figure 1. Project Location

In 2013, the Restated MDA and CDP were approved as a 3-lot commercial subdivision. According to the applicant (Exhibit “A”), as the lots developed within the PCD, less acreage was required for development of the commercial uses on the lots than initially anticipated (see Tables 1 and 2 below). The Amendment states a maximum of four lots will be developed within the PCD (Exhibit “B”).

Table 1. Existing Lot Sizes

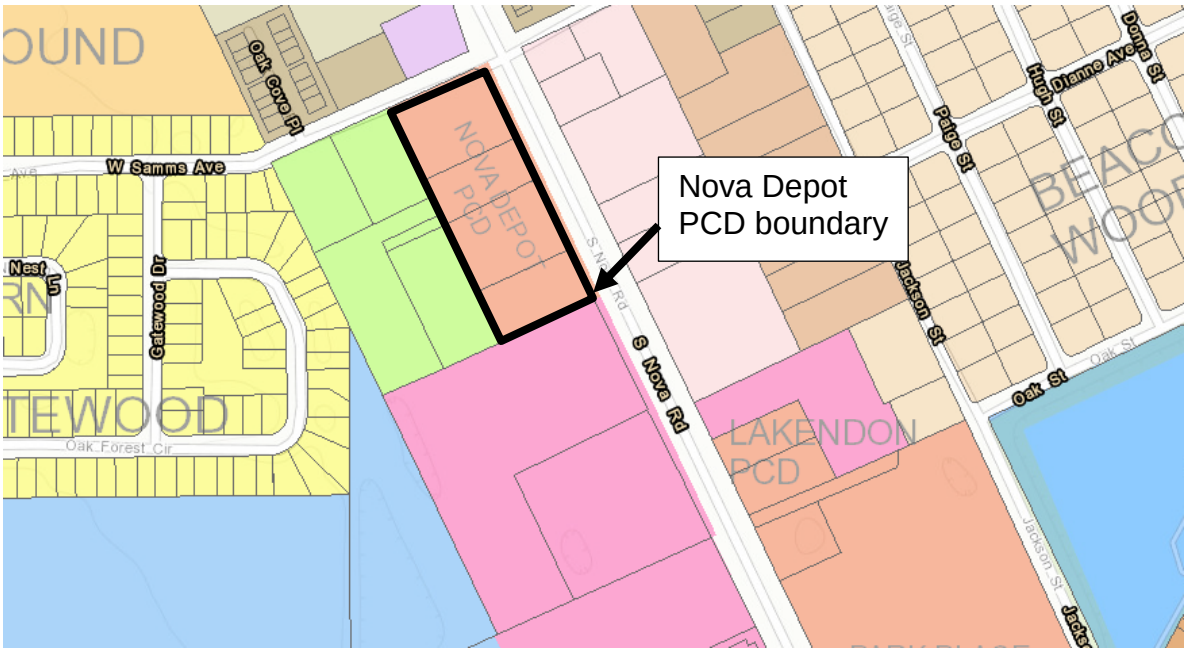
	Tenant	Area (sq. ft.)
Lot 1	O'Reilly Auto Parts	48,352
Lot 2	Family Dollar	74,916
Lot 3	Waffle House	35,025

Table 2. Proposed Lot Sizes

	Tenant	Area (sq. ft.)
Lot 1	O'Reilly Auto Parts	48,352
Lot 2	Family Dollar	44,864
Proposed Lot 2A	Vacant	30,052
Lot 3	Waffle House	35,025

If the Amendment is approved, Lot 2 will contain the Family Dollar building along with all of its required parking, stormwater infrastructure, landscaping, and other site improvements. The proposed Lot 2A is currently part of the Family Dollar lot.

Lot 2A will be developed with a commercial tenant building and will be required to be developed according to the existing site development requirements in the Restated Nova Depot MDA and Land Development Code (LDC) including parking, stormwater, landscaping, utilities, and traffic impacts. The lot will be accessed from the existing driveways on Nova Road and Samms Avenue. Cross-access easements already exist as an internal driveway network for vehicles and pedestrians to move between the lots. As part of the site plan for Waffle House (Lot 3) the developer extended the access drive to the south end of the PCD property for future connection to the property to the south. To complete the connection, the adjacent property owner will be required to connect to the existing driveway on the PCD property and enter into a cross access agreement with the adjoining property owner at that time.



The existing permitted uses allowed in PCD that would apply to Lot 2A include: restaurants, retail sales and services, personal services, professional and medical offices, business services, financial services, banks, and office supplies. These uses would allow a variety of tenants to occupy the new lot.

The following is an analysis of the requested deviation from the Land Development Code (LDC) or Nova Depot MDA proposed in the Second Amendment.

Lot Size: The proposed MDA Amendment provides the dimensional requirements for the proposed lot. The building setback, lot coverage, open space, and lot width requirements in the existing Restated MDA will apply to Lot 2A. As part of the proposed amendment, the applicant is proposing a minimum 30,000 square foot lot area. The minimum lot area in the current MDA is 35,000 square feet. The proposed lot area for Lot 2A is comparable with the minimum lot area in the City's other similar commercial zoning districts.

Table 2. Dimensional Requirement Comparison

	Minimum Lot Area	Maximum Building Coverage	Minimum Open Space
Proposed 2nd Amendment	**30,000 SF**	**35%**	**30%**
Current Nova Depot PCD	35,000 SF	35%	30%
Highway Commercial (HC) zoning	30,000 SF	35%	25%
Community Commercial (CC) zoning	22,500 SF	35%	30%

If approved, a site plan will be required for Lot 2A to verify all of the minimum development requirements, building setbacks, open space, building coverage, stormwater, utility connections, parking lot standards, landscape buffers to provide visual screening, and architectural design standards of the LDC and the Nova Depot MDA are met for Lot 2A.

CONSISTENCY WITH THE COMPRHENSIVE PLAN:
The subject property is designated *Office/Residential Transition* on the City's Future Land Use (FLU) Map. The original PCD zoning and Restated MDA were found to be consistent with the City's Comprehensive Plan when it was approved in 2006. The proposed Amendment does not change the FLU designation for the PCD property and is consistent with the general intent of the Comprehensive Plan.

SUMMARY OF POLICY ISSUE:
As part of its review of the Amendment proposal, the Planning Commission and City Council will need to consider the following deviations from the LDC or Restated Nova Depot MDA:

1. Allow a minimum lot size of 30,000 square feet for Lot 2A

RECOMMENDATION:
Staff recommends **approval** of the Second Amendment to the Restated Nova Depot PCD Master Development Agreement and Conceptual Development Plan, subject to:

1. Resolution of remaining comments prior to City Council; and
2. Review by the City Attorney as to legal form and content

ATTACHMENTS:
1. Exhibit “A” – Justification letter from applicant
2. Exhibit “B” – Second Amendment to the Nova Depot MDA and CDP

EXHIBIT "A"

William M. Cobb
(1881-1939)
Thomas T. Cobb
(1916-2004)
W. Warren Cole, Jr.
(1926-2008)
Rhoda Bess Goodson
(1950-2017)

Scott W. Cichon
Robert A. Merrell III
John P. Ferguson
Mark A. Watts
Heather Bond Vargas
Kelly Parsons Kwiatek
Kathleen L. Crotty
Andrea M. Kurak
Matthew S. Welch
Michael O. Sznapstajler

COBB COLE
Attorneys at Law
Since 1925

Daytona Beach • DeLand

351 East New York Avenue
Suite 200
DeLand, Florida 32724
(386) 736-7700
Fax (386) 785-1549
CobbCole.com

Michael J. Woods
Pamela R. Masters
Robert E. Doan
Holly Woersching
Rachel I. Pringle
Kelsie W. Willett
Erica C. Johnson

OF COUNSEL
Thomas J. Leek
Harold C. Hubka
Larry D. Marsh
Maja Sander Bowler
William A. Parsons
Peter R.J. Thompson*

RETIRED
Thomas S. Hart

*Practice limited to federal immigration matters

March 15, 2018

VIA EMAIL AND MAIL
gperney@port-orange.org

Gwen Perney, Senior Planner
City of Port Orange
Community Development
1000 City Center Circle
Port Orange, FL 32129

Re: PCD Amendment/Nova Depot PCD- 2nd Amendment
3730 Nova Rd. Case No. 18-40000001
Parcel ID # 6337-01-25-0015

Dear Gwen,

As you know, this firm has the pleasure of representing Nova Port Orange, LLC with respect to the development of its property located generally at 3730 Nova Road in Port Orange, Florida. At present, we are asking for an amendment to the PCD to effectively create a fourth parcel for development purposes. As part of this application, we are requesting a reduction in the minimum lot size from 35,000 square feet to 30,000 square feet and also seeking to permit the project via a minor subdivision rather than a full plat.

When first permitted, the PCD anticipated 3 lots but was well under the allowable density and intensity permitted by the underlying land use. The projects have developed thus far with smaller footprints than originally anticipated and as a result, we can now include a fourth lot while remaining within the thresholds established by the land use and the PCD itself. Essentially, by developing with a smaller footprint, we have left room to fill in a fourth lot. Moreover, since the site has been fully engineered at this point, and necessary cross access easements have been provided, we are now able to ensure that all necessary services can be provided to the new lot without going through the formal platting process. Again, this use of the minor subdivision process, utilizing shared design stormwater and cross access easements, was what was contemplated with the original PCD.

COBB COLE
Attorneys at Law
Since 1925

Please do not hesitate to contact me if you have any further questions.

Sincerely,

Michael J. Woods

Michael J. Woods (LF)
Michael.Woods@CobbCole.com
Fax (386) 944-7968

MJW:lgf

THE FIRST AMENDMENT TO THE RESTATED FIRST AMENDMENT TO THE MASTER DEVELOPMENT AGREEMENT NOVA DEPOT PLANNED COMMERCIAL DEVELOPMENT (LOT 2 SPLIT AND RELATED REVISIONS)

This First Amendment to the Restated First Amendment to the Master Development Agreement Nova Depot Planned Commercial Development ("First Amendment MDA"), by and between Nova Port Orange LLC, a Florida limited liability company, as owner of the property described herein (the "Developer") and the City of Port Orange, a Florida municipal corporation (the "City") hereby covenant and agree to bind their successors and assigns as follows:

WITNESSETH:

WHEREAS, Nova Port Orange, LLC is the Owner of approximately 1.72 acres of property ("Lot 2 Property"), more particularly described in Exhibit "A", attached hereto and made a part hereof by reference; and

WHEREAS, the City, All Aboard Storage, LLC, and R.K.M. Development Corp. previously entered into an agreement and covenant to bind their successors and assigns to the terms and provisions of a development agreement entitled Restated First Amendment to the Master Development Agreement – Nova Depot Planned Commercial Development ("Restated MDA"), recorded at Book 6929, Page 3542, Public Records of Volusia County, Florida; and

WHEREAS, the Developer is desirous of subdividing the Lot 2 Property into two (2) lots, as shown on the Amended CDP, as defined hereinbelow; and

WHEREAS, the City is agreeable to the terms and provisions of this First Amendment MDA to allow modifications of the already approved Restated MDA as more specifically provided herein below; and

WHEREAS, the Developer is the owner of the Lot 2 Property which is the only property impacted by this First Amendment MDA; and

WHEREAS, the City and the Developer wish to amend the Restated MDA as applied to the Lot 2 Property to allow for the following:

1. Provide for a division of Lot 2 Property in order to create two (2) lots, being identified as Lot 2 and Lot 2A.
2. Provide for an amended CDP and new lot dimensions.

NOW, THEREFORE, the City and the Developer hereby agree as follows:

1. The premises stated above are true and correct and form a material part of this First Amendment MDA.

2. Paragraph 2, "DEVELOPMENT AGREEMENT AND CONCEPTUAL DEVELOPMENT PLAN" of the Restated MDA as applied to Lot 2 Property which references and incorporates the amended CDP as Exhibit "A" and the Amended CDP as applied to Lot 2 Property is hereby further amended to reflect the modifications shown by this First Amendment MDA Exhibit "B", attached hereto and incorporated herein by reference. Furthermore, Paragraph 2 of the Restated MDA, as applied to Lot 2 Property is hereby further amended as follows:

> Development of the Lot 2 Property shall be controlled by the terms and provisions of the Restated MDA, as amended by this First Amendment MDA and the Amended CDP referenced herein as Exhibit "B", and collectively may be referred to as the "Plan."

