Draft

Natural Resources Evaluation Report

Florida Department of Transportation

Florida's Turnpike Enterprise

Orlando South Ultimate Interchange PD&E

SR 528 (MP 4) & SR91 (MP 254)

Orange County, Florida

Financial Project ID No.: 438547-1-22-01

ETDM No.: 14294

Date: December 16, 2019

"The PD&E Study's support documents were developed in consideration of FTE's Express Lanes Master Plan, which was in effect before October 2019. However, during design phase, the concepts will be updated to Managed Lanes criteria. Managed Lanes plan will not have additional tolls on the facility and will not affect the results of the PD&E study (please see Section A.0 – Project Addendum)."

EXECUTIVE SUMMARY

Florida's Turnpike Enterprise (FTE), in conjunction with the Florida Department of Transportation (FDOT) Office of Environmental Management, has initiated a Project Development and Environment (PD&E) study to evaluate potential improvements to the Orlando South Ultimate Interchange in Orange County, Florida. The project area is at the Orlando South Ultimate Interchange at SR 528 (MP 4) and SR 91 (MP 254) and the specific limits for the study are Florida's Turnpike from south of Taft Vineland Road to north of Sand Lake Road (SR 482), and Beachline Expressway from west of John Young Parkway (SR 423) to east of the Beachline West Toll Plaza. Results from the PD&E evaluation are documented below.

Protected Species and Habitats

Federally listed species which may be affected, but are not likely to be adversely affected by the project include:

- Eastern indigo snake (*Drymarchon corais couperi*); and
- Wood stork (*Mycteria americana*).

The project is anticipated to have no effect on the following federally listed species:

- Sand skink (*Neoseps reynoldsi*);
- Florida scrub-jay (*Aphelocoma coerulescens*);
- Crested caracara (*Caracara cheriway*);
- Red-cockaded woodpecker (*Picoides borealis*); and
- Everglade snail kite (*Rostrhamus sociabilis plumbeus*).

There is no adverse effect anticipated on the following state-protected species:

- Gopher tortoise (*Gopherus polyphemus*);
- Florida sandhill crane (*Antigone pratensis canadensis*);
- Wading birds including the little blue heron (*Egretta caerulea*), reddish egret (*Egretta rufescens*), tricolored heron (*Egretta tricolor*), and roseate spoonbill (*Platalea ajaja*); and
- Southeastern American kestrel (*Falco sparverius paulus*).

There is no effect anticipated on the following state-protected species:

- Florida pine snake (*Pituophis melanoleucus mugitus*);
- Florida burrowing owl (*Athene cunicularia floridana*); and

- Shorebirds including the black skimmer (*Rhynchops niger*), and least tern (*Sternula antillarum*).

The project will have no effect on the bald eagle (*Haliaeetus leucocephalus*), southern fox squirrel (*Sciurus niger niger*), or various state-protected bat species. There is no adverse effect anticipated to the Florida black bear (*Ursus americanus floridanus*). These four species or groups of animals which may occur in the project vicinity are not listed as threatened, endangered, or species of special concern (SSC), but receive other legal protection.

Wetlands and Surface Waters

For the Preferred Alternative, approximately 8.91 acres of wetlands considered jurisdictional by the U.S. Army Corps of Engineers (USACE) and South Florida Water Management District (SFWMD) are assumed to be permanently impacted. The 55.96 acres of previously permitted surface water impacts will be replaced in-kind are not considered jurisdictional to either agency. The FDOT will address wetland and/or surface water impacts and provide appropriate wetland mitigation in future phases of this project.

Essential Fish Habitat

In accordance with the Magnuson-Stevens Fishery Conservation and Management Act of 1996 (50 Code of Federal Regulations [CFR] Section 600.920), as amended through January 12, 2007 and as administered by the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS), federal agencies must consult with NMFS regarding any of their actions authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken that may adversely affect essential fish habitat (EFH). As stated in the PD&E Manual Part 2, Chapter 17, NMFS has designated FDOT to conduct EFH consultations in Florida pursuant to 50 CFR § 600.920(c) in a July 19, 2000 letter to Federal Highway Administration (FHWA) and FDOT.

No EFH is documented within or adjacent to the project limits; therefore, no EFH will be impacted.

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ACRONYMS AND ABBREVIATIONS

AET	All Electronic Toll
BGEPA	Bald and Golden Eagle Protection Act
BMP	best management practice
CA	consultation area
CFA	core foraging area
CFR	Code of Federal Regulations
CH	critical habitat
CWA	Clean Water Act
EB	eastbound
EFH	essential fish habitat
EL	Express Lanes
EPA	Environmental Protection Agency
ERP	Environmental Resource Permit
ESA	Endangered Species Act
ETAT	Environmental Technical Advisory Team
ETDM	Efficient Transportation Decision Making
FAC	Florida Administrative Code
FDACS	Florida Department of Agricultural and Consumer Services
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FEGN	Florida Ecological Greenways Network
FGT	Florida Gas Transmission
FHWA	Federal Highway Administration
FLUCFCS	Florida Land Use, Cover, and Forms Classification System
FNAI	Florida Natural Areas Inventory
FPID	Financial Project Identification
FS	Florida Statutes
FTE	Florida's Turnpike Enterprise
FWC	Florida Fish and Wildlife Conservation Commission
GIS	Geographic Information System
GTL	General Toll Lanes
I-Drive	International Drive
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MP	Mile Post
MUID	Mapping Unit Identifier
NB	northbound
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory

OBT	Orange Blossom Trail
OFW	Outstanding Florida Water
PD&E	Project Development and Environment
ROW	right-of-way
SB	southbound
SFH	suitable foraging habitat
SIS	Strategic Intermodal System
SFWMD	South Florida Water Management District
SJRWMD	St. Johns River Water Management District
SPUI	Single Point Urban Interchange
SR	State Road
SSC	species of special concern
UCF	University of Central Florida
UMAM	Uniform Mitigation Assessment Methodology
USACE	United States Army Corp of Engineers
USFWS	United States Fish and Wildlife Service
WB	westbound

A.0 PROJECT ADDENDUM

The development of alternatives for the Orlando South Ultimate Interchange Project Development & Environment (PD&E) Study was completed in consideration of the Florida's Turnpike Enterprise (FTE's) Express Lane Master Plan in effect at the study Notice to Proceed which included the following:

- Two Express Lanes and three General Toll Lanes in each direction on Florida's Turnpike, separated by a buffer with Express Lane Markers
- One Express Lane and three General Toll Lanes in each direction on the Beachline Expressway, separated by a buffer with Express Lane Markers

Incorporation of the Express Lane Plan is included in the supporting documents and analysis.

In October 2019, FTE elected to change its operational approach and will not implement dynamically tolled express lanes on these facilities. The FTE is now implementing a Managed Lane system that restricts truck usage on selected lanes on its facilities without the additional toll. Revised typical sections for Florida's Turnpike and the Beachline Expressway are shown on **Figures A-1 and A-2**.

Figure A-1
Florida's Turnpike Managed Lane Typical Section

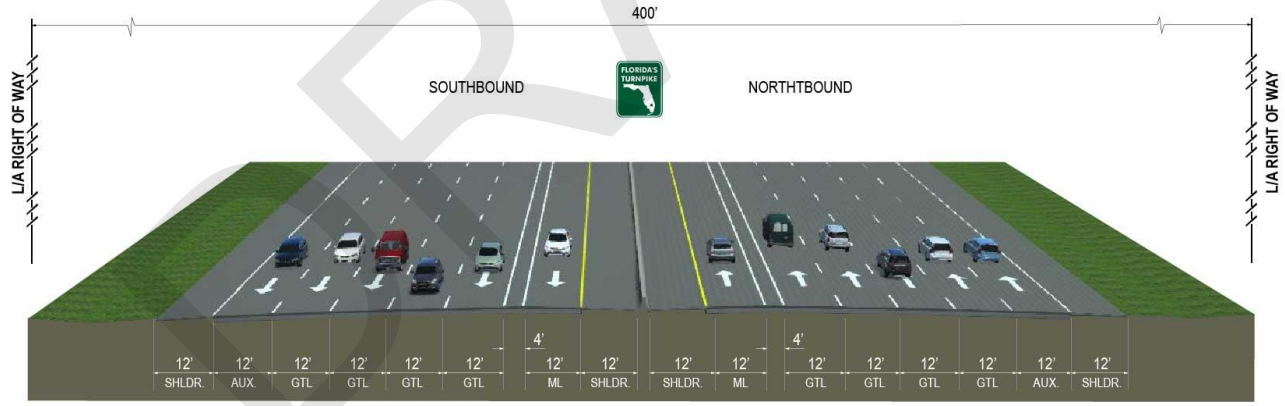
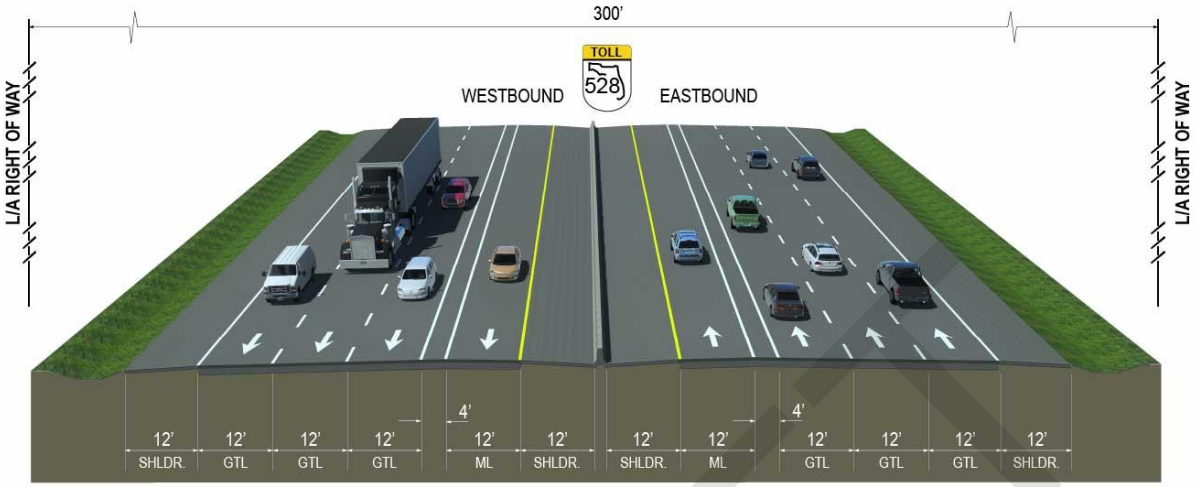


Figure A-2
Beachline Expressway Managed Lane Typical Section



This proposed change will be implemented during final design. The change does not invalidate the results of this study because the proposed footprint of the Florida's Turnpike and the Beachline Expressway is the same as the studied typical section. Therefore, there is no increase in impacts.