3. Paragraph 3.A., "DEVELOPMENT PLAN" of the Restated MDA as applied to Lot 2 as originally described in the Restated MDA as now described as Lots 2 and 2(A) is hereby further amended as follows:

> A. Development of the Lot 2 Property shall be controlled by the terms and provisions of the Restated First Amendment to the Master Development Agreement Nova Depot Planned Commercial Development ("Restated MDA") as amended by this First Amendment to the Restated First Amendment ot the Master Development Agreement Nova Depot Planned Commercial Development MDA ("First Amendment MDA") and to the extent not in conflict with the Restated MDA and the First Amendment MDA, the Port Orange Land Development Code (the "LDC").

4. Paragraph 3.B., "DEVELOPMENT PLAN" of the Restated MDA as applied to Lot 2 as originally described in the Restated MDA as now described as Lots 2 and 2(A) is hereby further amended as follows:

> B. The Lot 2 Property shall be subdivided pursuant to the City's minor subdivision process in accordance with the LDC. The parties affirmatively recognize and approve that the utilization of this process wil result in the Lot 2 Property being split into two (2) lots and that, as a result, the Nova Depot Planned Commercial Development shall consist of a maximum of four (4) lots. The Amended CDP, attached hereto, reflects the new alignment. The two lots created by the minor subdivision shall be referred to herein as Lot 2 and Lot 2A, as more particularly described in Exhibit "C", attached hereto and incorporated herein.

5. Paragraph 3, "DEVELOPMENT PLAN" of the Restated MDA as applied to Lot 2 as originally described in the Restated MDA as now described as Lots 2 and 2(A) is hereby further amended to add a new subparagraph as follows:

C. Developer, its successor and assigns, shall provide the standard lot easements for drainage and utility provisions to each proposed lot within the Lot 2 Property. Additionally, a recommended cross access and drainage easement for the Lot 2 Property is included in Exhibit "B". In the case of conflict between any textual provision of the Restated MDA, as amended by this First Amendment MDA and the Amended CDP, the textual provision shall govern. If the Restated MDA, as amended the Amended CDP, fail to address a particular subject or requirement, the requirement of the applicable City ordinance(s) in effect at the time of development plan approval shall control. Failure of either to address a particular permit, condition, term or restriction shall not relive the developer of the necessity of complying with the law governing said permitting requirements, conditions, terms or restrictions.

6. Paragraph 4, "MAINTENANCE OF AMENITIES" of the Restated MDA as applied to Lot 2 as originally described in the Restated MDA as now described as Lots 2 and 2(A) is hereby further amended as follows:

Developer, its successors or assigns, shall be the entity responsible for the continued maintenance of the Lot 2 Property. Developer shall impose Covenants and Restrictions upon both lots to ensure cross access between the 2 lots within the Lot 2 Property as well as the two adjacent lots to the north and south of the Lot 2 Property, all of which are included within the Nova Depot Planned Commercial Development. Each lot owner shall be required to maintain their own driveways/parking and landscaping and site screening at their sole expense unless otherwise provided in the Covenants and Restrictions prepared by the Developer.

7. Paragraph 6.B., "MINIMUM DIMENSIONAL REQUIREMENTS" of the Restated MDA as applied to Lot 2 as originally described in the Restated MDA as now described as Lots 2 and 2(A) is hereby further amended as follows:

Minimum Lot Size	30,000 square feet

All other provisions of Paragraph 6.B. of the Restated MDA shall otherwise remain in full force and effect.

8. Paragraph 15.A., "EFFECTIVE DATE AND EXPIRATION" of the Restated MDA as applied to Lot 2 as originally described in the Restated MDA as now described as Lots 2 and 2(A) is hereby further amended as follows:

> A. This First Amendment MDA shall be effective upon recording by the City at the Developer's expense in the Public Records of Volusia County, Florida, not later than thirty (30) days from the date the City Council approves this First Amendment MDA. After the effective date, the restrictions on use and development imposed by this First Amendment MDA shall be binding upon all successors in interest in the Lot 2 Property, unless and until the parties mutually agree to alter or eliminate such restrictions in the course of the City's actions as zoning authority or until this First Amendment MDA expires.

9. Paragraph 15.D., "EFFECTIVE DATE AND EXPIRATION" of the Restated MDA as applied to Lot 2 as originally described in the Restated MDA as now described as Lots 2 and 2(A) is hereby further amended to add a new paragraph as follows:

> D. In contemplation of this First Amendment MDA and in recognition of the timing the rezoning process required, Developer did request and City did provide approval for the Volusia County Property Appraiser to create two Tax Parcel ID Numbers for the Lot 2 Property. The Tax Parcel ID Numbers were generated and conform with the lot split contemplated herein for Lot 2 – Family Dollar and Lot 2A – Future Development. As a condition of the City's approval of this Tax Parcel ID Number request, Developer was required to execute a Unity of Title Agreement with the City which affirmatively stated that the Lot 2 Property would remain as a single parcel until such time as this rezoning and the related minor subdivision was approved by the City Council. Upon the effective date of this Second Amendment, the Unity of Title Agreement will be deemed to be of no further effect by the Developer and the City.

10. Paragraph 17, "COMPLETE AGREEMENT" of the Restated MDA as applied to Lot 2 as originally described in the Restated MDA as now described as Lots 2 and 2(A) is hereby further amended as follows:

> All the provisions of the Restated MDA not in conflict herewith shall remain in full force and effect and shall be supplemented for the matters specifically amended herein by this First Amendment MDA. The Restated MDA shall survive the execution of this First Amendment MDA.

IN WITNESS WHEREOF, the parties hereto attach their hand and seals on the dates set forth below:

WITNESSES:

OWNER:

NOVA PORT ORANGE, LLC

A Florida limited liability company

_____

By: _____

Printed Name: _____

William C. Lloyd, president

_____

Printed Name: _____

State of Florida

County of _____

The foregoing instrument was acknowledged before me this _____ day of _____, 2018 by William C. Lloyd, as president of NOVA PORT ORANGE, LLC, a Florida limited liability company. He is personally known to me or has produced _____ as identification.

NOTARY PUBLIC:

_____

Notary Public, State of Florida at Large

Commission Number: _____

WITNESSES:

THE CITY OF PORT ORANGE, a Florida municipal corporation

_____

By: _____

Printed Name: _____

Mayor Donald O. Burnette

_____

Printed Name: _____

_____

Attest: _____

Printed Name: _____

City Clerk Robin L. Fenwick

_____

Printed Name: _____

_____

State of Florida

County of Volusia

The foregoing instrument was acknowledged before me this _____ day of _____, 2018 by Mayor Donald O. Burnette and City Clerk Robin L. Fenwick of the City of Port Orange, a Florida municipal corporation, on behalf of the City. They are personally known to me or has produced _____ as identification.

NOTARY PUBLIC:

_____

Notary Public, State of Florida at Large

Commission Number: _____

Exhibit "A"

Legal Description for Lot 2

OVERALL REAL PROPERTY DESCRIPTION

THE EAST 1/2 OF LOT 1, BLOCK 25, MAP OF DUNLAWTON, AS RECORDED IN DEED BOOK "M", PAGE 187, AND RE-RECORDED AS A TRUE COPY IN MAP BOOK 14, PAGES 82 AND 83 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, LESS AND EXCEPT THAT PORTION TAKEN FOR THE RIGHT OF WAY OF NOVA ROAD AND LESS AND EXCEPT THAT PORTION TAKEN FOR RIGHT OF WAY FOR SAMMS AVENUE, AS DESCRIBED IN OFFICIAL RECORDS BOOK 6896, PAGE 225, SAID PUBLIC RECORDS AND LESS AND EXCEPT THE FOLLOWING DESCRIBED PARCEL:

A PORTION OF THE EAST 1/2 OF LOT 1, BLOCK 25, MAP OF DUNLAWTON, AS RECORDED IN DEED BOOK "M", PAGE 187, AND RE-RECORDED AS A TRUE COPY IN MAP BOOK 14, PAGES 82 AND 83 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, IN SECTION 37, TOWNSHIP 16 SOUTH, RANGE 33 EAST AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF THE EAST 1/2 OF SAID LOT 1, BLOCK 25, MAP OF DUNLAWTON; THENCE RUN N25°19'48"W ALONG THE WEST LINE OF SAID EAST 1/2, A DISTANCE OF 445.10 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE ALONG SAID WEST LINE N25°19'48"W, 191.01 FEET TO THE SOUTH RIGHT OF WAY LINE OF SAMMS AVENUE AS DESCRIBED IN OFFICIAL RECORDS BOOK 6896, PAGE 225, OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA; THENCE N65°15'21"E ALONG SAID SOUTH RIGHT OF WAY LINE, 230.50 FEET TO THE WEST RIGHT OF WAY LINE OF NOVA ROAD; THENCE S89°49'40"E ALONG SAID WEST RIGHT OF WAY LINE, 16.11 FEET; THENCE CONTINUE ALONG SAID WEST RIGHT OF WAY LINE S28°00'33"E, 179.67 FEET; THENCE S65°15'21"W, 243.92 FEET TO THE POINT OF BEGINNING.

AND LESS AND EXCEPT THE FOLLOWING DESCRIBED PARCEL:

A PORTION OF THE EAST 1/2 OF LOT 1, BLOCK 25, MAP OF DUNLAWTON, AS RECORDED IN DEED BOOK "M", PAGE 187, AND RE-RECORDED AS A TRUE COPY IN MAP BOOK 14, PAGES 82 AND 83 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, IN SECTION 37, TOWNSHIP 16 SOUTH, RANGE 33 EAST AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE SOUTHWEST CORNER OF THE EAST 1/2 OF SAID LOT 1, BLOCK 25, MAP OF DUNLAWTON; THENCE RUN N25°19'48"W ALONG THE WEST LINE OF SAID EAST 1/2, A DISTANCE OF 141.02 FEET; THENCE N65°37'59"E, 247.57 FEET TO THE WEST RIGHT OF WAY LINE OF NOVA ROAD; THENCE ALONG SAID WEST RIGHT OF WAY LINE S28°00'33"E, 141.06 FEET TO THE SOUTH LINE OF SAID LOT 1; THENCE S65°37'59"W, 249.24 FEET TO THE POINT OF BEGINNING.

Exhibit "B"

Conceptual Development Plan for Lot 2 (as revised)

(Includes Cross Access Drainage Easement Illustration)

Exhibit "C"

Legal Description for Two New Lots

Legal Description of Lot 2 – Family Dollar

A PORTION OF THE EAST 1/2 OF LOT 1, BLOCK 25, MAP OF DUNLAWTON, AS RECORDED IN DEED BOOK "M", PAGE 187, AND RE-RECORDED AS A TRUE COPY IN MAP BOOK 14, PAGES 82 AND 83 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, IN SECTION 37, TOWNSHIP 16 SOUTH, RANGE 33 EAST AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

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Legal Description of Lot 2A – Future Development

OVERALL REAL PROPERTY DESCRIPTION

THE EAST 1/2 OF LOT 1, BLOCK 25, MAP OF DUNLAWTON, AS RECORDED IN DEED BOOK "M", PAGE 187, AND RE-RECORDED AS A TRUE COPY IN MAP BOOK 14, PAGES 82 AND 83 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, LESS AND EXCEPT THAT PORTION TAKEN FOR THE RIGHT OF WAY OF NOVA ROAD AND LESS AND EXCEPT THAT PORTION TAKEN FOR RIGHT OF WAY FOR SAMMS AVENUE, AS DESCRIBED IN OFFICIAL RECORDS BOOK 6896, PAGE 225, SAID PUBLIC RECORDS AND LESS AND EXCEPT THE FOLLOWING DESCRIBED PARCEL:

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AND LESS AND EXCEPT THE FOLLOWING DESCRIBED PARCEL:

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Less and Except

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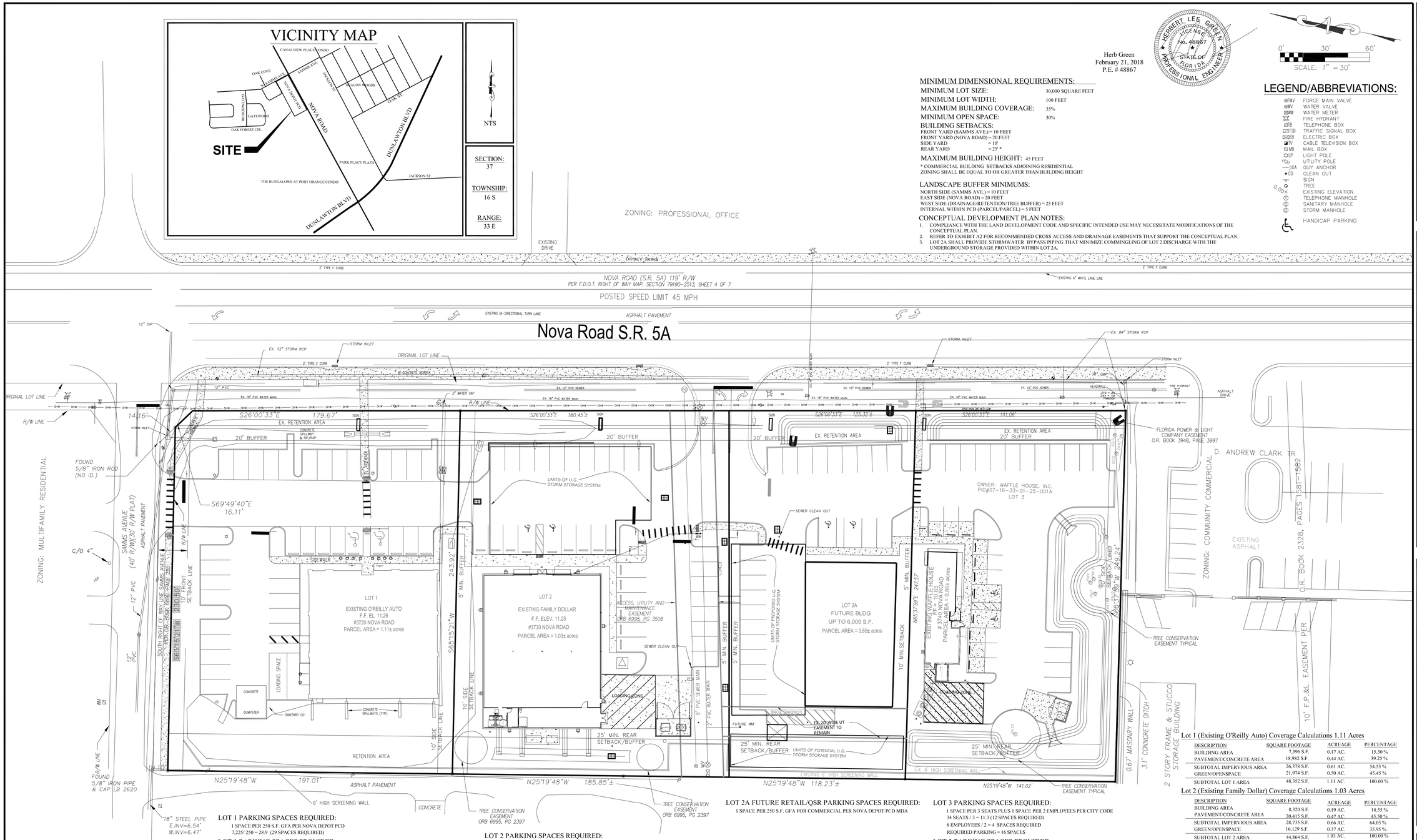


Herb Green
February 21, 2018
P.E. # 48867

HERBERT LEE GREEN LICENSE No. 48867 STATE OF FLORIDA PROFESSIONAL ENGINEER

0' 30' 60'
SCALE: 1" = 30'

MINIMUM DIMENSIONAL REQUIREMENTS:

MINIMUM LOT SIZE:	30,000 SQUARE FEET
MINIMUM LOT WIDTH:	100 FEET
MAXIMUM BUILDING COVERAGE:	35%
MINIMUM OPEN SPACE:	30%

BUILDING SETBACKS:
FRONT YARD (SAMMS AVE.) = 10 FEET
FRONT YARD (NOVA ROAD) = 20 FEET
SIDE YARD = 10'
REAR YARD = 25' *

MAXIMUM BUILDING HEIGHT: 45 FEET

* COMMERCIAL BUILDING SETBACKS ADJOINING RESIDENTIAL ZONING SHALL BE EQUAL TO OR GREATER THAN BUILDING HEIGHT

LANDSCAPE BUFFER MINIMUMS:

NORTH SIDE (SAMMS AVE.) = 10 FEET
EAST SIDE (NOVA ROAD) = 20 FEET
WEST SIDE (DRAINAGE/RETENTION/TREE BUFFER) = 25 FEET
INTERNAL WITHIN PCD (PARCEL/PARCEL) = 5 FEET

CONCEPTUAL DEVELOPMENT PLAN NOTES:

1. COMPLIANCE WITH THE LAND DEVELOPMENT CODE AND SPECIFIC INTENDED USE MAY NECESSITATE MODIFICATIONS OF THE CONCEPTUAL PLAN.
2. REFER TO EXHIBIT A2 FOR RECOMMENDED CROSS ACCESS AND DRAINAGE EASEMENTS THAT SUPPORT THE CONCEPTUAL PLAN.
3. LOT 2A SHALL PROVIDE STORMWATER BYPASS PIPING THAT MINIMIZE COMMINGLING OF LOT 2 DISCHARGE WITH THE UNDERGROUND STORAGE PROVIDED WITHIN LOT 2A.

LEGEND/ABBREVIATIONS:

FMV	FORCE MAIN VALVE
WV	WATER VALVE
WM	WATER METER
FH	FIRE HYDRANT
TB	TELEPHONE BOX
TSB	TRAFFIC SIGNAL BOX
EB	ELECTRIC BOX
TV	CABLE TELEVISION BOX
MB	MAIL BOX
LP	LIGHT POLE
UP	UTILITY POLE
GA	GUY ANCHOR
CO	CLEAN OUT
	SIGN
	TREE
0.00 X	EXISTING ELEVATION
T	TELEPHONE MANHOLE
S	SANITARY MANHOLE
D	STORM MANHOLE
	HANDICAP PARKING

LOT 1 PARKING SPACES REQUIRED:

1 SPACE PER 250 S.F. GFA PER NOVA DEPOT PCD
7,225/ 250 = 28.9 (29 SPACES REQUIRED)

LOT 1 PARKING SPACES PROVIDED:

STANDARD SPACES (10'x20') = 32 SPACES PROVIDED
HANDICAP SPACES (12'x20') MINIMUM W/ 5' ACCESS AISLE = 2 SPACES PROVIDED
TOTAL SPACES PROVIDED = 34 SPACES PROVIDED

LOT 2 PARKING SPACES REQUIRED:

1 SPACE PER 250 S.F. GFA PER NOVA DEPOT PCD
8,320/ 250 = 33.3 (34 SPACES REQUIRED)

LOT 2 PARKING SPACES PROVIDED:

STANDARD SPACES (10'x20') SOME WITH 2' GREEN AREA OVERHANG = 32 SPACES PROVIDED
HANDICAP SPACES (12'x20') MINIMUM W/ 5' ACCESS AISLE = 2 SPACES PROVIDED
TOTAL SPACES PROVIDED = 34 SPACES PROVIDED

LOT 2A FUTURE RETAIL/QSR PARKING SPACES REQUIRED:

1 SPACE PER 250 S.F. GFA FOR COMMERCIAL PER NOVA DEPOT PCD MDA

LOT 3 PARKING SPACES REQUIRED:

1 SPACE PER 3 SEATS PLUS 1 SPACE PER 2 EMPLOYEES PER CITY CODE
34 SEATS / 3 = 11.3 (12 SPACES REQUIRED)
8 EMPLOYEES / 2 = 4 SPACES REQUIRED
REQUIRED PARKING = 16 SPACES

LOT 3 PARKING SPACES PROVIDED:

STANDARD SPACES (10'x20') SOME WITH 2' GREEN AREA OVERHANG = 25 SPACES PROVIDED
EMPLOYEE PARKING ONLY WITHIN DESIGNATED LOADING AREA = 4 SPACES
HANDICAP SPACES (12'x20') MINIMUM W/ 5' ACCESS AISLE = 2 SPACES PROVIDED
TOTAL SPACES PROVIDED = 31 SPACES PROVIDED

Lot 1 (Existing O'Reilly Auto) Coverage Calculations 1.11 Acres

DESCRIPTION	SQUARE FOOTAGE	ACREAGE	PERCENTAGE
BUILDING AREA	7,396 S.F.	0.17 AC.	15.30 %
PAVEMENT/CONCRETE AREA	18,982 S.F.	0.44 AC.	39.25 %
SUBTOTAL IMPERVIOUS AREA	26,378 S.F.	0.61 AC.	54.55 %
GREEN/OPENSPACE	21,974 S.F.	0.50 AC.	45.45 %
SUBTOTAL LOT 1 AREA	48,352 S.F.	1.11 AC.	100.00 %

Lot 2 (Existing Family Dollar) Coverage Calculations 1.03 Acres

DESCRIPTION	SQUARE FOOTAGE	ACREAGE	PERCENTAGE
BUILDING AREA	8,320 S.F.	0.19 AC.	18.55 %
PAVEMENT/CONCRETE AREA	20,415 S.F.	0.47 AC.	45.50 %
SUBTOTAL IMPERVIOUS AREA	28,735 S.F.	0.66 AC.	64.05 %
GREEN/OPENSPACE	16,129 S.F.	0.37 AC.	35.95 %
SUBTOTAL LOT 2 AREA	44,864 S.F.	1.03 AC.	100.00 %

Lot 3 (Existing WAFFLE HOUSE) Coverage Calculations 0.80 Acres

DESCRIPTION	SQUARE FOOTAGE	ACREAGE	PERCENTAGE
BUILDING AREA	1,875 S.F.	0.04 AC.	5.35 %
PAVEMENT/CONCRETE AREA	15,485 S.F.	0.35 AC.	44.21 %
SUBTOTAL IMPERVIOUS AREA	17,360 S.F.	0.39 AC.	49.56 %
GREEN/OPENSPACE	17,665 S.F.	0.41 AC.	50.44 %
SUBTOTAL LOT 3 AREA	35,025 S.F.	0.80 AC.	100.00 %

Lot 2A (Future Development) Coverage Estimates 0.69 Acres

DESCRIPTION	SQUARE FOOTAGE	ACREAGE	PERCENTAGE
BUILDING AREA	6,000 S.F.	0.14 AC.	19.97 %
PAVEMENT/CONCRETE AREA	15,036 S.F.	0.34 AC.	50.03 %
SUBTOTAL IMPERVIOUS AREA	21,036 S.F.	0.48 AC.	70.0 %
GREEN/OPENSPACE	9,016 S.F.	0.21 AC.	30.0 %
SUBTOTAL LOT 2A AREA	30,052 S.F.	0.69 AC.	100.00 %

Nova Depot PCD Buildout Coverage Estimates 3.63 Acres

DESCRIPTION	SQUARE FOOTAGE	ACREAGE	PERCENTAGE
BUILDING AREA	23,591 S.F.	0.54 AC.	14.91 %
PAVEMENT/CONCRETE AREA	69,888 S.F.	1.60 AC.	44.16 %
SUBTOTAL IMPERVIOUS AREA	93,479 S.F.	2.14 AC.	59.06 %
GREEN/OPENSPACE	64,784 S.F.	1.49 AC.	40.94 %
TOTAL AREA	158,263 S.F.	3.63 AC.	100.00 %

DESIGNED BY: HLG	DRAWN BY: SEP	CHKD BY: HLG	
JOB NUMBER: CDJ/NOVA ROAD	DATE: 5/2015	SCALE:	

REVISIONS

NO.	DATE	APPL
1		
2		
3		
4		
5		

CONCEPTUAL DEVELOPMENT PLAN

NOVA DEPOT PCD

NOVA ROAD (SR 5A) PORT ORANGE, FLORIDA

RKM DEVELOPMENT CORP.

CADJAZZ
• Engineering Consultants •
PO Box 450006 • Kissimmee, Florida 34745
Phone: (407) 738-1979 Fax: (407) 348-7552

THESE PLANS MAY NOT BE COPIED OR MODIFIED WITHOUT WRITTEN PERMISSION FROM THE GOOD GROUP.