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1.0 PROJECT SUMMARY

1.1 Project Description

The Florida Department of Transportation (FDOT), Florida's Turnpike Enterprise (FTE) is conducting a Project Development & Environment (PD&E) Study for the Orlando South Ultimate Interchange at Florida's Turnpike (State Road (SR) 91, Milepost (MP) 254) and Beachline Expressway (SR 528, MP 4), in Orange County, Florida. The project limits are shown on **Figure 1-1: Project Location Map**. The specific project limits for the study are:

- Florida's Turnpike from south of Taft Vineland Road to Sand Lake Road (SR 482), and
- Beachline Expressway from John Young Parkway (County Road (CR) 423) to east of the Beachline West Toll Plaza.

Florida's Turnpike is a limited access facility with four 12-foot (-ft) lanes (two lanes in each direction) south of Taft Vineland Road and eight 12-ft lanes (four lanes in each direction) north of the Beachline Expressway. FTE is currently widening Florida's Turnpike (FPID 411406-1) south of the Beachline Expressway to continue the eight 12-ft lanes typical section. Construction for FPID 411406-1 is expected to be completed by year 2020.

The Beachline Expressway is also a limited access facility with two widening projects under construction within the project limits. Both projects, described below, are expected to be opened to traffic by the summer of 2020.

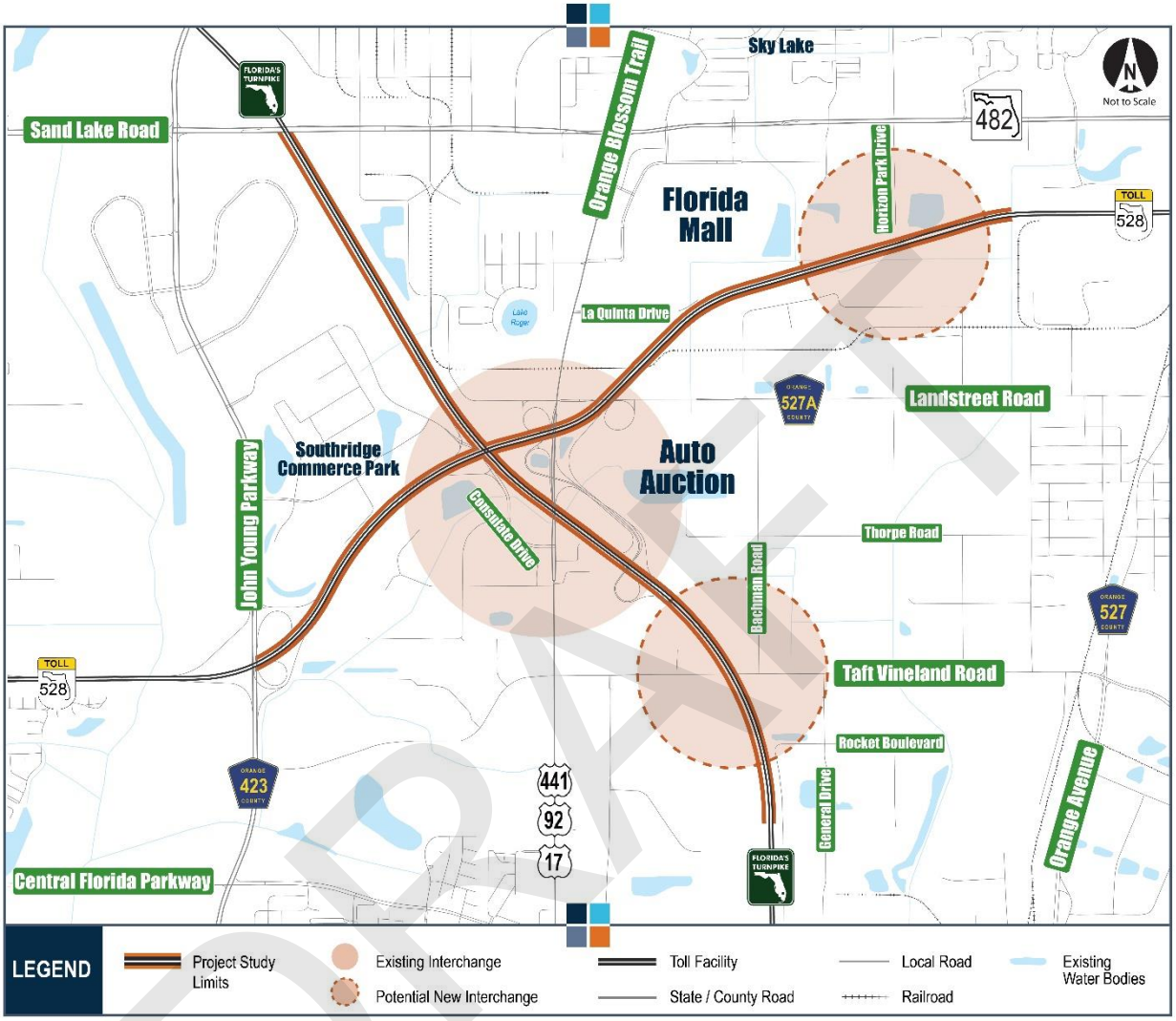
- FPID 406090-5: Widening from four to eight 12-ft lanes with a 4-ft buffer to include two General Toll Lanes (GTLs), two Express Lanes (ELs), and an auxiliary lane in each direction from I-4 (MP 0.0) to Florida's Turnpike (MP 4.3), west of the interchange.
- FPID 437156-1: Widening from six to eight 11.5-ft lanes with a 2-ft buffer to include three GTLs and one EL in each direction from Florida's Turnpike (MP 4.3) to the McCoy Road interchange (MP 8.4), east of the interchange.

Improvements are needed to address traffic needs and optimize safety at Florida's Turnpike and the Beachline Expressway. The alternatives evaluated include:

- New and improved connections between Florida's Turnpike and the Beachline Expressway
- All Electronic Toll (AET)
- Improved connections to local roads to address traffic operations
- Future express lane expansion

This PD&E Study will also include analysis of the No-Build Alternative which would result in no additional improvements except those currently programmed.

Figure 1-1
Project Location Map



1.2 Purpose & Need

The purpose of the Orlando South Ultimate Interchange improvement is to accommodate future travel demands expected along Florida's Turnpike and Beachline Expressway due to increased population, freight demands, and employment opportunities expected in Orange County, Florida. The interchange improvements will also provide improved access to tourist centers, Orlando International Airport, Port Canaveral, and the growing industrial region surrounding the project location.

Within the Orlando South Interchange, there are 13 ramp connections that directly or indirectly connect between the Beachline Expressway, Florida's Turnpike and Orange Blossom Trail (OBT). Although the planned construction of the Florida's Turnpike at Sand Lake Road Interchange will

alleviate demand at some ramps, in the study area, traffic on all facilities is still expected to increase overtime. In order to maintain an acceptable Level of Service (LOS) (LOS D for Florida's Turnpike mainline and LOS E for ramps), Florida's Turnpike will need to be widened to ten lanes by the year 2038 north of the Orlando South Interchange and by the year 2040 to the south of the interchange under the No-Build scenario. Additionally, total freight movements across Orange County are expected to increase by up to 58% by 2040, which will place higher traffic demands on designated Strategic Intermodal System (SIS) corridors like Florida's Turnpike and Beachline Expressway.

The Florida Future Corridors Initiative has recommended improvements be made to Florida's Turnpike and Beachline Expressway near Orlando to accommodate future traffic demands. Currently, Beachline Expressway is the only limited access roadway that provides a high-speed connection between Orlando and Brevard County. The interchange improvements, along with existing plans to widen Beachline Expressway to eight lanes from I-4 to McCoy Road (Financial Project Identification (FPID) Nos. 406090-5 and 437156-1) will address these needs. Currently, this area is home to Southpark Center with over 2.9 million square feet of building space.

Although not directly serviced by the interchange, the Orange County Convention Plaza Overlay District and International Drive (I-Drive) are located approximately four miles to the west of the project location. Universal Orlando has also recently acquired approximately 500 acres of vacant land between the project location and I-Drive, which has been zoned for theme park use and is expected to be developed as such in the future.

These developments will contribute to increasing traffic volumes on the limited access roadways that connect the area with other parts of the state, such as, Florida's Turnpike, Beachline Expressway and I-4. Improvements on interchanges that surround this area of future growth relieve congestion and provide efficient access to new development from multiple limited access facilities.

2.0 ALTERNATIVES ANALYSIS

2.1 Project Alternatives

2.1.1 No-Build (No Action) Alternative

The future No-Build network includes the following planned and programmed improvements within the study area:

- Florida's Turnpike mainline widening (FPID No. 411406-1) from four to eight lanes: two General Toll Lanes (GTL) and two Express Lanes (EL) in each direction. This project extends from the Osceola Parkway Interchange at MP 248.93 to the Orlando South Interchange at MP 254. It will include widening ramps to/from the north at Orlando South to two lanes. It is expected to be completed by year 2020.
- Implementation of ELs on Florida's Turnpike from the Orlando South Interchange to I-4 (MP 254 to 259) and direct connect ramps to/from I-4 (FPID No. 437166-2 and 437987-3). This project is expected to be implemented by year 2021/2022. It includes an EL ingress/egress weaving zone between Sand Lake Road and I-4, direct connection of the ELs from Florida's Turnpike (south of I-4) to I-4 (east of Florida's Turnpike) and widening of ramps to/from the north at the I-4 Interchange. The I-4 ramps, to/from the north, will be converted to AET. This project will also include implementation of the following interim improvements at the Florida's Turnpike southbound (SB) off-ramp terminal intersection with Consulate Drive: an exclusive SB right-turn lane with a receiving lane along Consulate Drive, a second westbound (WB) left-turn lane, and a second receiving lane on the WB on-ramp to Beachline Expressway that terminates upstream of the gore. FTE has subsequently deferred EL implementation until after completion of the Sand Lake Road Interchange.
- The Beachline Expressway widening (FPID No. 406090-5) from four to eight lanes to include two GTLs, two ELs, and an auxiliary lane in each direction from I-4 (MP 0.0) to Florida's Turnpike (MP 4.3). This project is expected to be opened to traffic by the summer of 2019.
- The Beachline Expressway widening (FPID No. 437156-1) from six to eight lanes to include three GTLs and one EL in each direction from Florida's Turnpike (MP 4.3) to the McCoy Road Interchange (MP 8.4). This project is expected to be opened to traffic by year 2019.
- Orlando South Interchange resurfacing (FPID No. 437156-2). This project includes widening of the combined WB Beachline Expressway and SB OBT to Florida's Turnpike ramp from one to two lanes. The two-lane ramp is expected to be opened to traffic by year 2019.