SEAL

NOT VALID UNLESS SIGNED & EMBOSSED BY A REGISTERED ENGINEER CADJAZZ, LLC CERTIFICATION OF AUTHORIZATION # 28509

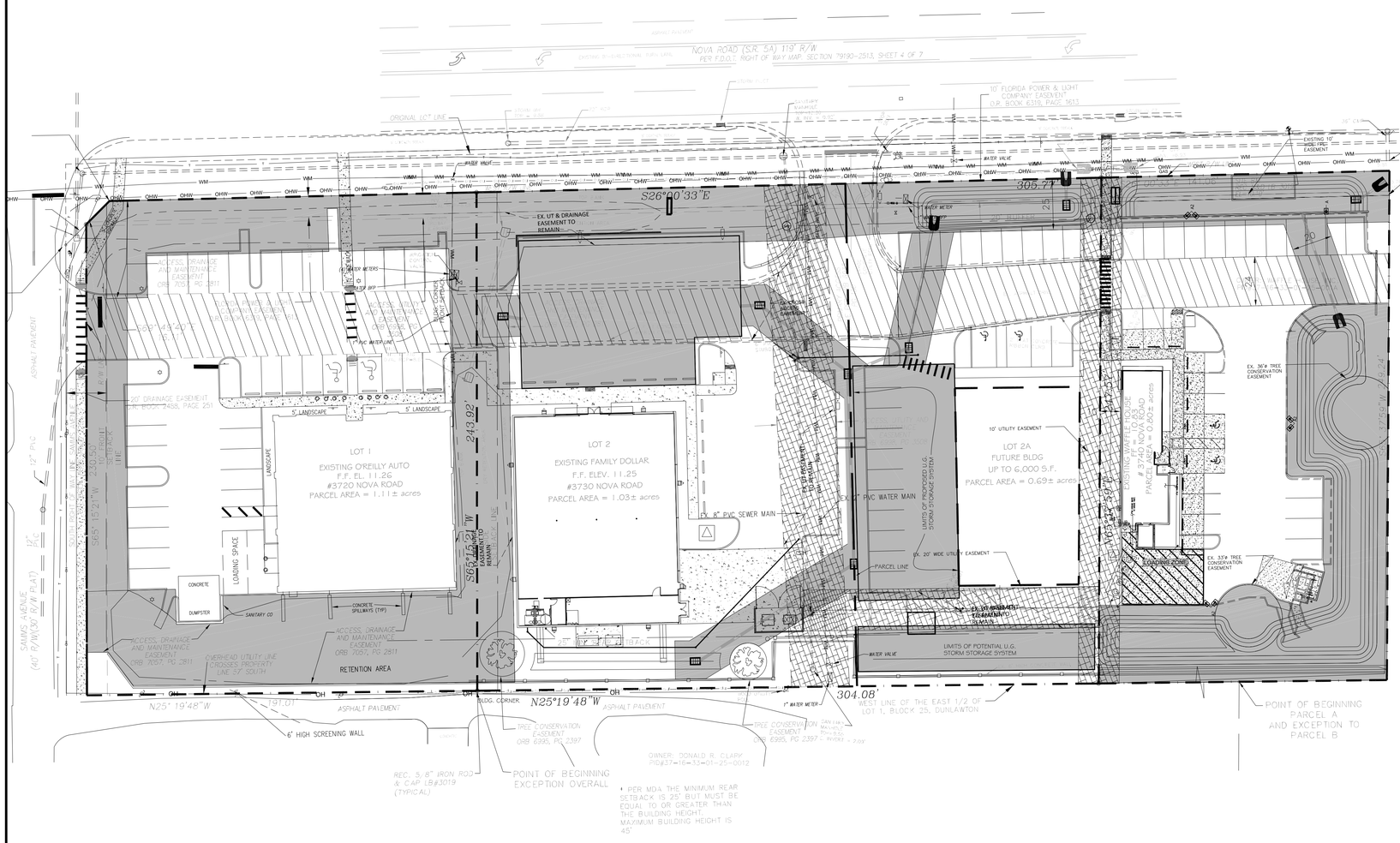
SHEET NUMBER

EX.A1

HERBERT LEE GREEN
February 21, 2018
P.E. # 48867

HERBERT LEE GREEN
LICENSED
No. 48867
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

0' 30' 60'
SCALE: 1" = 30'



LEGEND / ABBREVIATIONS

EXISTING	DESCRIPTION
	FIRE HYDRANT
	WATER VALVE–WV
	BLOWOFF – BO
	WATER METER – WM
	SANITARY MANHOLE – MH
	SANITARY CLEANOUT – CO
	BACKFLOW PREVENTER – BFP OR REDUCED PRESSURE ASSEMBLY – RPZ
WM	WATER MAIN
SAN	SANITARY MAIN
gas	GAS LINE
	EASEMENT LINE
LF	LINEAR FEET
PVC	POLYVINYL CHLORIDE
SD	STORM DRAIN
INV	INVERT
	DRAINAGE & UTILITY EASEMENT
	CROSS ACCESS EASEMENTS
	PRIVATE/PUBLIC UTILITY EASEMENT

CONCEPTUAL DEVELOPMENT PLAN EASEMENT NOTES:

1. COMPLIANCE WITH THE LAND DEVELOPMENT CODE AND SPECIFIC INTENDED USE MAY NECESSITATE MODIFICATIONS OF THE CONCEPTUAL PLAN AND REQUIRED EASEMENTS.
2. LOT 2A SHALL PROVIDE STORMWATER BYPASS PIPING THAT MINIMIZE COMMINGLING OF LOT 2 DISCHARGE WITH THE UNDERGROUND STORAGE PROVIDED WITHIN LOT 2A.

DESIGNED BY: HLG	DRAWN BY: SEF	CHKD BY: HLG
JOB NUMBER: CDI-NOVA ROAD	DATE: 5/2015	SCALE:

NO.	REVISIONS	DATE	APPL
1			
2			
3			
4			
5			

CDP EASEMENT EXHIBIT

NOVA DEPOT PCD

NOVA ROAD (SR 5A) PORT ORANGE, FLORIDA

RKM DEVELOPMENT CORP.

CADJAZZ
Engineering Consultants
PO Box 450006 • Kissimmee, Florida 34745
Phone: (407) 738-1979 Fax: (407) 348-7552

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SEAL

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A REGISTERED ENGINEER
CADJAZZ, LLC
CERTIFICATION OF AUTHORIZATION # 28509

SHEET NUMBER

EX.A2

STAFF REPORT

Administrative Large-Scale Comprehensive Plan Future Land Use Amendment/Williamson Boulevard-Willow Run Boulevard Site
CASE NO. 18-20000002

REQUEST:	Amend the Comprehensive Plan Future Land Use (FLU) Map to change the FLU for ±34.5 acres from *Urban High Density Residential* (8-16 units/acre), *Urban Medium Density Residential* (4-8 units/acre), and *Suburban Residential* (2-4 units/acre) to *Mixed-Use Center*. Add FLU Element Policy 5.15, to provide density/intensity limits for the property.
APPLICANT:	City of Port Orange
LOCATION:	South side of Willow Run Boulevard, east of Williamson Boulevard (Figure 1 - Location Map)
STAFF RECOMMENDATION:	**Approval**
STAFF CONTACT:	Tim Burman, Community Development Director (386) 506-5675
PLANNING COMMISSION DATE:	March 22, 2018

INTRODUCTION

The proposed amendment is to change the future land use designation for +/- 34.5 acres of overall +/- 39.5-acre property. The amendment area is located near the southeast corner of Williamson Boulevard and Willow Run Boulevard. The remaining +/- 5 acres are not included in the proposed amendment and would retain the current *Commercial* FLU designation.

Figure 1 - Location Map

The amendment consists of two requests:

1. Change the FLU designation for +/- 34.5 acres from *Urban High Density Residential* (8-16 units/acre), *Urban Medium Density Residential* (4-8 units/acre), and *Suburban Residential* (2-4 units/acre) to *Mixed-Use Center*.

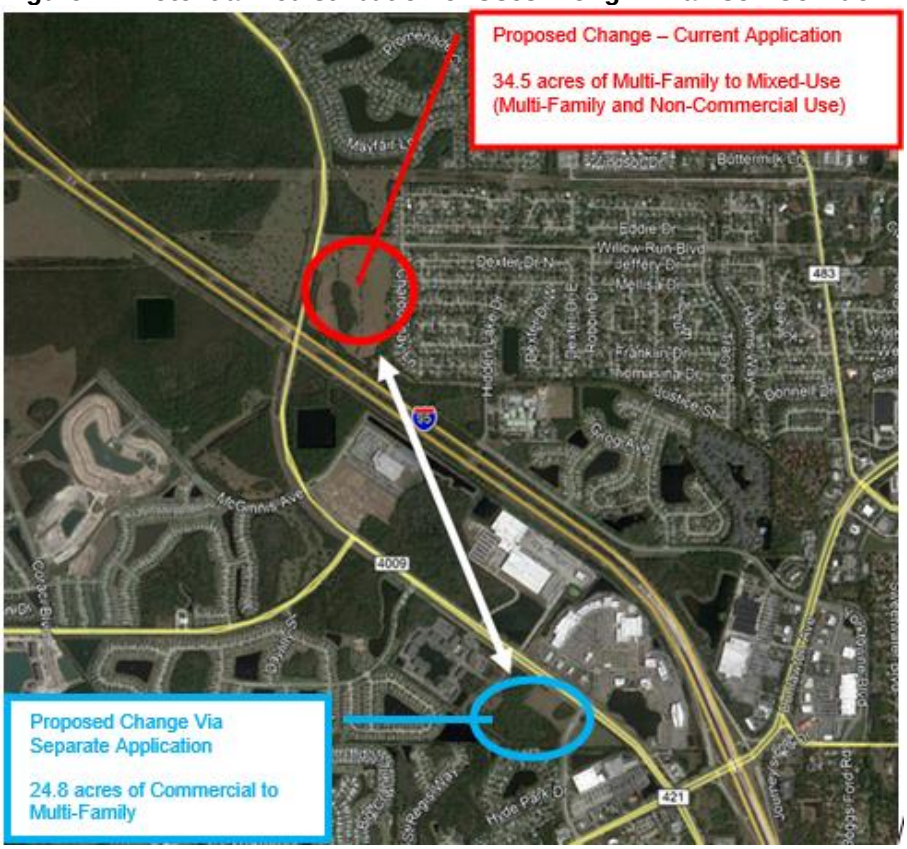
2. Add a FLU Element Policy 5.1.5, that provides density/intensity limits for the subject property, to limit the maximum number of residential dwelling units to 276 and the maximum non-residential square-footage at 250,000 square-feet.

In 2010, the City created the *Mixed-Use Center* FLU designation to serve as an alternative to the single-use, community-level commercial node in certain settings. A mixed-use center can contain a variety of land uses, which may include commercial, office, residential, and institutional development, and is focused around a point of high activity, such as an intersection of major roads. The land uses should be mixed, but commercial uses may dominate if necessary to achieve City redevelopment or economic development goals.

The proposed amendment is part of a City effort to redistribute commercial development from the Taylor Road/Williamson Boulevard intersection area to the Willow Run Boulevard/Williamson Boulevard intersection area. A separate Land Development Code (LDC) is being processed to increase the acreage of multi-family that can be developed in the Planned Community-Agricultural (PC-A) Workplace District. The LDC amendment would increase the acreage that can be developed with multi-family from +/- 29 acres to +/- 54 acres. With approval of the LDC amendment, a developer is prepared to develop a +/- 300-unit multi-family development on +/- 24 acres at the northwest corner of North Summer Trees Road and Williamson Boulevard.

The intent is for +/- 24 acres near the intersection of Taylor Road/Williamson Boulevard to be developed as multi-family instead of commercial to reduce number of vehicular trips near the Taylor Road/Williamson Boulevard intersection. However, retaining land for non-residential uses is an objective and policy in the Comprehensive Plan. Therefore, to comply with Objective 3.1 and Policy 3.1.1 and 3.2.1 of the Comprehensive Plan, the City has proposed to change the FLU of 34.5 acres near the Willow Run Boulevard/Williamson Boulevard intersection to *Mixed-Use Center* to retain a portion of the non-residential square-footage lost as part of the proposed multi-family development north of the Taylor Road/Williamson Boulevard intersection. The *Mixed-Use Center* designation allows for variety of land uses, which may include commercial, office, residential, and institutional development (Figure 2).

Figure 2 – Potential Redistribution of Uses Along Williamson Corridor



The following discussion will examine the proposed amendment, the impacts of the proposed amendment, and the existing environmental conditions.

PROPERTY OVERVIEW:

The subject property is currently undeveloped and in agricultural use. The property has varied topography and is mainly pasture, with forested wetlands interspersed throughout. To the east of the property is an existing single-family residential development and to the west is Williamson Boulevard and vacant land with a *Commercial* FLU designation. To the south, the property abuts I-95, and to the north, the property abuts Willow Run Boulevard and vacant land that has FLU designations to allow for commercial and multi-family uses. The currently adopted and proposed future land use (FLU) designations are identified on Exhibit 1. The current zoning classification of the subject property is Planned Unit Development (PUD) and is identified on Exhibit 2. If approved, the subject property will be rezoned to Mixed-Use Center (MXC) District. At this time, there are no development plans for the property.