- Florida's Turnpike Interchange at Sand Lake Road at MP 257 (FPID No. 433663-1). This will be a full interchange with tolled ramps to and from the north. Construction is expected to begin in late 2021.
- Express lane implementation on Florida's Turnpike (FPID No. 433633-2). This project is a "Goes-With" the Sand Lake Road Interchange (FPID No. 433633-1).
- AET conversion at all tolled ramps (FPID No. 441322-1). Conversion is expected in summer of 2020.
- Single Point Urban Interchange (SPUI) at the Sand Lake Road and John Young Parkway intersection. The construction of the SPUI is complete.
- Taft Vineland Road widening from two to four lanes from OBT to the bridge over Florida's Turnpike.
- Sand Lake Road and Destination Parkway widening to six lanes just west of John Young Parkway.

Most of the planned improvements are within FTE's system and will be funded by FTE. The only exceptions are the last three listed projects which are being designed and constructed by others.

Traffic operations with the planned and programmed improvements are expected to be at unacceptable levels within the Orlando South Interchange in the 2045 design year.

2.1.2 Viable Build Alternatives

The viable alternatives developed include the improvements identified in the No-Build and additional improvements to meet FTE needs for enhancing safety, addressing traffic needs, improving travel time reliability and providing long-term mobility for the Orlando South Interchange.

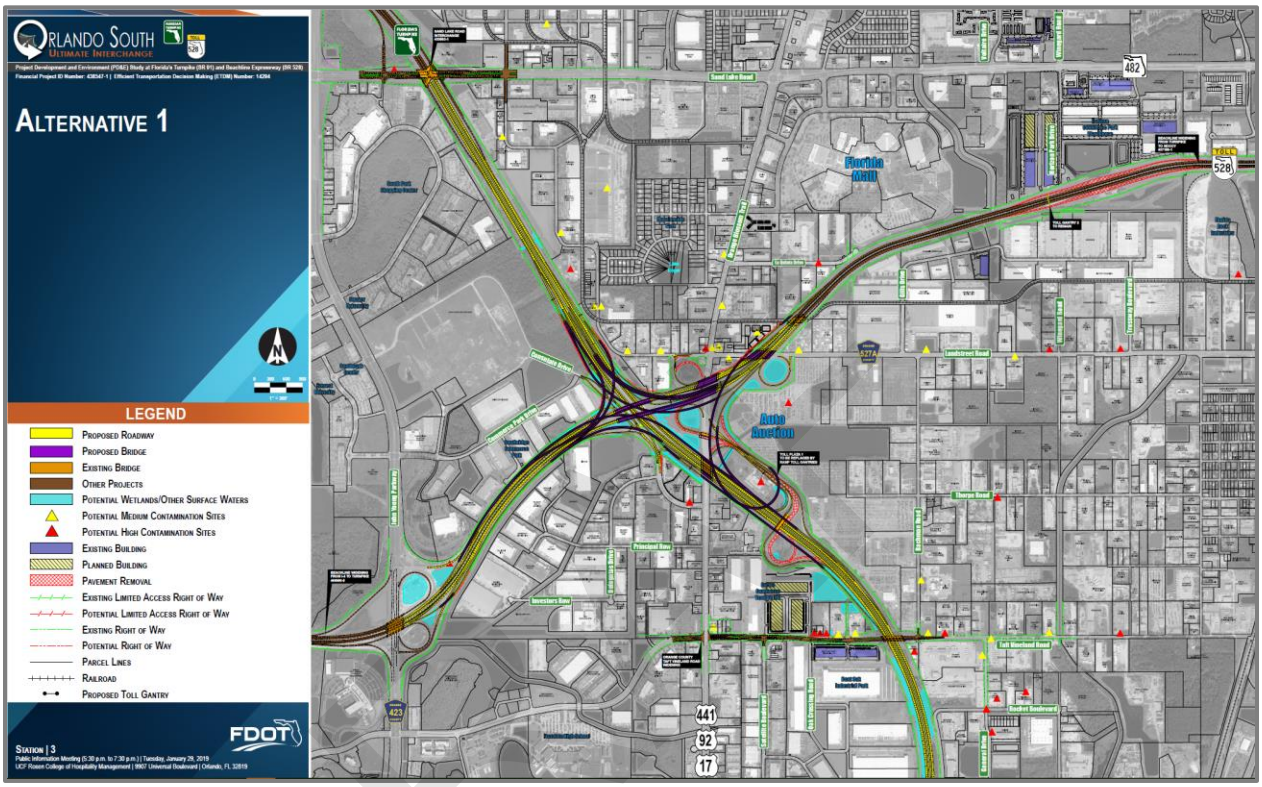
2.1.2.1 Build Alternative 1

Based on meeting the basic project needs, with least costs and impacts, the "D" concept was selected as Build Alternative 1, shown on **Figure 2-1**. Build Alternative 1 meets all project objectives except the dispersing of surface street traffic and includes:

- Directional GTL systems ramps;
- Directional north/east EL ramps;
- Realignment of the Beachline Expressway to provide longer spans for a ten-lane Florida's Turnpike typical section;
- Maintaining the Landstreet Ramps connected to the Beachline Expressway;
- Maintaining Consulate Drive entry/exit ramps connected to the Beachline Expressway and the SB exit from Florida's Turnpike with a Diverging Diamond Interchange;

- Modifications to the remaining OBT ramps to preclude weaving;
- A new SB entry ramp to Florida's Turnpike SB via Consulate Drive;
- A new more direct entry to Florida's Turnpike northbound (NB) from OBT SB;

Figure 2-1
Build Alternative 1



- A new SB Florida's Turnpike to NB OBT flyover to provide a higher speed ramp;
- Use of the SB Florida's Turnpike exit to Consulate Drive for access to OBT SB; and
- Ramp braiding between John Young Parkway and Consulate Drive to preclude adverse weaving.

Build Alternative 1 has right-of-way (ROW) impacts on the north side of the Beachline Expressway from east of Florida's Turnpike to east of Landstreet Road. These impacts are caused by the geometric requirements of the systems ramps connected to the WB Beachline Expressway. The WB Beachline Expressway exit to SB Florida's Turnpike has significant impacts to the Blossom Park Condominiums and Travelodge Hotel. These impacts could not be avoided due to the space required for the express direct connections in the median of the Beachline Expressway and realignment of the eastbound (EB) Beachline Expressway lanes.

Additional impacts along Florida's Turnpike are needed to spread the median of Florida's Turnpike for the express direct connections. This need requires:

- ROW acquisition in the northwest and northeast quadrants of the interchange; and
- The relocation of a Florida Gas Transmission (FGT) valve station that is located outside the east ROW of the Florida's Turnpike, just north of the Beachline Expressway.

Other project impacts include:

- The relocation of a single FGT line between the NB OBT exit and the valve station as well as a crossing of the Florida's Turnpike south of the Beachline Expressway; and
- Acquisition of limited access rights without acquisition of property along the east side of Consulate Drive for the construction of the SB entry to SB Florida's Turnpike.

The analysis of Build Alternative 1 revealed improvements in surface street and ramp travel times, particularly the delay at the Consulate Drive/OBT intersection.

2.1.2.2 Build Alternative 2

Based on best improvement to surface street operations, two "C" concepts were developed as Build Alternative 2, Options 1 and 2. Alternative 2 options meet all project objectives by including the improvements in Alternative 1, plus two new interchanges for surface street access away from the Orlando South Interchange. The construction of the new interchanges improves safety and operations by removing selected surface street ramps at the Orlando South Interchange. The differences in Options 1 and 2 are based on differences in the configuration of the reliever interchanges. The options provided functionally equivalent access and level of service. However, the reliever interchanges have different impacts, shown on **Figures 2-2** and **2-3**.

Figure 2-2
Build Alternative 2 Option 1

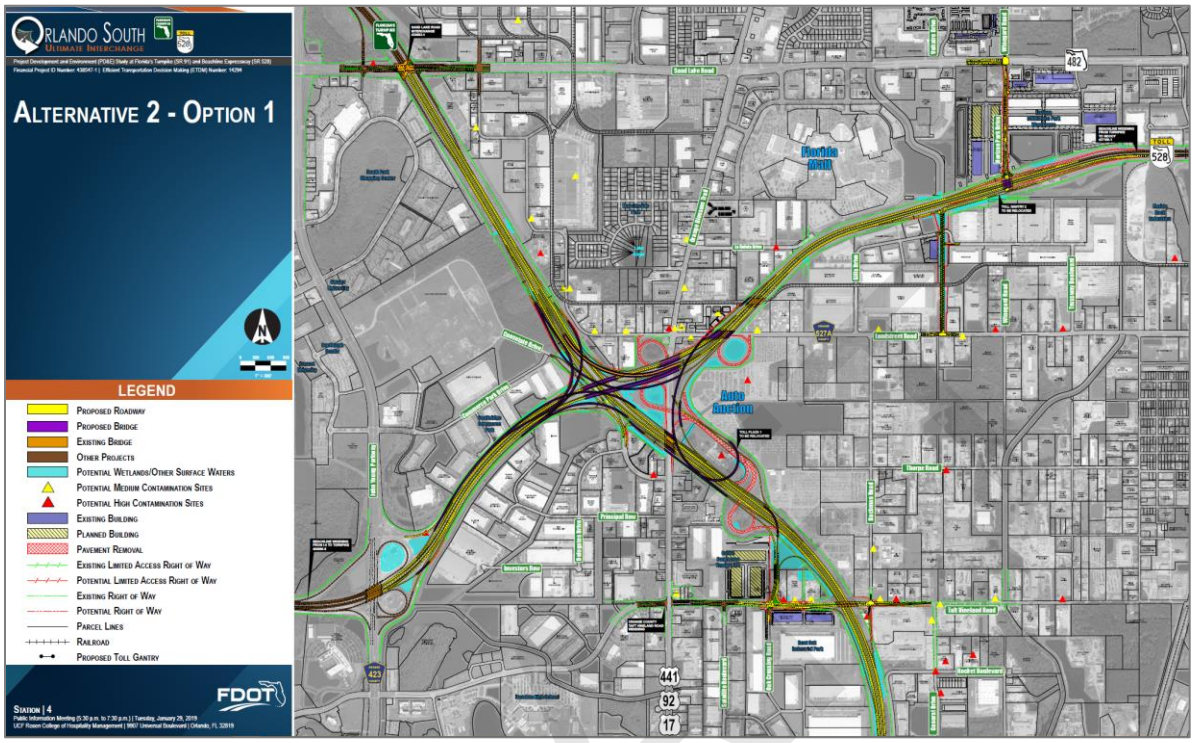
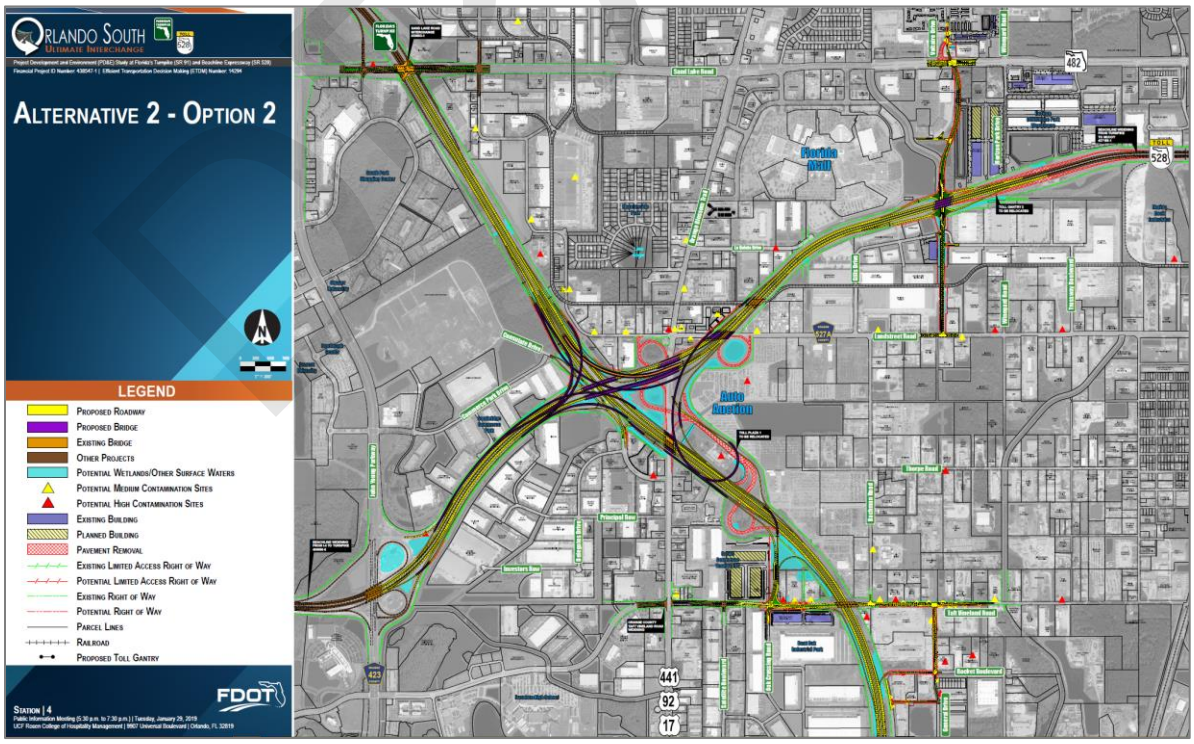


Figure 2-3
Build Alternative 2 Option 2



Common issues for both options include:

- Improvements and impacts identified in Build Alternative 1;
- The removal of Landstreet Road ramps connecting to the Beachline Expressway;
- The removal of OBT ramps to/from south at the Orlando South Interchange;
    - NB OBT NB/SB Florida's Turnpike;
    - NB Florida's Turnpike to SB OBT; and
- Construction of two new reliever interchanges at Florida's Turnpike and the Beachline Expressway.

A description of each reliever interchange option is provided below.

Florida's Turnpike Reliever Interchange

The configuration includes:

- Trumpet style interchange in the northwest quadrant;
- Modification of the proposed Taft Vineland Road median to accommodate dual left-turn lanes EB;
- A diamond ramp (EB to SB) in the southeast quadrant with minor ROW acquisition, depending on design speed of the ramp and compatibility with a sidewalk crossing; and
- Impacts to FGT for NB exit crossing at-grade, which could be addressed with a local relocation.

These common elements require the acquisition of five parcels northwest of the Taft Vineland bridges over Florida's Turnpike. Partial acquisition of a stormwater management facility for the Crews development is also required.

Two options for the northbound (NB) exit ramp were carried forward for the Build Alternative 2:

- Alternative 2 – Option 1

  This option includes a NB exit, directly connected to Taft Vineland Road, east of the Turnpike. This option requires total acquisition of the Truck Services parcel and minor impacts to the Orlando Terminals parcel to the east; and

- Alternative 2 - Option 2

  Includes a NB exit to Rocket Boulevard with arterial connections to Taft Vineland Road. This option requires termination of Rocket Boulevard where the alignment changes from north-south to east-west for limited access limits. Impacts and mitigation for these impacts include:

- A new connector road linking Rocket Boulevard to General Drive. This road mitigates circuitous access for parcels on the north/south leg of Rocket Boulevard but impacts two parcels.
- An additional NB lane on General Drive (Rocket Boulevard to Taft Vineland Road) to accommodate added traffic from the exit.
- An additional WB lane on Taft Vineland Road (General Drive to Bachman Road) beyond the limits of Orange County's widening to accommodate added traffic from the exit.

Beachline Expressway Reliever Interchange

Two concepts were identified for the Beachline Express reliever Interchange. Both concepts include a new four-lane divided arterial facility, connecting the Beachline Expressway with Sand Lake Road to the north and Landstreet Road to the south. Both concepts require a replacement of the Beachline Expressway toll gantry. This gantry is currently being modified with narrow shoulders to accommodate an eight-lane typical section, as part of the current Beachline Expressway widening project (FPID No. 437156-1). One of the advantages of the Beachline Expressway reliever is that the ROW used by the existing toll plaza could be repurposed for ramps for a new interchange. The removal and replacement of the toll site to the east was identified in the AET Conversion Report for the Beachline Expressway (January 2019) and is included as part of the Orlando South Ultimate Interchange improvements.

Both concepts include a common southern arterial alignment that parallels a Duke Energy easement and crosses four stormwater ponds for adjoining parcels. Potential impacts of this common element include:

- A major twin 10-foot x 7-foot box culvert under the Beachline Expressway which may need replacement based on additional fill. Replacement will require realignment, which will in turn impact Orange County canal and drainageways;
- Additional space for replacement of impacted storm water capacity for off-site parcels;
- A new at-grade crossing for CSX spur;
- Parking on the south leg near Landstreet Road;
- Duke Energy easement along the alignment; and
- A new signalized intersection at Landstreet Road.

Two options were developed for the north leg of this reliever interchange. The difference in the concepts are alignment and the resulting interchange type. These options were incorporated into Alternative 2 – Options 1 and 2, described below:

Alternative 2 - Option 1

The north arterial leg includes using the existing Horizon Park Drive alignment by widening to a four-lane divided arterial facility. When combined with the common south leg, this arterial results in a split interchange. Additional impacts associated with Alternative 2 - Option 1 include:

- Parking impacts to developed parcels along this corridor;
- Potential impacts to the water treatment facility at Sand Lake Road;
- Relocation of electrical distribution lines along the west side of Horizon Park Drive;
- Signal pole adjustments at Sand Lake Road; and

Alternative 2 - Option 2

The north arterial leg is an extension of the southern alignment along the east side of the Terrace at Florida Mall. The intersection with Sand Lake Road includes a realignment of Voltaire Drive north of Sand Lake Road to form the fourth leg of this intersection. A SPUI at the Beachline Expressway was selected. Additional impacts associated with Alternative 2 - Option 2 include:

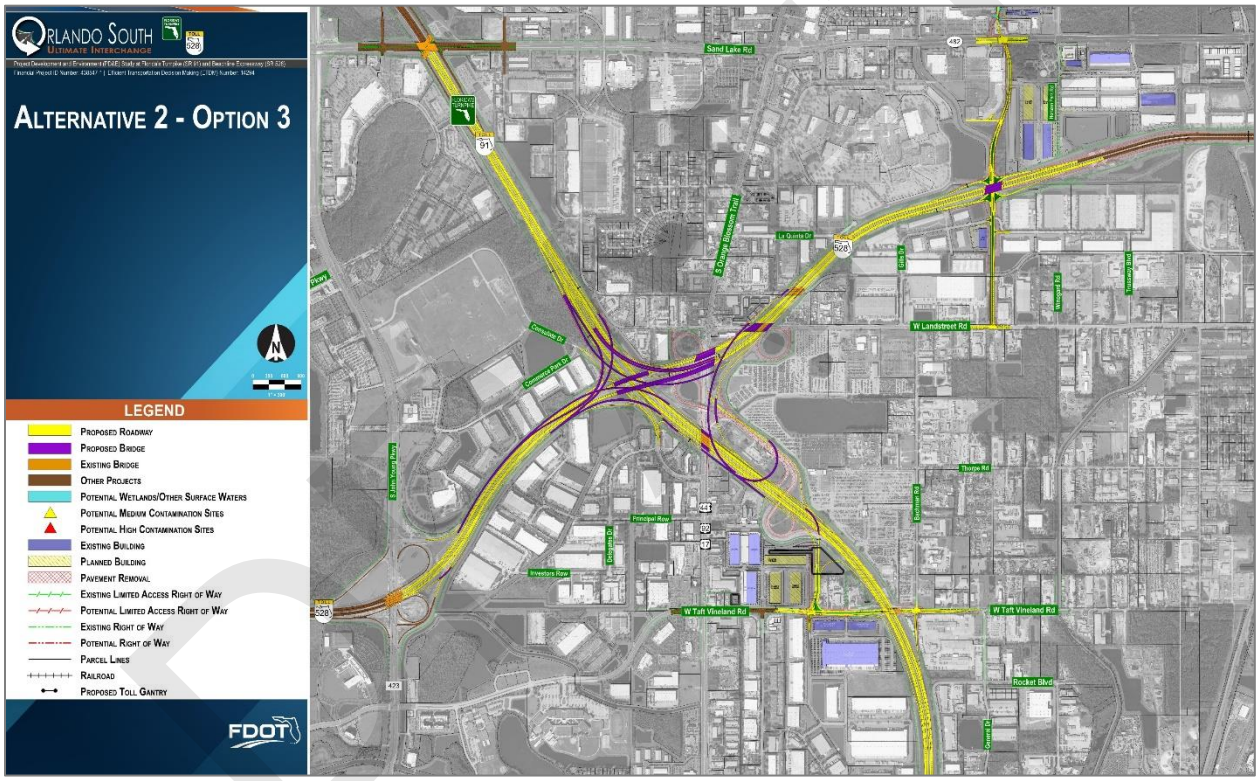
- Additional existing pond and canal impacts;
- ROW acquisition of a vacant parcel in the southeast quadrant of Sand Lake Road and the new alignment and ROW impacts to the Terrace at Florida Mall;
- Closure of the east Sand Lake Road entrance for the Terrace at Florida Mall parcel (primarily used as a service entrance for businesses). To mitigate this closure a new connection along the new arterial alignment is provided;
- The Voltaire Drive realignment has access management modifications on Sand Lake Road, including revised signalization and median closure to the west;
- The realignment of Voltaire Drive requires the acquisition of a 7-11 convenience store and minor impacts to Sandlake Palazzo and Las Palmas at Sand Lake Road Condominium Villas; and
- Relocation of transmission and distribution electrical lines along the south side of Sand Lake Road and the east side of the Terrace at Florida Mall.