With future development of the property, the Yorktowne Boulevard extension is planned to be built as an urban collector roadway extending from Hidden Lake Drive to Willow Run Boulevard, along with widening of Willow Run Boulevard from Yorktowne Boulevard to Williamson Boulevard (Figure 3). The completion of Yorktowne Boulevard would provide an alternate route for vehicles to cross I-95 and relieve congestion at the I-95/ Dunlawton intersection. The City currently has the right-of-way for the central segment of Yorktowne Boulevard, along with sufficient right-of-way for improvements to

Willow Run Boulevard. City staff and the subject property owner have recently discussed the dedication of the remaining right-of-way to the City needed to complete the north Yorktowne Boulevard segment.

Figure 3 – General Alignment for Yorktowne Boulevard

PROPOSED AMENDMENT

The proposed FLU amendment is to change the FLU designations for +/- 34.5 acres from *Urban High Density Residential* (8-16 units/acre), *Urban Medium Density Residential* (4-8 units/acre), and *Suburban Residential* (2-4 units/acre) to *Mixed-Use Center*. The *Mixed-Use Center* designation enables the blending of commercial, office, service, and multi-family uses not possible with the distinct separation of residential and non-residential designations. A companion text amendment is proposed in the FLU Element of the Comprehensive Plan to limit the square-footage of non-residential development at 250,000 SF and the maximum number of residential dwelling units at 276. The subject density/intensity limitation will also be included as a map notation on the FLU map.

The intent of the *Mixed-Use Center* designation is to create an area with integrated uses, including those of residential, office, retail, and institutional, near the intersection of significant roads (arterial and collector), and to serve the needs of existing residential neighborhoods. In addition to a mixture of compatible uses, development of this type should provide amenities and walkways to increase pedestrian activity from within the subject property and from existing residential developments, and decrease a reliance on individual vehicles and provide a concentration of services for adjacent neighborhoods and pass-by traffic.

The maximum residential density allowed in this category is 16 dwelling units per gross acre. The maximum Floor Area Ratio (FAR) for non-residential uses allowed in this category is 1.5. The allowable distribution of uses within a mixed-use center is within the following ranges, with the cumulative mixture of percentages equaling 100%:

- Commercial (not including office) 50%-90%;
- Office 10% - 90%;
- Residential 0% - 50%; and
- Institutional 0% - 35%.

TABLE 1. CURRENT & PROPOSED FUTURE LAND USES – ACREAGE BY CATEGORY

FLU DESIGNATION	Current FLU (acres)	Proposed FLU (acres)	Net Change in FLU (acres)
Urban High Density Residential (16 units/acre)	6.5	0	-6.5
Urban Medium Density Residential (8 units/acre)	27.5	0	-27.5
Suburban Residential (4 units/acre)	0.5	0	-0.5
Mixed-Use Center (16 units/acre & FAR -1.5)	0	34.5	+34.5
TOTAL	34.5	34.5	0

TABLE 2. CURRENT & PROPOSED FUTURE LAND USES – DENSITY/INTENSITY BY CATEGORY

	Current FLU	**Proposed FLU**	**Proposed FLU ***	**Net Change**
	Theoretical Max Dwelling Units & Non-Commercial sq.ft.	Theoretical Max Dwelling Units & Non-Commercial sq.ft.	Policy 5.1.5 Theoretical Max Dwelling Units & Non-Commercial sq.ft.	
Urban High Density Residential (16 units/acre)	104	0	0	- 104 DU
Urban Medium Density Residential (8 units/acre)	220	0	0	- 220 DU
Suburban Residential (4 units/acre)	2	0	0	- 2 DU
Mixed-Use Center 90% Commercial (1.5 FAR**) 10% Residential (16 units/acre)	0	55 DU 2,028,800 sq.ft.	N/A	-271 DU +2,028,807 sq.ft.*
Mixed-Use Center* 50% Commercial (1.5 FAR**) 50% Residential (16 units/acre)	0	N/A	276 DU* 250,000 sq.ft.*	-50 DU 250,000 sq.ft.*
TOTAL	326 DU 0 sq.ft.	55 DU 2,028,807 sq.ft.	276 DU* 250,000 sq.ft.*	

*Maximum non-residential square-footage and residential units allowed by site-specific Future Land Use Element, Policy 5.1.5
** FAR (Floor Area Ratio) is the total covered area on all floors of all buildings on a certain lot divided by the total area of the property.

The amendment reduces the number of dwelling units allowed on the subject property but increases the square-footage for non-residential uses. As previously mentioned, the intent of the amendment is to maintain residential on the subject property and

redistribute a portion of the non-residential square-footage to the subject property that will be lost with the development of multi-family in lieu of commercial on the property near the intersection of Williamson Boulevard and North Summer Trees Road.

The proposed amendment is consistent with the Comprehensive Plan neighborhood commercial node designation for the intersection of Williamson Boulevard and Willow Run Boulevard. In locating commercial areas on the Future Land Use Map, the City has maintained the policy of designating commercial nodes at intersections of roadways based on the functional classification of the adjacent roadways and size of the surrounding neighborhoods. The node at the intersection of Williamson Boulevard and Willow Run Boulevard is generally designed to serve the neighborhood areas within ±1 mile of the subject property. The allowed FAR in the *Mixed-Use Center* designation is 1.5; however, the theoretical maximum square footage for non-residential uses (commercial, office, and institutional) for the 34.5-acres is limited to 250,000 SF and 276 dwelling units.

INFRASTRUCTURE IMPACT ASSESSMENT

In accordance with standard practice from the Florida Department of Economic Opportunity (DEO) and other review agencies, an impact comparison analysis of the proposed amendment has been completed based upon the theoretical maximum development potential under the currently adopted future land use designations versus the proposed designation. The following seven public facilities and services were examined:

1. Transportation
2. Sanitary Sewer
3. Potable Water
4. Solid Waste
5. Stormwater Drainage
6. Recreation
7. Schools

Table 3. Impact Analysis (Theoretical Max.)

Development Variable	Current Land Uses	Proposed Land Use*	Net Change
Residential Units	326	276	-50
Non-residential Buildable Sq. Ft.	0	250,000	+250,000
Population[1]	734	621	-113
Peak Hour Trips/Daily Trips[2]	143 / 1,775	852 / 12,713	+709 / +9,747
Sanitary Sewer (gallons/day)[3]	52,160	69,160	+17,000
Potable Water (gallons/day)[4]	58,680	74,680	+16,000
Solid Waste (lbs./person)[5]	2,356	4,493	+2,137
Stormwater Drainage[6]	n/a	n/a	n/a
Recreation/Open Space(acres)[7]	5.1	4.3	-0.8

*Maximum allowed by site-specific Future Land Use Element, Policy 5.1.5 - 250,000 SF and 276 dwelling units.

1. Population: 2.25 persons per household (per 2010 Census)
2. Transportation: ITE Trip Generation Manual, 9th Edition
3. Sanitary Sewer: 160 gallons per day per Equivalent Residential Unit; 1/10 gallon per square foot per day of non-residential development
4. Potable Water: 180 gallons per day per Equivalent Residential Unit; 1/10 gallon per square foot per day of non-residential development
5. Solid Waste: 3.21 pounds per person per day; 10 lbs. per 1,000 square feet of non-residential development per day
6. Stormwater Drainage: LOS standard = 25-year, 24-hour event; Drainage system will be designed to meet the requirements of the Land Development Code.
7. Rec. & Open Space: 7 acres/1,000 persons (0.007 acres/person)

The FLU designations currently in place would allow a theoretical maximum of 326 dwelling units. The proposed FLU designation and density/intensity limitation policy would decrease the theoretical maximum number of dwelling units to 276 and increase the maximum non-residential development up to 250,000 SF. Overall, the amendment results in a net increase in impacts to public infrastructure, except for recreation and open space.

Transportation

A Transportation Impact Analysis (TIA) has been prepared and reviewed by staff. An increase in the number of daily trips and P.M. peak hour trips is expected to result from the proposed FLU amendment. Based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition, the proposed *Mixed-Use Center* FLU designation could generate an additional 709 P.M. peak hour trips, and an additional 9,747 daily trips, based on the maximum allowed development by the proposed site-specific Future Land Use Element, Policy 5.1.5.

The analysis shows that there will be deficiencies under the current land use in the long-term (2025) and the land use proposed in the amendment is expected to add traffic to these roadway segments. Although there is an increase in trips, the mixed-use nature of the amendment results in a redistribution of vehicle trips on the network.

As previously mentioned, in conjunction with the FLU amendment, a LDC text amendment is being processed by a separate applicant to allow for property along Williamson Boulevard, south of Town West Boulevard, that is zoned for commercial, to be developed as multi-family instead of commercial. A traffic analysis was conducted to evaluate the expected impact this could have on area roadways. According to the analysis, development of multi-family near the Taylor Road/Williamson Boulevard and N. Summer Trees Road/Williamson Boulevard intersections, and development of a mixed-use development at the Williamson Boulevard/Willow Run Boulevard intersection, is expected to reduce the number of p.m. peak-hour vehicular trips. When comparing the PM peak-hour trip generation for the current and proposed uses of these properties, the *theoretical maximum trip generation potential* along this segment of Williamson Boulevard could decrease by 2,045 PM peak-hour trips (table 4).

Table 4. PM Peak-Hour Trips - Theoretical Max Net Change

	Current Theoretical Max - PM Peak Hour trips	Proposed Theoretical Max - PM Peak Hour Trips	Net Change PM Peak Trips
Williamson Blvd./Willow Run Blvd. Intersection Area	143	852 *	+ 709
Williamson Blvd/N. Summer Trees Rd. and Williamson Blvd./Taylor Rd. Intersection Areas	2,929**	175***	-2,754
Total	**3,072**	**1,027**	**-2,045**

* Maximum allowed by site-specific Future Land Use Element, Policy 5.1.5 - 250,000 SF non-residential and 276 DU.
** Maximum Commercial allowed on 24.8 acres at FAR of 1.0. = 1,083,337 SF
*** Maximum Dwelling Units allowed on 24.8 acres with a density of 16 units/acre = 397 DU

As with all development, the specific site development proposals for the subject property will be subject to concurrency regulations at the time of development, requiring adequate transportation facilities to be provided or to mitigate their impacts.

Sanitary Sewer

The City has available sewer capacity to accommodate the proposed amendment. The City's adopted LOS standard for sanitary sewer is 160 gallons per day per Equivalent Residential Unit (ERU), and 1/10 gallon per square foot per day of non-residential development. Using these standards, the proposed FLU designation would theoretically generate 69,160 gallons per day (gpd) of wastewater. This is a net increase of 17,000 gpd between the current and proposed FLU designations. Based upon these measures, the City has available sewer capacity to accommodate the proposed amendment and future development of the property.

Potable Water

The City has available well and Consumptive Use Permit (CUP) capacity to serve the proposed amendment. The City's adopted LOS standard for potable water is 180 gallons per day per ERU, and 1/10 gallon per square foot per day of non-residential development. Using these standards, the proposed FLU designation would theoretically demand of 74,680 gpd of potable water. This is a net increase of 16,000 gpd between the current and proposed FLU designations. Even though the City may have the technical capability to pump 15 MGD from its wells, prohibitions within the City's 20-year CUP, issued by the St. Johns River Water Management District (SJRWMD), significantly limit the amount of water that is permitted to be withdrawn. The City's CUP allows for an average daily withdrawal of 8.74 MGD, and a maximum daily withdrawal of 13.28 MGD in 2018. Actual average daily flow during the 2017 calendar year was 6.01 MGD.

When reviewing Future Land Use amendments, the following is considered to determine the amount of permitted water capacity available for all other future uses: the current year CUP allocation, consumption in the previous calendar year, reserved capacity, and projected consumption. Based upon these measures, the City still has available CUP capacity to accommodate the proposed amendment and future development of the property (Exhibit 3).

Solid Waste Collection

There is available capacity at the landfill to address the City's solid waste disposal needs. The City's collection standard is 1,350 residential units per curbside collection crew, per day, a weight standard of 3.21 pounds per person per day, and 10 lbs. per 1,000 square feet of non-residential development per day. Using these standards, the proposed FLU designations would theoretically generate approximately 4,493 pounds of garbage per day. This is a net increase of 2,356 pounds of solid waste between the current and proposed FLU. Solid waste generated within the City of Port Orange is delivered to the Volusia County landfill, a 3,000-acre Class I landfill with a projected life span to the year 2050.

Stormwater Drainage

There is no anticipated impact to the City's drainage system from the proposed land use. Stormwater management in the City of Port Orange deals with both quality and quantity. The City's adopted LOS standard for stormwater is the 25-year, 24-hour storm event. More specifically, the stormwater facilities must be capable of treating and conveying the runoff from such a storm without causing flooding of adjacent properties or polluting any receiving water bodies. In addition, the Comprehensive Plan and Land Development Code require that there be no net loss of stormwater retention function as a result of development. In other words, a given parcel must have the same ability to store and discharge water after development as it does before development occurs. Any future redevelopment of the property will be required to address stormwater retention on the property in accordance with these City standards.

Recreation and Open Space

According to the City's 2017 Concurrency Management Report, the City has an excess of 68 acres of parkland, so no additional parkland is needed. The proposed FLU designation would require 4.3 acres of parkland. This is a net decrease of 0.8 acres of parkland between the current and proposed FLU. The proposed FLU amendment does not require additional parkland or recreation facilities because it does not increase residential density.

Schools

The Volusia County School District reviewed the proposed FLU amendment for potential impacts to school capacity. The School District determined that no additional impact to their schools will result from this amendment. The proposed FLU amendment does not create additional demand because it reduces the residential density.

ENVIRONMENTAL CONDITIONS

An environmental analysis was conducted for the subject property in 2018 by Zev Cohen & Associates. The majority of the site consists of bahia pasture. Two vegetative communities were identified on site including Upland Vegetative and Wetland Vegetative. The majority of the site consists of the Upland Vegetative Communities that is comprised of open pasture dominated by bahia grass (Paspalum notatum), scattered live oak (Quercus virginiana), and small pockets of saw palmetto (Serenoa repens). There is roughly 3.29 acres of the subject property that is comprised of Wetland Vegetative Communities that include three cypress wetlands. The canopy is dominated by bald cypress (Taxodium distichum). Other canopy species include loblolly bay (Gordonia lasianthus), swamp gum (Nyssa sylvatica var. biflora), and cabbage palm

(Sabal palmetto). The sub-canopy and groundcover vegetation is mostly comprised of wax myrtle (Myrica cerifera), Blackberry (Rubus argutus), smart weed (Polygonum spp.), and Virginia chain fern (Woodwardia virginica).

Florida Fish and Wildlife Conservation Commission (FWC) has documented that the closest bald eagle nest is located within 0.5 miles of the subject property. The FWC database indicates no “last known active” date for this nest. This nest was last surveyed in 2017 with its occupational status being reported as undetermined and in unsuitable condition for nesting. No impacts to bald eagles are expected to occur from development of the subject property. The potential is low for protected plant and/or protected wildlife species occurrence on the subject property. The environmental analysis did not reveal the presence of Florida scrub-jays on-site. Gopher tortoise burrows were not observed during reconnaissance surveys conducted. There is a low likelihood that the site contains gopher tortoise burrows. The gopher tortoises and other listed animal and plant species will be reviewed and addressed appropriately by local, State, and Federal agencies during the subdivision and site plan review process.

Surface waters present on-site include a cattle watering pond and ditches. This small cattle watering pond may provide limited habitat for wading birds along the southern edge of the 2-acre cypress head wetland. The cattle watering pond is surrounded by uplands and wetlands. There are also several ditches that run along the southern boundary and throughout southern and western portion of the property. Wetlands will be reviewed and addressed appropriately by local, State, and Federal agencies during the subdivision and site plan review process.

REVIEW CRITERIA AND STAFF FINDINGS

1. Consistency with the City’s Comprehensive Plan.

Staff finding: The proposed FLU amendment is generally consistent with the Goals, Objectives, and Policies of the City’s Comprehensive Plan. The proposed FLU designation meets the locational criteria as the subject property is located along an arterial corridor near the intersections of arterial, collector or significant local roads. Adequate capacity exists for potable water, sewer, schools, and solid waste to accommodate the proposed amendment. As for traffic, failing roadway segments were identified and as with all development, the specific site development proposals for the property will be subject to concurrency regulations requiring adequate public facilities to be provided to mitigate their impacts.

2. Compatibility with land use designations for adjacent parcels and neighborhoods.

Staff finding: Compatibility is defined in the comprehensive plan as a condition in which dissimilar land uses can co-exist in relative proximity to one another and stable fashion over time, such that neither use is unduly negatively impacted by the other. The subject property abuts three roadways, I-95 to the south, Williamson Boulevard to the west, and Willow Run to the north. To the west is the Willow Run Subdivision, which consists of single-family homes. As part of the site development, sufficient landscape buffers will be required adjacent to the residential subdivision and rights-of-way.

The development of this intersection node is consistent with the policies in the Comprehensive Plan that require commercial developments at defined nodes, which encourage effective access and internal capture of traffic generated by the development of the property, and discourages long trips between distant commercial and residential uses.

3. Impacts on public facilities/infrastructure/services.

Staff finding: All public facilities, except for roadways, have adequate capacity to accommodate the proposed amendment and potential increased impacts on infrastructure. The proposed amendment would allow for new non-residential uses (office, commercial, and institutional) where currently only residential is allowed.

As for traffic, failing roadway segments were identified, and as with all development, at the time of site or subdivision development, the specific site development proposals for the property will be subject to concurrency regulations requiring adequate public facilities to be provided to mitigate their impacts.

4. Whether the amendment increases the clearance time for evacuation of the population in the Hurricane Vulnerability Zone above twelve hours.

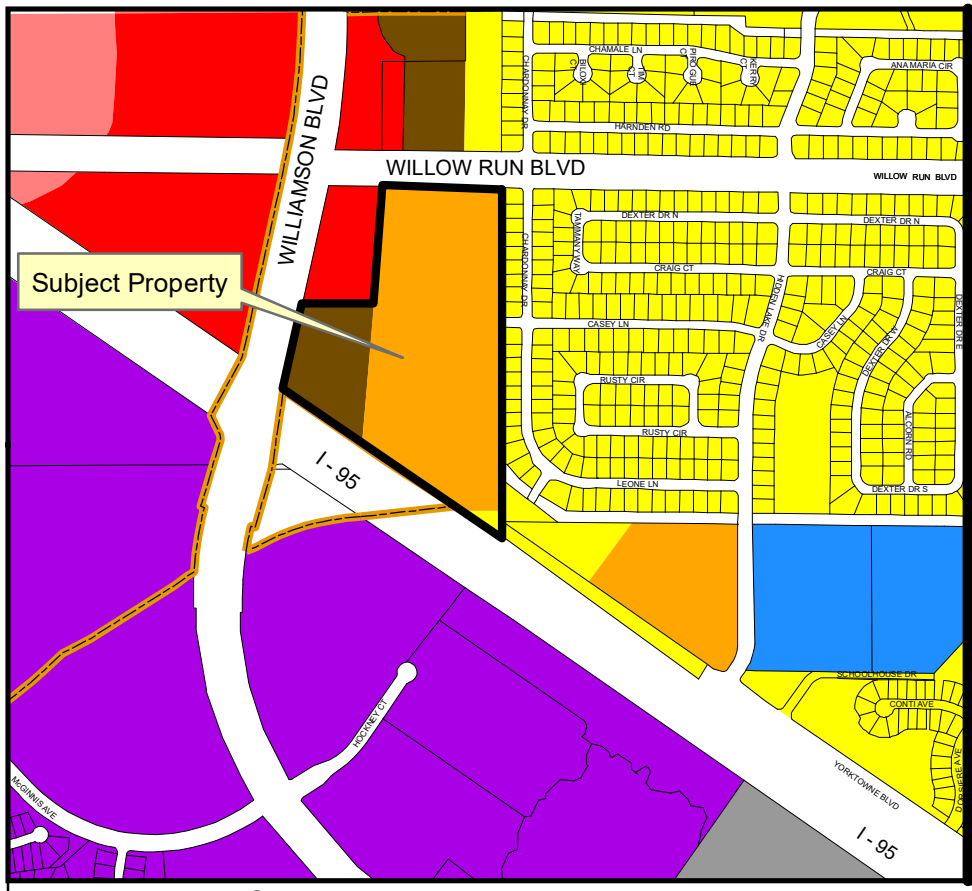
Staff finding: The subject property does not lie within the Hurricane Vulnerability Zone. The proposed amendment will not negatively impact the clearance time for evacuation of the population in the Hurricane Vulnerability Zone.

5. Whether the amendment discourages the proliferation of urban sprawl.

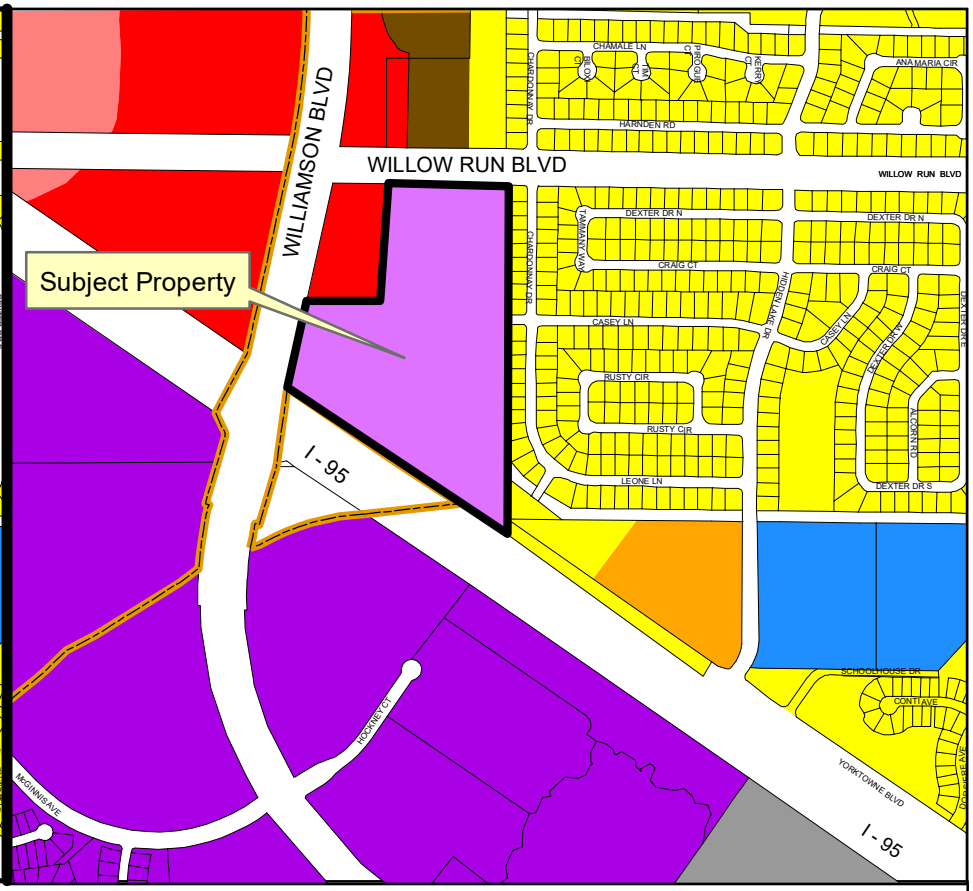
Staff finding: The proposed amendment will not encourage sprawl. The proposed amendment provides for a mixed-use, inter-connected development that will support housing and non-residential uses to serve the needs of future and existing surrounding residents, rather than separate use residential and commercial areas. The subject property is identified as a commercial node in the Comprehensive Plan.

STAFF RECOMMENDATION

Staff recommends approval of the requested amendment to the City's Future Land Use Map and the text amendment FLU Element Policy 5.1.5, and transmittal to the Florida Department of Economic Opportunity, the Volusia Growth Management Commission, and other required agencies for review.