2.1.2.3 Selection of a Preferred Alternative

The three viable alternatives were displayed for public comment on January 29, 2019, at a Public Information Meeting held at the University of Central Florida (UCF) Rosen College of Hospitality Management, 9907 Universal Boulevard, Room 124, Orlando, FL 32819.

At the end of the Public Information Meeting, there was a preference for a modified Alternative 2 that includes the Option 1 interchange for the Florida's Turnpike reliever interchange and Option 2 for the Beachline Expressway reliever interchange. This combined alternative was designated as Alternative 2 - Option 3 and is shown in **Figure 2-4**.

Figure 2-4
Build Alternative 2 Option 3



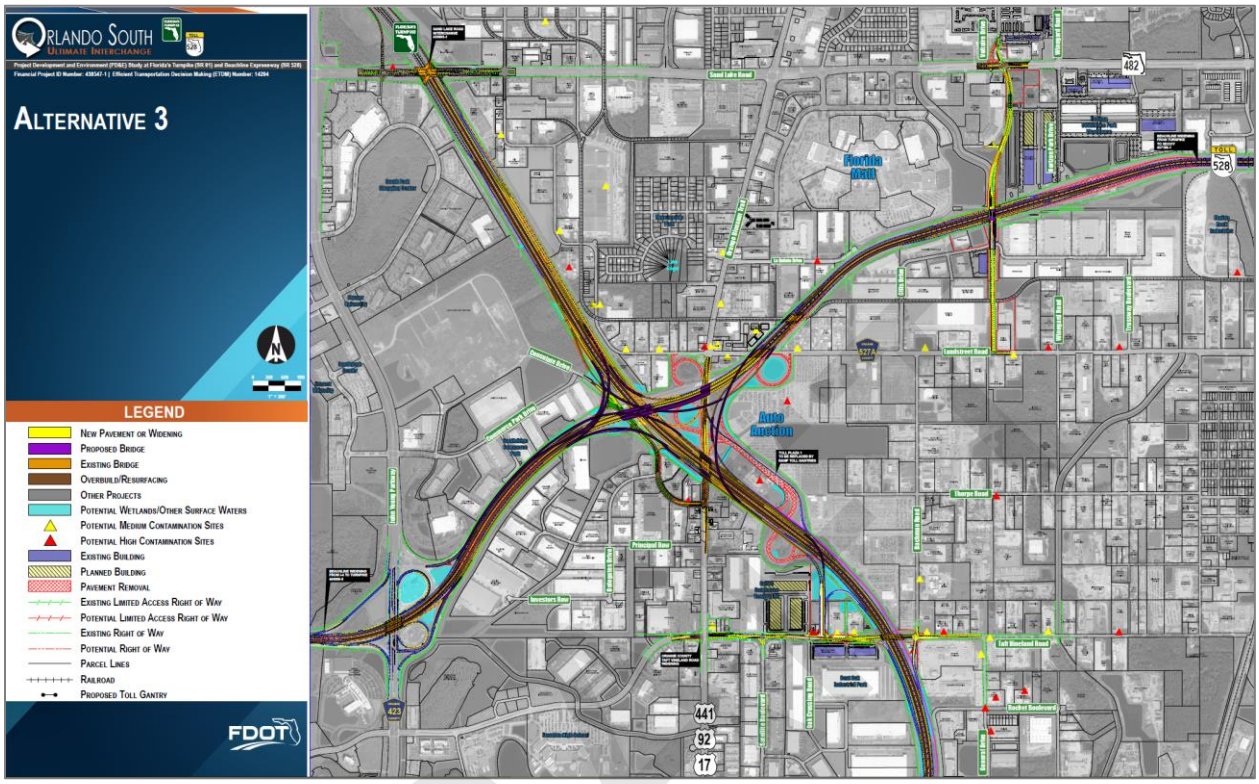
After the Public Information Meeting, further refinement was made to Alternative 2 Option 3 to reduce ROW impacts and improve the overall design. The following refinements that impacted ROW were made either before or in conjunction with the formal Value Engineering review:

- The express direct connections connecting WB Beachline Expressway to NB Turnpike and SB Turnpike to WB Beachline were deleted due to high costs and impacts, and low anticipated usage. This change allowed for the southward shift of the WB Beachline expressway, substantially reducing impacts to the north side of the Beachline expressway;

- To address anticipated queing from the Sand Lake Road Interchange, an NB collector distributor road was added. The eastern retaining wall of the collector distributor road is 16 feet clear of the existing ROW. Thus, the only impacts associated with this improvement is an existing FGT line;
- The SB Turnpike to NB OBT flyover was removed from the project, and this traffic must use the exit to Consulate Drive to access OBT NB. To address the additional traffic, the Consulate drive/OBT intersection was modified to increase efficiency. These improvements included access management modifications, a third EB left-turn, and a turbo configuration. There are no ROW impacts associated with these changes;
- The Voltaire Drive Extension Interchange was reconfigured from a SPUI to a Tight Urban Diamond Interchange to reduce impacts. The profiles were modified such that the Beachline Expressway remains at grade. Minor alignment modifications were added on Voltaire Drive north of Sand Lake Road to reduce impacts; and
- The Taft Vineland Road Interchange was modified to reduce access impacts, west of the Turnpike. In addition, the EB to SB ramp was modified to eliminate ROW acquisition in the southwest quadrant. East of the Turnpike, the NB exit and the transition to the existing two-lane Taft Vineland Road was modified to minimize impacts. However, approximately seven extra feet of ROW is required along the west side of Bachman Road to add a turn lane.

This preferred alternative includes the refinements described above as well as potential ponds sites and is shown on **Figure 2-5**.

Figure 2-5
Build Alternative 3



3.0 EXISTING ENVIRONMENTAL CONDITIONS

3.1 Soils

For the purposes of this report, the project study area consists of the footprint of the Preferred Alternative and a 250-ft buffer of those limits. According to the Natural Resources Conservation Service (NRCS) Soil Survey of Orange County (1989), the three most prevalent soils in the project study area are Smyrna-Smyrna, Wet, Fine Sand, Zero to Two Percent Slopes (Mapping Unit Identifier (MUID) 44), St. John's Fine Sand (MUID 37), and Basinger Fine Sand, Frequently Ponded, Zero to One Percent Slopes (MUID 3). Two existing soil types, Basinger Fine Sand, Frequently Ponded, Zero to One Percent Slopes (MUID 3) and Sanibel Muck (MUID 42), are classified as state hydric. All soils documented within the project study area and their relative acreages are in **Table 3-1**. Project study area soil types are described in more detail and depicted in **Appendix A**.

Table 3-1
Existing NRCS Soil Types within Project Study Area

MUID	Soil Type	Hydric Status	Acres	Percent of Total Study Area
1	Arents, Nearly Level	Non-hydric	2.99	0.27
3	Basinger Fine Sand, Frequently Ponded, 0 to 1 Percent Slopes	Hydric	63.91	5.78
20	Immokalee Fine Sand	Non-hydric	50.16	4.54
26	Ona Fine Sand, 0 to 2 Percent Slopes	Non-hydric	44.58	4.03
33	Pits	Unranked	0.58	0.05
34	Pomello Fine Sand, 0 to 5 Percent Slopes	Non-hydric	20.23	1.83
42	Sanibel Muck	Hydric	29.26	2.65
44	Smyrna-Smyrna, Wet, Fine Sand, 0 to 2 Percent Slopes	Non-hydric	680.33	61.52
45	Smyrna- Urban Land Complex	Non-hydric	34.32	3.10
37	St. John's Fine Sand	Non-hydric	147.37	13.33
50	Urban Land	Unranked	1.58	0.14
99	Water	Unranked	30.63	2.77
	Total		**1105.94**	**100**

3.2 Land Use and Cover Types

Land use was reviewed within the study area using the 2014 data layer from the South Florida Water Management District (SFWMD). Habitats were subsequently field verified on February 27, 2018 and land use/land cover mapping was updated to reflect the current field conditions. Notably, construction related to the widening of SR 91 was occurring at that time. A project-specific Florida Land Use, Cover and Forms Classification System (FLUCFCS) map was prepared. A map depicting project area land uses and land use descriptions are provided in **Appendix B**. **Table 3-2** provides a summary of the land use/land cover types.

The major land use/land cover classifications within the study area, in order of frequency, include Transportation (FLUCFCS 8100 ~ 32%), Commercial and Services (FLUCFCS 1400 ~ 31%), Reservoirs (FLUCFCS 5300 ~ 7%), and Roads and Highways (FLUCFCS 8140 ~ 4%). These categories account for approximately 74% of the land use/land cover within the study area. There are natural wetlands and roadside ditches which qualify as surface waters within the study limits. **Appendix C** contains representative habitat photos.

Table 3-2
Existing Land Use/Land Cover (FLUCFCS) within Study Area

FLUCFCS Code		FLUCFCS Description	Acres	Percent of Total Study Area
1000: URBAN AND BUILT UP	1330	Multiple Dwelling Units, Low Rise	6.56	0.59
	1400	Commercial and Services	339.85	30.73
	1410	Retail Sales and Services	30.78	2.78
	1420	Wholesale Sales and Services	20.54	1.86
	1490	Commercial and Services Under Construction	34.58	3.13
	1550	Other Light Industry	31.42	2.84
	1630	Rock Quarries	3.03	0.27
	1770	Institutional	5.55	0.50
	1900	Open Land	43.37	3.92
	Total		515.68	46.63
4000: UPLAND FOREST	4100	Pine Flatwoods	0.53	0.05
	4200	Upland Hardwood Forests	2.87	0.26
	4340	Upland Mixed Coniferous / Hardwood	22.62	2.05
	4410	Coniferous Plantations	30.85	2.79
	Total		56.87	5.14
5000: WATER	5120	Channelized Waterways, Canals	19.73	1.78
	5130	Chanelized Waterways, Ditches	6.62	0.60
	5300	Reservoirs	80.81	7.31
	Total		107.16	9.69
6000: WETLANDS	6170	Mixed Wetland Hardwoods	1.71	0.15
	6210	Cypress	16.92	1.53
	6300	Wetland Forested Mixed	1.41	0.13
	6310	Wetland Scrub	1.43	0.13
	6410	Freshwater Marshes	1.18	0.11
	Total		22.65	2.05
8000: TRANSPORTATION, COMMUNICATION & UTILITIES	8100	Transportation	356.04	32.19
	8140	Roads and Highways	42.04	3.80
	8190	Transportation Facilities Under Construction	3.16	0.29
	8330	Water Supply Plants - Including Pumping Stations	2.34	0.21
	Total		403.58	36.49
		Total	**1105.94**	**100.00**

3.3 Significant Waters and Protection Areas

There are no significant waters within or adjacent to the study area. No Outstanding Florida Waters (OFWs) or essential fish habitat (EFH) occur within or adjacent to the study area. Additionally, there are no rivers designated as Wild and Scenic Rivers as defined in Part 2, Chapter 12 of the PD&E manual. The Florida Ecological Greenways Network (FEGN) has not identified the project area on its priority assessment list.

The SFWMD owns regulatory mitigation lands on multiple parcels approximately 0.1 miles to the west of the project limits on the west side of John Young Parkway. These parcels abut Shingle Creek and include habitats of bottomland cypress swamps. There is a conservation easement over the majority of Wetland 3 which is in a proposed pond location. Other parks and conservation lands are depicted in **Figure 3-1**.

INSERT FIG 3-1 CONSERVATION LANDS MAP

4.0 PROTECTED SPECIES AND HABITAT

This project was evaluated for impacts to wildlife and habitat resources, including protected species, in accordance with 50 Code of Federal Regulations (CFR) Part 402 of the Endangered Species Act (ESA) of 1973, as amended, the Florida Endangered and Threatened Species Act, Section 379.2291, Florida Statutes (FS), and Part 2, Chapter 16 of the 2019 FDOT PD&E Manual titled Protected Species and Habitat. The project area does not fall within U.S. Fish and Wildlife (USFWS) designated critical habitat (CH) for any species. The project falls entirely within the USFWS consultation areas (CAs) of the Florida scrub-jay (*Aphelocoma coerulescens*), red-cockaded woodpecker (*Picoides borealis*), Everglade snail kite (*Rostrhamus sociabilis plumbeus*), and sand skink (*Neoseps reynoldsi*). The southern limits of the project fall within the CA of the crested caracara (*Caracara cheriway*). The project falls partially or entirely within the core foraging areas (CFAs) of four wood stork (*Mycteria americana*) colonies: Gatorland, Lake Mary Jane, Lawne Lake, and Eagle Nest Park.

4.1 Agency Coordination

This project was evaluated through the FDOT's Efficient Transportation Decision Making (ETDM) process (ETDM Project No. 14294). The purpose of the ETDM tool is to incorporate environmental considerations into transportation planning to inform project delivery. An ETDM Programming Screen Summary Report was published on May 5, 2017 and contains comments from the Environmental Technical Advisory Team (ETAT) on the project's effects on various natural, physical, and social resources. The Florida Fish and Wildlife Conservation Commission (FWC), USFWS, and Florida Department of Agriculture and Consumer Services (FDACS) were commenting agencies for Wildlife and Habitat.

Wildlife and Habitat was assigned a degree of effect of 2 – Minimal. Specific concerns regarding impacts to suitable foraging habitat (SFH) for the federally threatened wood stork were raised by the USFWS. Impacts to wetlands and surface waters which could provide SFH for the species will be avoided and minimized. In instances where impacts are unavoidable, mitigation will be provided, therefore no net loss in wood stork SFH is anticipated.

4.2 Methodology

Literature reviews, agency database searches, and field reviews of potential habitat areas were conducted to identify state and federally protected species occurring or potentially occurring within the project area. The Orange County Soil Survey, recent aerial imagery (2018), and SFWMD land use/land cover mapping were reviewed to determine habitat types occurring within and adjacent to the project corridor. As discussed in Section 3.0, land use/land cover mapping was updated to reflect the current field conditions.

Information sources and databases reviewed for the project include the following:

- USFWS databases;
- Florida Natural Areas Inventory (FNAI) protected plant and animal species lists;
- Orange County soil survey (current);
- FWC – Bald Eagle (*Haliaeetus leucocephalus*) Nest Locator for Orange County (2016-2017 nesting season data);
- FWC – Waterbird colony locator (1999);
- USFWS – CH for threatened and endangered species;
- USFWS – Central Florida wood stork CFAs (15-mile radius); and
- FDOT's ETDM Summary Report 2017 (ETDM Project No. 14294).

Figure 4-1 depicts field observations as well as historic species occurrences from database searches. Based on the results of database searches, preliminary field reviews, and review of aerial photographs and soil surveys, field survey methods for specific habitat types and tables of potentially occurring protected fauna and flora were developed.

Field reviews consisted of vehicular and pedestrian surveys through natural areas and altered habitats with the potential to support protected species. In the absence of physical evidence of a protected species, evaluation of the appropriate habitat along with regional occurrence data was conducted to determine the likelihood of a species being present.

Project scientists conducted initial general surveys on February 27, 2018; a subsequent field review specifically targeting state-protected bats was conducted on March 28, 2019. At each field event, the field team consisted of ecologists with bachelor's degrees in a biological science, and several years of field experience in Florida ecosystems.

Using vehicular and pedestrian survey methods during daylight hours, appropriate habitat within the study area was visually scanned for evidence of listed species as well as general wildlife. All natural areas were considered appropriate wildlife habitat, and protected floral species habitat. All occurrences of wildlife in the study area were recorded and observation locations were depicted on project aerials. These occurrence records could include observations of the actual species, or signs of their presence including tracks, burrows, dens, scat, nests, or calls. Special attention was given to identifying signs of listed species.

INSERT FIG 4-1 Listed Species: Historic Location Data and Feld Observations Map

To further summarize the results of desktop and field data collection efforts, each potential occurring species was assigned a likelihood for occurrence of "none", "low", "moderate", or "high" within habitats found on the project corridor and an indicator of suitable habitat proximity to the project area of "distant", "near", or "contiguous". Definitions of probability of species presence/habitat proximity are provided below.

Likelihood of Species Presence

None – Species has been documented in Orange County, but due to complete absence of suitable habitat, could not be naturally present within the project corridor.

Low – Species with a low likelihood of occurrence within the project area are defined as those species that are known to occur in Orange County or the bio-region, but preferred habitat is limited in the project area, or the species is rare.

Moderate - Species with a moderate likelihood for occurrence are those species known to occur in Orange or nearby counties, and for which suitable habitat is well represented in the project area, but no observations or positive indications exist to verify presence.

High - Species with a high likelihood for occurrence are suspected within the project area based on known ranges and existence of sufficient preferred habitat in the area; are known to occur adjacent to the project; or have been previously observed or documented in the vicinity.

Habitat Proximity

Distant - Appropriate habitat is distant from the project footprint when accounting for the species' home range size and level of mobility.

Near - Appropriate habitat is near the project footprint when accounting for the species' home range size and level of mobility.

Contiguous - Appropriate habitat occurs within or immediately adjacent to the project footprint.

4.3 Results

Table 4-1 lists the federally and state-protected wildlife species known to occur within Orange County that could potentially occur near the project area based on availability of suitable habitat and known ranges.

Table 4-1
Potentially Occurring and Observed Listed Wildlife Species

Species	Common Name	FWC	USFWS	Habitat	Habitat Occurrence in Relation to Project Footprint	Probability of Species Presence or Occurrence
REPTILES						
Drymarchon corais couperi	Eastern indigo snake	FT	T	Hydric hammock, palustrine, sandhill scrub, upland pine forest, mangrove swamp	Contiguous	Low
Gopherus polyphemus	Gopher tortoise	T	C	Old field, sandhill, scrub, xeric hammock, ruderal, dry prairie, pine flatwood	Contiguous	Moderate
Neoseps reynoldsi	Sand skink	FT	T	Oak-dominated scrub, high pine, xeric hammocks	Distant	Low
Pituophis melanoleucus mugitus	Florida pine snake	T	-	Well-drained, sandy open area or longleaf pine forests, sandhills	Distant	Low
BIRDS						
Antigone canadensis pratensis	Florida sandhill crane	T	-	Basin marsh, depression marsh, dry prairies, marl prairie, pastures, human-altered suburban landscapes	Contiguous	High
Aphelocoma coerulescens	Florida scrub-jay	FT	T	Relict dune ecosystems or scrub on well drained to excessively well drained sandy soils	Distant	Low
Athene cunicularia floridana	Florida burrowing owl	T	-	Native prairies and cleared areas with short groundcover	Contiguous	Low
Caracara cheriway	Crested caracara	FT	T	Dry or wet prairie with scattered cabbage palm, and other scattered native vegetation, improved pasture with seasonal wetlands	Distant	Low
Egretta caerulea	Little blue heron	T	-	Estuarine, lacustrine, riverine, tidal marsh, tidal swamp	Contiguous	High
Egretta rufescens	Reddish egret	T	-	Estuarine, lacustrine, riverine, tidal marsh, tidal swamp	Contiguous	Low
Egretta tricolor	Tricolored heron	T	-	Estuarine, lacustrine, riverine, tidal marsh, tidal swamp	Contiguous	High
Falco sparverius paulus	Southeastern American kestrel	T	-	Sandhill, mesic flatwoods, ruderal, dry prairie	Contiguous	Moderate
Haliaeetus leucocephalus	Bald eagle	-	*	Forests, estuarine, lacustrine, riverine, tidal marsh, tidal swamp	Contiguous	Moderate

Species	Common Name	FWC	USFWS	Habitat	Habitat Occurrence in Relation to Project Footprint	Probability of Species Presence or Occurrence
Mycteria americana	Wood stork	FT	T	Estuarine tidal swamps/marshes, lacustrine, seepage stream, ditches, ruderal	Contiguous	High/Observed
Picoides borealis	Red-cockaded woodpecker	FE	E	Mature pine forests containing living longleaf pine trees	Distant	None
Platalea ajaja	Roseate spoonbill	T	-	Estuarine, lacustrine, riverine, tidal marsh, tidal swamp	Contiguous	High
Rostrhamus sociabilis plumbeus	Everglade snail kite	FE	E	Lowland freshwater marshes and littoral shelves of lakes	Distant	Low
Rynchops niger	Black skimmer	T	-	Open sand on beaches, sandbars, and dredge material islands	Distant	None
Sternula antillarum	Least tern	T	-	Coastal beaches, estuaries, and bays, occasional use of rooftops	Distant	Low
MAMMALS						
Sciurus niger niger	Southern fox squirrel	**	-	Mature, open, fire-maintained longleaf pine and turkey oak sandhills and pine flatwoods, mixed hardwood pine, mature pine forests, cypress domes, pastures	Distant	None
Ursus americanus floridanus	Florida black bear	***	-	Forests and forested wetlands, bayheads	Near	Moderate
-	Bats (multiple species)	****	-	Forested areas, manmade structures	Near	Moderate

Sources:

(1) USFWS - U.S. Fish and Wildlife Service status, Official lists of Threatened and Endangered species, 50 CFR 17.11

(2) Florida Fish and Wildlife Conservation Commission. 2016. Florida's Imperiled Species Management Plan. Tallahassee, Florida

(3) FWC - Florida's Endangered and Threatened Species, Updated December 2018.
(4) USFWS ECOS - Environmental Conservation Online System http://ecos.fws.gov/tess_public/reports/species-by-current-range-county?fips=12105 accessed August, 2019
(5) FNAI - Florida Natural Areas Inventory Tracking List http://www.fnai.org/bioticssearch.cfm accessed August, 2019

Notes:

In accordance with Florida Administrative Code (FAC) Title 68A-27.0012, Procedures for Listing and Removing Species from Florida's Endangered and Threatened Species List, federally endangered or threatened species under the Endangered Species Act will be listed by the FWC by their federal designation.