Current Future Land Use



Proposed Future Land Use

- Public/Institutional
- Suburban Residential (2-4 Units/Acre)
- Urban Medium Density Residential (4-8 Units/Acre)
- Urban High Density Residential (8-16 Units/Acre)
- Office/Residential Transition (Up to 10 Units/Acre)
- Commercial
- Mixed-Use Center
- Planned Community
- Warehouse/Industrial

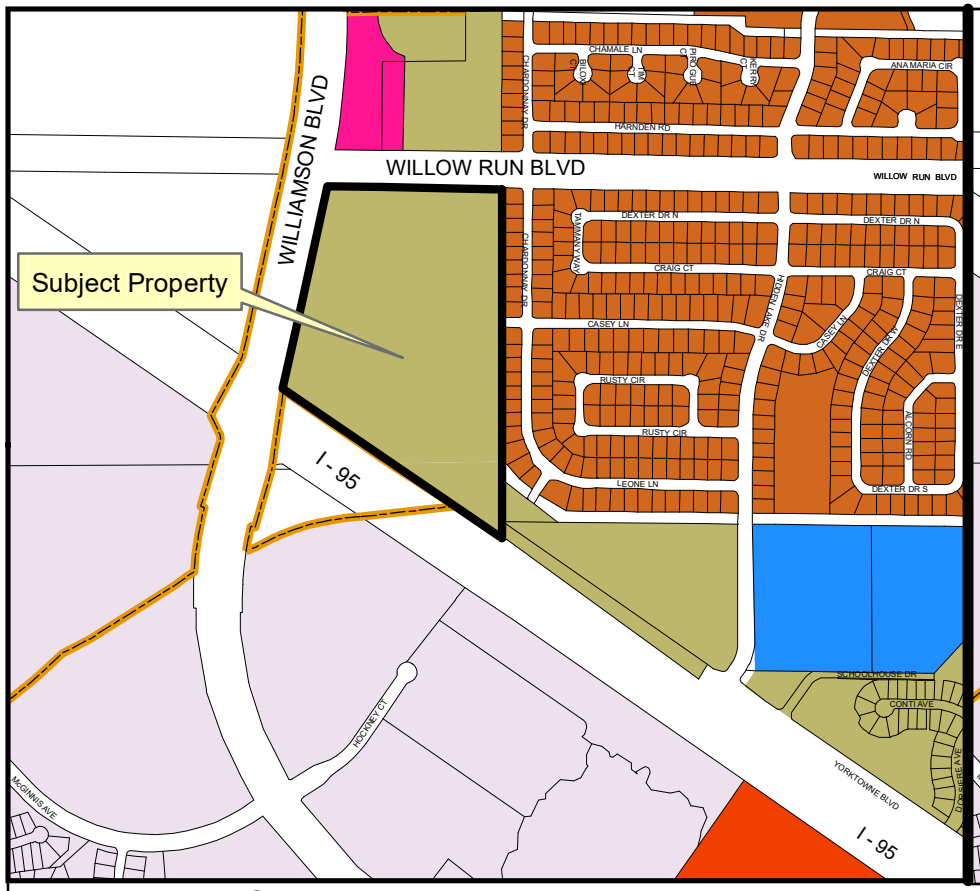
CITY OF PORT ORANGE 1867 FLORIDA

EXHIBIT 1

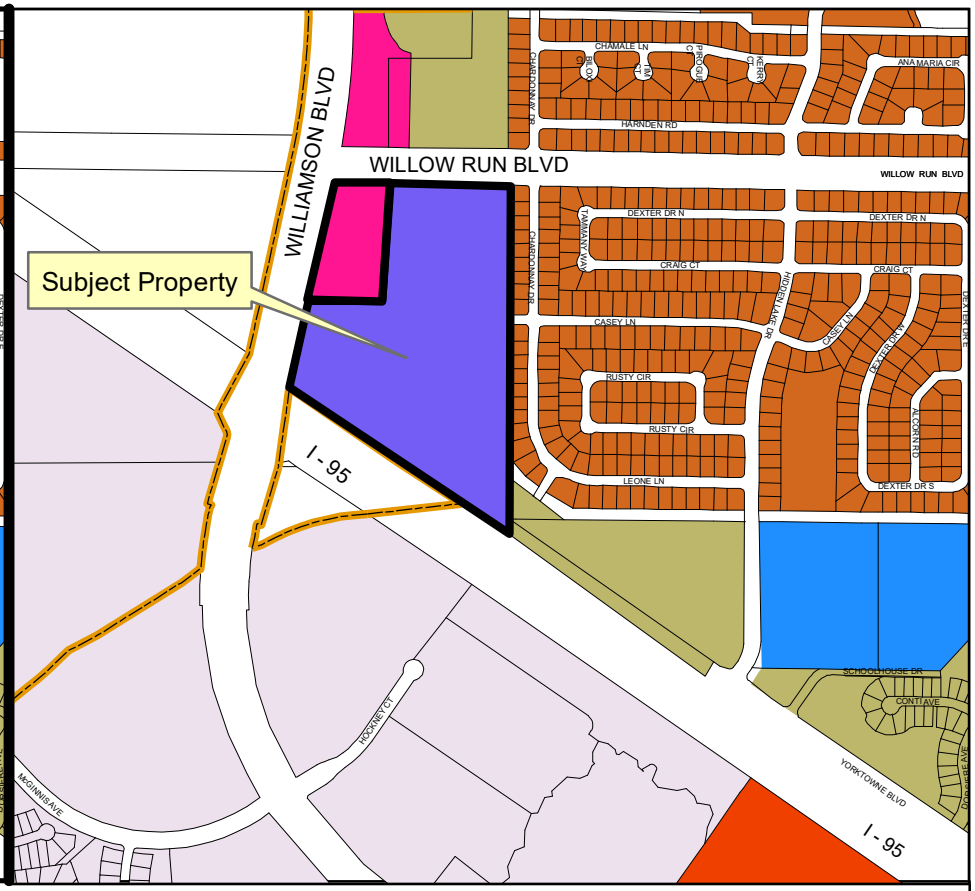
CASE NO. 18-20000002 and 18-60000001

DEPARTMENT OF COMMUNITY DEVELOPMENT

N W E S



Current Zoning



Proposed Zoning

- PUD Planned Unit Development
- R-8SF Single Family Residential
- CC Community Commercial
- PCD Planned Commercial Development
- GPU Government/Public Use
- MXC Mixed Use Center
- PC-A Planned Community-Agricultural

EXHIBIT 2

CASE NO. 18-20000002 and 18-60000001

DEPARTMENT OF COMMUNITY DEVELOPMENT

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St. Johns River Water Management District
Potable Water Availability Worksheet

This worksheet is for use by local governments submitting comprehensive plan amendments to determine the availability of potable water resources to serve proposed development. Instructions and St. Johns River Water Management District (SJRWMD) staff contact information are attached.

1. General Information

Date: March 8, 2018 Case No. 18-20000002

Contact name: Penelelope Cruz/ Kenny Ho, P.E. Phone: 386-506-5671 E-mail: pcruz@port-orange.org

Local government: City of Port Orange

Potable water supplier: City of Port Orange

2. Infrastructure Information

Water treatment plant permit number: 3641044 Permitting agency: FDEP

Permitted capacity of the water treatment plant(s): 15 million gallons a day (mgd)

Total design capacity of the water treatment plant(s): 15 mgd

Are distribution lines available to serve the property? Yes ☒ No ☐

If not, indicate how and when the lines will be provided: _____

Are reuse distribution lines available to serve the property? Yes ☒ No ☐

If not, indicate if, how and when the lines will be provided: _____

3. SJRWMD Consumptive Use Permit (CUP) Information

CUP number: 8595 Expiration date: 6/1/22

Total CUP duration (years): 20

CUP allocation in last year of permit: 8.97 MGD (annual average)

Current status of CUP: In compliance ☒ Not in compliance ☐

Allocations to other local governments: Ponce Inlet as a whole sale customer; Daytona Beach Shores & Volusia County are partially served as retail customers; No specific water usage amount has been recorded or agreed for these local goverments

Reserved capacity: 0.12 MGD (Based on a estimated 666 ELUs that are permitted but unbuilt at 180 GPD/ELU.) Total committed capacity built and unbuilt is 7.24 MGD - based on 40,239 ELUs at 180 GPD/ELU.

4. Consumptive Use Analysis

Designate mgd ☒ or mgy ☐

A. Current year CUP allocation:	8.74
B. Consumption in the previous calendar year:	6.01
C. Reserved capacity ☐ or growth projection ☒ (check the one used):	0.18
D. Projected consumption by proposed comprehensive plan amendment areas	0.02
E. Amount available for all other future uses (A – B – C – D = E):	2.53

If the amount in E is zero or a negative number, explain how potable water will be made available for future uses: Please note for "C" - the growth projection is based a historical growth rate of 0.15 MGD - 0.18 MGD calculated from monthly operating reports data (MORs, DEP form 17.1.122 (40)) of the City's Garnsey Water Plant.

This worksheet is available electronically at ***http://www.sjrwmd.com/programs/outreach/local_gov/***

STAFF REPORT
Administrative Rezoning/Williamson Boulevard-Willow Run Boulevard Site
CASE NO. 18-60000001

REQUEST:	Rezone ± 34.5 acres from Planned Unit Development (PUD) to Mixed-Use Center (MXC) and ± 5 acres from Planned Unit Development (PUD) to Community Commercial (CC)
APPLICANT:	City of Port Orange
LOCATION:	South side of Willow Run Boulevard, east of Williamson Boulevard (Figure. 1 Location Map)
STAFF RECOMMENDATION:	**Approval**
STAFF CONTACT:	Tim Burman, Community Development Director (386) 506-5675
PLANNING COMMISSION DATE:	March 22, 2018

DISCUSSION:

The subject property is currently zoned Planned Unit Development (PUD). The proposed rezoning to Mixed-Use Center (MXC) and Community Commercial (CC) is a shift from the negotiated PUD zoning district to a conventional commercial zoning district that uses the Land Development Code (LDC) to provide specific development regulations. The subject property is currently vacant and is bordered by existing residential development along its eastern edge and Williamson Boulevard to the west. To the north, the property abuts Willow Run Boulevard, and abuts I-95 to the south (Figure. 1 Location Map)

Figure. 1 Location Map

The subject property was originally zoned Agriculture. In 2007, the City Council approved the original Master Development Agreement (MDA) for the PUD that provided for the development of 476 multi-family units, a commercial tract, and associated infrastructure improvements. The subject property was never developed and the MDA and CDP expired. The property has remained undeveloped and until a MDA and CDP are approved, executed, and recorded, the property has no permitted uses or building and lot dimensional requirements in effect.

It is difficult to predict future redevelopment options on the subject property, and if the property remains PUD, a new MDA and CDP will need to be established, and it is possible that ongoing amendments to the MDA could be necessary. The list of permitted uses in the MXC and CC zoning districts and the development requirements in the LDC is a more efficient process to develop the site as a commercial node:

- The purpose and intent of the MXC zoning category is to serve as an alternative to the single-use, community-level commercial node in certain settings. A mixed-use center contains a variety of land uses, which may include commercial, office, service, residential, and institutional development, and is focused around a point of high activity, such as an intersection of collectors or higher-classified roads. It is intended to provide a concentration of uses for adjacent neighborhoods and pass-by traffic. The allowable distribution of uses within a mixed-use center is within the following ranges, with the cumulative mixture of percentages equaling 100%:

  - commercial (not including office) 50%-90%;
  - office 10% - 90%;
  - residential 0% - 50%; and
  - institutional 0% - 35%.

  There is a Future Land Use Comprehensive Plan Amendment being processed concurrently with this rezoning that includes a policy to limit the maximum square-footage of non-residential development at 250,000 SF, and the maximum number of residential dwelling units to 276 on the +/- 34.5 acres.

- The purpose and intent of the CC zoning category is to provide for community scale businesses that customarily require freestanding buildings on individual sites.

The rezoning request was reviewed according to the criteria established in Chapter 3, Section 5 of the Land Development Code (LDC) in terms of consistency with the Comprehensive Plan and consistency with the surrounding land uses and zoning.

Access to the property is available off Willow Run Boulevard and Williamson Boulevard. Water and sewer is available and serves the property. 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. As with all development, the specific site development proposals for the subject property are subject to concurrency regulations at the time of development requiring adequate transportation facilities to be provided or for the developer to enter into mitigate agreement for their impacts.
With future development of the property, the Yorktowne Boulevard extension is planned to be built as an urban collector roadway extending from Hidden Lake Drive to Willow Run Boulevard, along with widening of Willow Run Boulevard from Yorktowne Boulevard to Williamson Boulevard (Figure 2). The completion of Yorktowne Boulevard would provide an alternate route for vehicles to cross I-

95 and relieve congestion at the I-95/ Dunlawton intersection. The City currently has the right-of-way for the central segment of Yorktowne Boulevard, along with sufficient right-of-way for improvements to Willow Run Boulevard. City staff and the subject property owner have discussed the dedication of right-of-way to complete the needed right-of-way for Yorktowne Boulevard extension.

Figure 3 – General Alignment for Yorktowne Boulevard

Compatibility with Surrounding Uses and Zoning

The proposed MXC and CC zoning districts are appropriate for their location near the intersection of Williamson Boulevard and Willow Run Boulevard and surrounding properties. Table 1 summarizes the land use and zoning of the adjacent properties and the Future Land Use and Zoning maps are attached (Exhibit A and Exhibit B).

Table 1. Surrounding Land Use & Zoning

Direction	Land Use	Zoning District
North	Vacant	Planned Unit Development (PUD) and Community Commercial
South	I-95	n/a
East	Single-family	R-8SF Single Family Residential and Planned Unit Development (PUD)
West	Williamson Boulevard	n/a

Consistency with Comprehensive Plan

An application for ± 34.5 is being processed to change the Future Land Use (FLU) designation from *Urban High Density Residential* (8-16 units/acre), *Urban Medium Density Residential* (4-8 units/acre), and *Suburban Residential* (2-4 units/acre) to *Mixed-Use Center*. The proposed rezoning to MXC is consistent with the type of land use and density and intensity allowed by the MXC FLU designation proposed for the property. The proposed amendment reduces the maximum number of residential units, increases the maximum non-residential square-footage allowed to be developed on the property, and includes a companion text amendment to limit the

square-footage of non-residential development at 250,000 SF and the maximum number of residential dwelling units to 276.