*The Bald Eagle is afforded federal protection through the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA)

**The southern fox squirrel is a taxonomic reclassification and is not listed by the FWC or USFWS however is protected under FAC 68A-29.002(1)c Regulations Relating to the Taking of Mammals

***The Florida black bear is no longer listed as threatened, however is protected under the FAC 68A-4.009 Florida Black Bear Conservation

****Bats are protected by FAC 68A-4.001 General Prohibitions and 68A-9.010 Taking Nuisance Wildlife

Key:

E - endangered, T - threatened, C - candidate for listing, FE - federally endangered, FT - federally threatened

4.3.1 Wildlife

4.3.1.1 Federally Protected Wildlife

Eastern Indigo Snake (*Drymarchon corais couperi*)

The eastern indigo snake is designated as threatened by the USFWS. This species may inhabit a variety of natural areas including forested uplands and wetlands as well as wet and dry prairies. There is some potentially suitable habitat within the project footprint, primarily outside the ROW. Given the potential suitability of habitat, it is anticipated that the project may affect, but is not likely to adversely affect this species. The FDOT will adhere to the most recent version of the USFWS Standard Protection Measures for the Eastern Indigo Snake (**Appendix D**).

Sand Skink (*Neoseps reynoldsi*)

The sand skink is designated as threatened by the USFWS. The project area falls within the CA for the species. Habitat requirements for the sand skink are highly specific and limited to scrubby, xeric areas on the high ridges of central Florida. Ideal habitat has soil that is sandy, well drained, and fairly loose with open sand areas abutting scrub vegetation. Certain NRCS soil types are classified as being potential skink habitat. The project contains one area of soil at the eastern limit crossing the Beachline Expressway that is classified as a potential skink soil (Pomello). Soils in this area are significantly disturbed from construction of the original Beachline Expressway and nearby commercial developments; additionally, no suitable habitat exists within this area of the project footprint. The project is expected to have no effect on the sand skink. The bluetail mole skink (*Eumeces egregius lividus*) is typically considered using the same criteria as the sand skink, however, does not occur within Orange County and is therefore not a factor for this project PD&E Study.

Florida Scrub-Jay (*Aphelocoma coerulescens*)

The Florida scrub-jay is designated as threatened by the USFWS and the project falls within the CA for the species. According to available Geographic Information Systems (GIS) data, the nearest Florida scrub-jay observation was documented approximately 11.1 miles southwest of the project limits and was recorded by the FWC in its 1992-1993 dataset.

Optimal scrub-jay habitat occurs on scrub ridges with well drained to excessively well drained soils that have scrubby oaks three to nine feet in height interspersed with 10 to 50 percent unvegetated sandy openings, and a sand pine (*Pinus clausa*)

canopy of less than 20 percent. The species has been documented in suboptimal habitats such as those fragmented by residential developments. The project footprint does not contain optimal or suboptimal habitat for the Florida scrub-jay. No Florida scrub-jays were observed during field surveys. Given the distance and age of the nearest observation and that habitat for the Florida scrub-jay is not available within the project limits, the project is expected to have no effect on the Florida scrub-jay.

Crested Caracara (*Caracara cheriway*)

The crested caracara is listed as threatened by the USFWS. Most of the project area is outside of the CA for the species except for the southern end of the project limits which is in the extreme northern end of the CA. Ideal caracara habitat consists of mixtures of wet prairies with cabbage palms (*Sabal palmetto*), wooded areas with saw palmetto (*Serenoa repens*), cypress (*Taxodium* spp.), scrub oak (*Quercus inopina*) ecosystems, and open pasturelands. As caracaras forage on carrion, they are somewhat adapted to non-natural areas and opportunistically feed on roadkill. Cabbage palms are the preferred nesting location for the caracara. Nesting habitat is absent from the project area and only minimal suboptimal foraging habitat is present in the form of roadways creating carrion feeding opportunities. Given the lack of ideal habitat and the project's location mostly outside of and partially within the extreme northern end of the consultation area, the project will have no effect on the crested caracara.

Wood Stork (*Mycteria americana*)

The wood stork is listed as threatened by the USFWS. Wood storks are known to use freshwater marshes, swamps, lagoons, ponds, flooded fields, depressions in marshes and brackish wetlands, open pine-cypress wetlands, and manmade wetlands (i.e., ditches, canals, and stormwater retention ponds). Wood storks are typically colonial nesters and construct their nests in medium to tall trees located within wetlands or on islands. Wood storks are known to forage within a large area, up to 40 miles, from the colony.

For central Florida, the USFWS has defined the CFA for a wood stork colony as the area within a 15-mile radius from the colony location. The project area is located entirely within the CFA of three wood stork colonies: Gatorland, Lawne Lake, and Eagle Nest Park. In addition, it is located partially within the CFA of Lake Mary Jane wood stork colony. As defined by the USFWS, wood stork SFH includes wetlands and surface waters that have areas of water that are relatively calm, uncluttered by dense thickets of aquatic vegetation, and have permanent or seasonal water depth between two and 15 inches.

SFH exists within the project area. Wood storks are likely to use the project area for foraging purposes given the overlapping CFAs of these colonies and the foraging habitat that exists within wetlands and surface waters in and outside of the project area. According to the USFWS database, the nearest wood stork colony (Gatorland) is located approximately 3.8 miles south of the project footprint (well beyond the 0.47-mile threshold for a "may affect" determination).

In total, the preferred alternative will result in impacts to 55.96 acres of surface waters. These surface waters fall into three categories: roadside ditches (FLUCFCS 5130), ponds (FLUCFCS 5300), and open water canals (FLUCFCS 5120). Each type of surface water impact was considered separately and is discussed below. Based on an analysis of habitats that constitute SFH and post-construction replacement of stormwater systems, surface water impacts will result in no permanent net loss of wood stork SFH.

The preferred alternative will result in 6.51 acres of surface water ditches (FLUCFCS 5130) considered wood stork SFH. However, these surface water ditches will be replaced onsite adjacent to the current location at a similar bottom elevation; therefore, are considered temporary impacts.

The littoral edges of the existing surface water ponds (FLUCFCS 5300) are also considered wood stork SFH. In total, the project is impacting 43.22 acres of existing surface waters considered ponds, of which, a portion of the area will be at a depth that provides wood stork SFH. Post-development, a project total of 128.07 acres of additional surface water area will be created for stormwater management purposes that will provide the same functions as the existing surface waters. Systems will be replaced onsite adjacent to their current location at a similar bottom elevation.

Surface Waters 1 through 9 total 6.23 acres and are manmade, open water canals (FLUCFCS 5120) with steep side slopes and mowed edges. Typical foraging sites throughout the wood stork's range include freshwater marshes and stock ponds, shallow, seasonally flooded roadside or agricultural ditches, narrow tidal creeks or shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs. Shallow wetland depressions that concentrate fish, either through local reproduction or through the consequences of drying, may be used as a feeding habitat. No impacts to the wood stork are anticipated for impacts associated with surface water canals for the following reasons:

- The steep banks bordering the surface water canals hinder wood stork access;
- The water depth within the canals exceeds 15 inches at all times throughout the year.

All project wetlands (WL 1 through WL 9) are considered SFH and impacts to these areas total 8.91 acres. Because permanent impacts to wood stork SFH are greater than 5.0 acres, an individual foraging prey base analysis is necessary. The FTE has assessed Preferred Alternative impacts to wood stork SFH using the USFWS' *Wood Stork Foraging Habitat Assessment Methodology* (Methodology). The USFWS considers short hydroperiod wetlands as those inundated with water

less than 180 days per year (i.e., Class 1, Class 2, and Class 3 hydroperiod wetlands), and long hydroperiod wetlands as those inundated greater than 180 days per year (i.e., Class 4, Class 5, Class 6, and Class 7). This project will result in the total loss of 19.24 kilograms (kg) of wood stork forage. Of this loss, 2.18 kg will be from short hydroperiod wetlands (1.65 acres of Class 1, 0.10 acres of Class 2, and 1.46 acres of Class 3 hydroperiod wetlands) and 17.06 kg is attributed to long hydroperiod wetlands (5.71 acres of Class 4 hydroperiod wetlands). These calculations are summarized in **Table 4-2**.

Table 4-2
Wood Stork Prey Biomass Loss Calculations for Preferred Alternative

ID	Habitat Type	Hydroperiod	Acres	% Exotic Vegetation	Prey Biomass Loss (kg)
WL 1	Forested	Class 1 (0-60 days)	0.13	50-75	0.02
WL 2	Forested	Class 1 (0-60 days)	1.52	25-50	0.40
WL 3	Forested	Class 4 (180-240 days)	5.26	0-25	16.19
WL 4	Forested	Class 4 (180-240 days)	0.10	25-50	0.20
WL 5	Forested	Class 4 (180-240 days)	0.34	25-50	0.67
WL 6	Forested	Class 3 (120-180 days)	0.48	0-25	0.83
WL 7	Herbaceous	Class 2 (60-120 days)	0.10	25-50	0.05
WL 8	Herbaceous	Class 3 (120-180 days)	0.45	50-75	0.29
WL 9	Herbaceous	Class 3 (120-180 days)	0.53	25-50	0.59
Total			**8.91**		**19.24**

The loss of 19.24 kg represents the loss of 0.10 nests (based on Kahl's [1964] estimate that 201 kg of forage was needed for a successful wood stork nest) and loss of 0.12 nestlings (based on the value of 1.21 nestlings per nest reported by Rodgers and Schwikert [1997]).

No wood storks are known to have nested within the project area and all of the wading bird censuses conducted to date have demonstrated that the area is periodically used by resident and/or migratory, over-wintering wood storks.