The ± 5 acres at the northwest corner of the site has a FLU designation of *Commercial* on the City's Future Land Use Map. The proposed rezoning to CC is consistent with the type of land use and density and intensity allowed by the *Commercial* FLU designation.

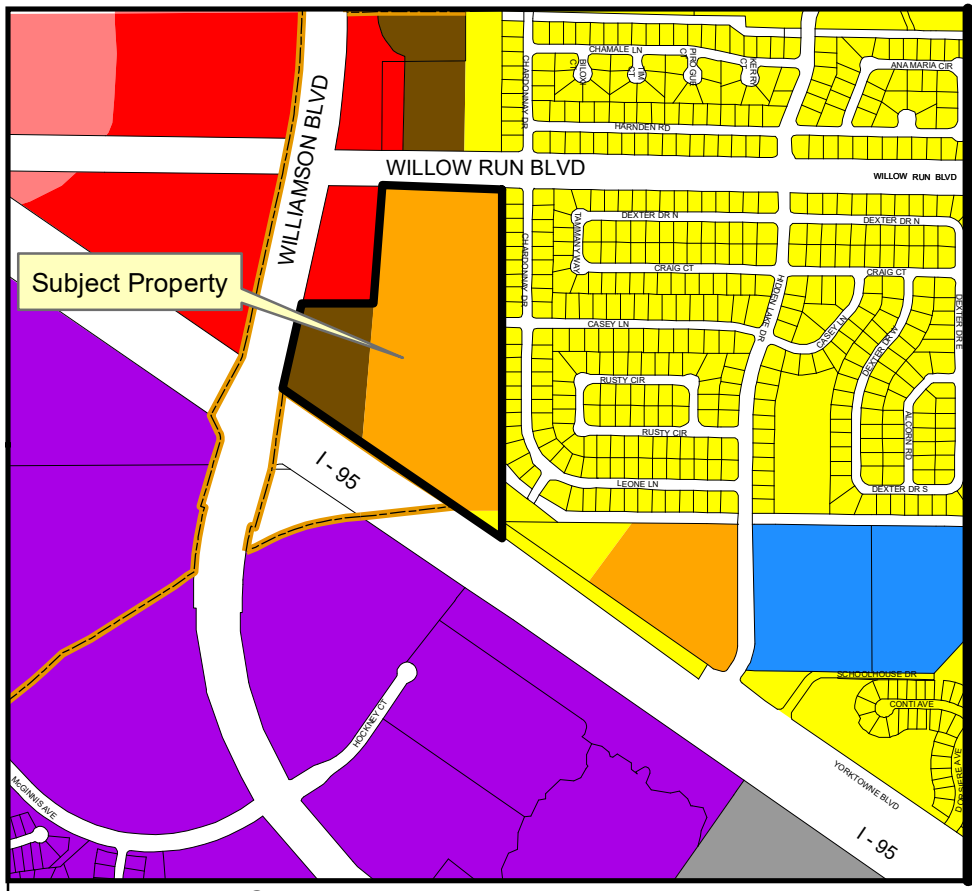
The City has planned for and designated commercial nodes at intersections of major roads in the Future Land Use Element of the Comprehensive Plan. In this case, the subject property is part of a Commercial Node located around the intersection of Williamson Boulevard and Willow Run Boulevard. This node is intended to support the City with a mix of general and specialized retail uses for the surrounding area within a +1-mile radius.

Recommendation:

Staff recommends approval of the request to rezone ±34.5 acres from Planned Unit Development (PUD) to Mixed Use Center (MXC), and ± 5 acres from Planned Unit Development (PUD) to Community Commercial (CC) located on the south side of Willow Run Boulevard, east of Williamson Boulevard.

ATTACHMENTS:

1. Exhibit 1 – Future Land Use Map
2. Exhibit 2 – Current and Proposed Zoning Map



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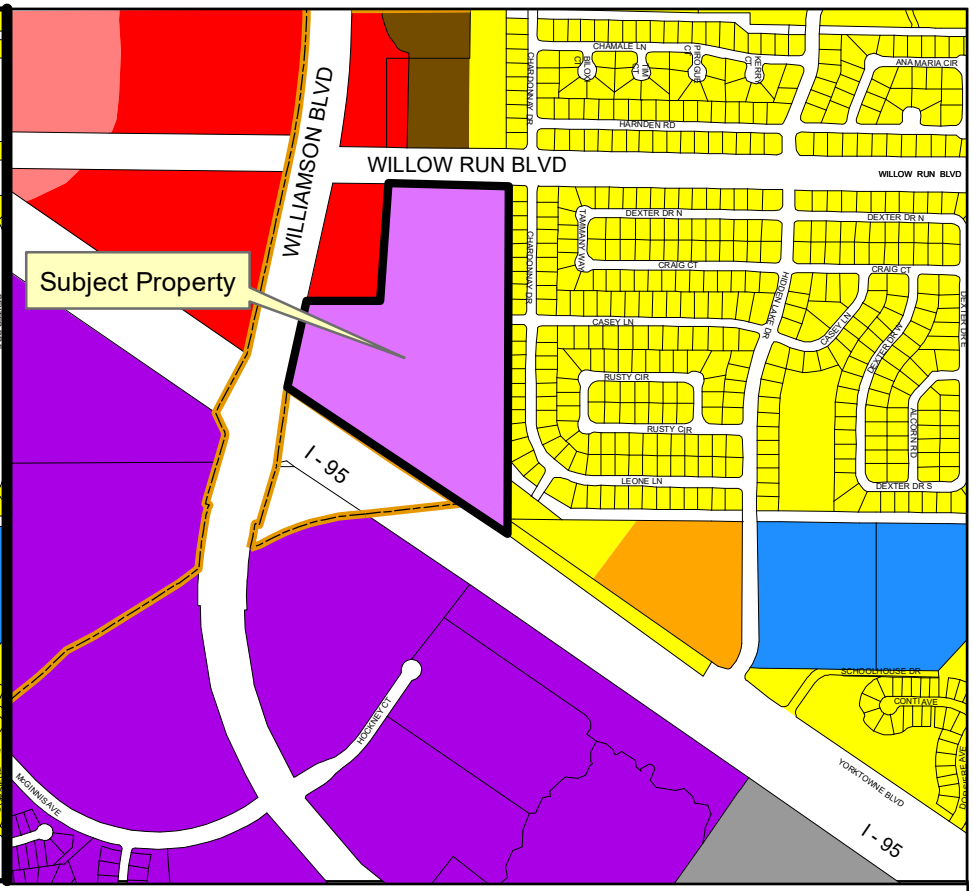

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- Planned Community
- Warehouse/Industrial

CITY OF PORT ORANGE 1867 FLORIDA

EXHIBIT 1

CASE NO. 18-20000002 and 18-60000001

DEPARTMENT OF COMMUNITY DEVELOPMENT

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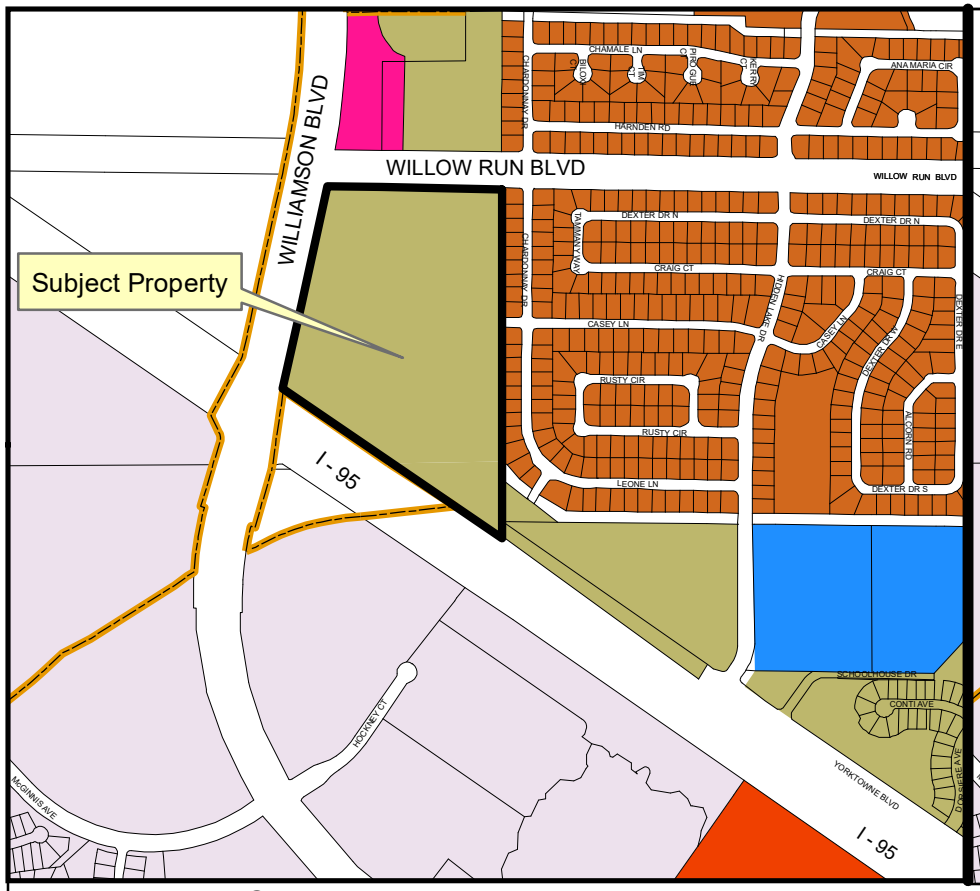

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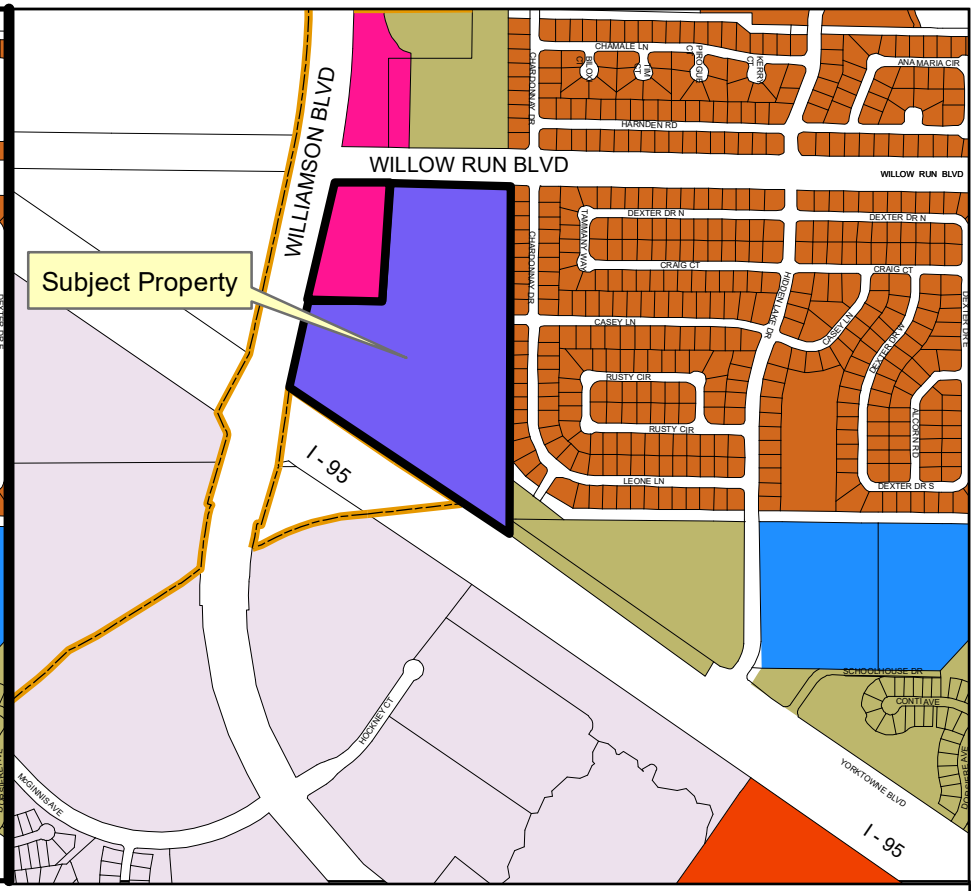

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