The project proposes to provide SFH compensation within the CFAs that provides an amount of habitat and foraging function equivalent to that of impacted SFH. It is anticipated the project will more than compensate for the SFH loss through the purchase of wetland mitigation bank credits. Specifically, 3.95 UMAM credits to satisfy all mitigation requirements of Part IV, Chapter 373 F.S., and 33 U.S.C. 1344. In addition, the designed stormwater areas, including the littoral zones and surface water ditches will provide foraging opportunities for wood storks in the post-construction condition. Because impacts to wetlands and surface waters will be mitigated for as appropriate, the project may affect, but is not likely to adversely affect the wood stork.

Red-cockaded Woodpecker (*Picoides borealis*)

Photo © Robert Strickland, accessed via Cornell Lab of Ornithology

The red-cockaded woodpecker is listed as endangered by the USFWS. The project area falls within the CA for the species. The nearest observation occurred 8.1 miles to the southwest of the project; the year of observation is not known but presumably occurred prior to 1999 as the observation is documented in both a 2005 FWC dataset and 1999 FNAI dataset. The red-cockaded woodpecker is extremely habitat specific; optimal habitat consists of forests of mature live longleaf pine (*Pinus palustris*) and/or loblolly pine (*Pinus taeda*). Red-cockaded woodpeckers are primary excavators of these trees and their behavioral adaptations require them to excavate cavities in the live wood. Given that suitable forest habitat is absent from the project area and the nearby surroundings, and that there are no historic or current observation records in the project vicinity, the project is anticipated to have no effect on the species.

Everglade Snail Kite (*Rostrhamus sociabilis plumbeus*)

The Everglade snail kite is a subspecies of snail kite that is designated by the USFWS as endangered. The project area falls within the species' CA. No evidence of the species was observed during field surveys; and the nearest documented observation is at a nesting site 6.2 miles to the south of the project limits and occurred in 2001.

Everglade snail kites have diets which are specialized on the Florida apple snail (*Pomacea paludosa*). This prey item inhabits surface waters of south Florida like the canals and stormwater ponds present within the project limits. These areas provide suboptimal, loosely vegetated foraging habitat for the species. Ideal foraging and nesting habitat would consist of large shallow marshes that support the apple snail, these areas are absent from the project limits and apple snails were not observed during surveys. Given that no evidence of the species was observed, the nearest documented observation is 6.2 miles from the project area, and mitigation will be provided for permanent impacts to surface waters, it is expected that the project will have no effect on the Everglade snail kite.

4.3.1.2 State-Protected Wildlife Species

Gopher Tortoise (*Gopherus polyphemus*)

The gopher tortoise is listed by the FWC as threatened, and is currently a candidate for listing by the USFWS. Gopher tortoise burrows provide habitat for many commensal species. Ideal habitats include xeric areas with sandy soils and open canopy with low groundcover. The gopher tortoise feeds primarily on new shoots of grasses and broad-leaf herbs, but may also consume mushrooms, fleshy fruit, and some animal matter.

No individuals or burrows were observed during preliminary field surveys of appropriate habitat. A comprehensive, 100 percent gopher tortoise burrow survey will be conducted prior to construction. Per FWC requirements, gopher tortoise burrows located within 25 feet of proposed impact areas must be excavated and tortoises relocated to an approved recipient site. Because no gopher tortoises have been observed, and a 100 percent survey with relocation, if needed, will be conducted prior to construction per the FWC 2017 Gopher Tortoise Permitting Guidelines, the project has no adverse effect anticipated on the gopher tortoise.

Florida Pine Snake (*Pituophis melanoleucus mugitus*)

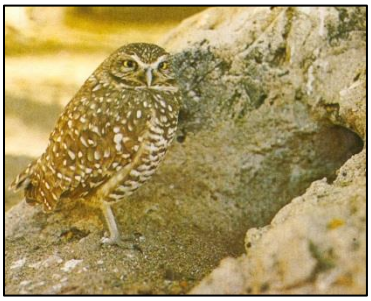
The Florida pine snake is listed by the FWC as threatened. Ideal habitat for the species consists of open, sandy soils which are well drained. Canopy cover should be moderate to open and longleaf pine or other softwoods are ideal. The Florida pine snake is also considered a gopher tortoise commensal species. The nearest documented Florida pine snake observation was approximately 19 miles to the west of the project and occurred in 1990. There is limited suboptimal habitat within the project footprint and surrounding area. Given the minimal amount of suboptimal habitat and absence of gopher tortoise burrows, and date of the last observation, there is no effect anticipated on the Florida pine snake.

Florida Sandhill Crane (*Antigone canadensis pratensis*)

The Florida sandhill crane is listed as threatened by the FWC. Nesting habitat consists of shallow, vegetated freshwater marshes. Cranes will construct nests on fairly isolated rafts of vegetation to limit access to predators. The Florida sandhill crane forages on insects, small vertebrates, and plant matter in prairies, pastures, and also maintained roadside edges. Wetland 8 provides minimal nesting habitat; however, it is a small, linear

system adjacent to the ROW without any buffer to the roadway. It is highly unlikely Florida sandhill cranes will nest in that wetland. Therefore, no impacts to potential nesting habitat are proposed. Foraging habitat is present; however, no Florida sandhill cranes were observed during field surveys. Therefore, there is no adverse effect anticipated on the Florida sandhill crane.

Florida Burrowing Owl (*Athene cunicularia floridana*)



The Florida burrowing owl is designated by the FWC as threatened. The nearest recorded observation occurred 22 miles to the northeast of the project area in 1989. The species creates subterranean burrows in native prairies and cleared pastures. Tracts of cleared ROW with low groundcover exist within the project limits. However, no observations of burrowing owls are documented within the project vicinity, no burrows were observed during field reviews, and suboptimal habitat in the project area is fragmented. Therefore, there is no effect anticipated on the Florida burrowing owl.

Southeastern American Kestrel (*Falco spaverius paulus*)

The southeastern American kestrel is listed by the FWC as threatened. The species inhabits sandhills, mesic flatwoods, and open pastures and nests in cavities of dead trees or utility poles that are not surrounded by tall vegetation, and is commonly observed perched on power lines in rural to suburban areas. Suboptimal but potentially suitable ruderal open areas which may provide foraging habitat for the species occur within the proposed project. Appropriate cavity trees or poles for nesting may also be found within the project footprint; however, no individuals were observed during field surveys. For these reasons, the project has no adverse effect anticipated on the southeastern American kestrel.

Wading Birds

Wading birds such as the little blue heron (*Egretta caerulea*), reddish egret (*Egretta rufescens*), tricolored heron (*Egretta tricolor*), and roseate spoonbill (*Platalea ajaja*), are listed by the FWC as threatened and are afforded some levels of federal protection by the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-712). Though no state-listed wading birds were observed in the study area during field surveys, it is very likely these species forage within stormwater facilities and canals within the project area. Nesting habitat for these wading birds would consist of relatively isolated islands of shrubs and trees out of the reach of predators such as raccoons; the project area does not contain ideal nesting habitat.

These are highly mobile species which are not likely nesting within the project footprint. For these reasons, the project has no adverse effect anticipated on state-protected wading birds. Any permanent impacts to surface waters would be mitigated for as appropriate.

Shorebirds

Photo © Phillip Simmons, black skimmer, accessed via Cornell Lab of Ornithology

Photo © Gerrit Vyn, least tern, accessed via Cornell Lab of Ornithology

The black skimmer (*Rhynchops niger*) and least tern (*Sternula antillarum*) are two state-protected species of shorebirds. These are coastal species that occasionally inhabit inland sandy areas; black skimmers have been documented to roost on certain suitable flat roofs of buildings. Because the project footprint and surrounding area do not provide this natural or human-created habitat, there is no effect anticipated on these shorebird species.

4.3.1.3 Protected Non-Listed Wildlife Species

Bald Eagle (*Haliaeetus leucocephalus*)

This species receives federal protection under the MBTA and the Bald and Golden Eagle Protection Act (BGEPA). A desktop review of the FWC's eagle nest locator indicates that the nearest documented nest, nest OR087, is approximately one mile to the west of the project area. The nest was last surveyed in 2017 and was active at that time. The project area contains waterways which may provide foraging habitat for the bald eagle; however, these systems will either be mitigated for or replaced (i.e. surfaces waters) in the final condition. Because the immediate project area does not contain active bald eagle nests and loss to waterways will be mitigated for, the project will have no effect on the bald eagle.

Southern Fox Squirrel (*Sciurus niger niger*)

The southern fox squirrel is a new taxonomic classification resulting from research showing that the previous susbspecies (the Sherman's fox squirrel *Sciurus niger shermanii*) is not genetically distinct from other fox squirrels in north and central Florida. The Sherman's fox squirrel was listed as a species of special concern (SSC) by the FWC. The southern fox squirrel is not listed as threatened or endangered by the State of Florida but remains protected through the Florida Administrative Code (FAC) 68A-29.002(1)c Regulations Relating to the Taking of Mammals. This species requires mixed pine-hardwood forests, ideally

with structure that reflects regular frequent fire. This habitat is absent from the project footprint and distant from the area, therefore there is no effect anticipated on the southern fox squirrel.

Florida Black Bear (*Ursus americanus floridanus*)

The Florida black bear is no longer listed as a threatened species by the FWC. While it was removed from the state list of protected species in August 2012, it is still protected through the FAC 68A-4.009 Florida Black Bear Conservation. The FWC's bear mapping unit indicates several black bear observations have occurred within the immediate vicinity of the project and abundant black bear sightings occur to the far north of the project in the Wekiva area. The nearest black bear observation occurred at the northern project limit edge in 1995; it was a dead bear found on Sand Lake Road but is not documented as a confirmed vehicle-caused bear mortality. The nearest confirmed vehicle-caused bear mortality occurred in 2013 approximately 4.1 miles southwest of the project on Turkey Lake Road. There have been 46 nuisance reports of Florida black bears within five miles of the project area. Because the project is an existing paved roadway to which bears have acclimated and does not add through lanes, the project has no adverse effect anticipated on the Florida black bear.

Bats (multiple species)

Photo by Jerry Gingerick, D.V.M. accessed via Floridabats.org

Bats in the state of Florida are protected via FAC 68A-4.001 General Prohibitions and FAC 68A-9.010 Taking Nuisance Wildlife. There is one species of bat, the Florida bonneted bat (*Eumops floridanus*) which receives additional protection as it is listed as endangered by the USFWS. The project is not within the designated CA for the Florida bonneted bat documented in the October 2019 USFWS Florida Bonneted Bat Consultation Guidelines. Solitary bats may roost in small tree cavities or palm fronds while larger colonies of bats may roost in manmade structures such as the joints of bridges. The project limits contain structures which could provide roosting habitat for state-protected bats. The existing bridges provide ideal roosting habitats as they have crevices and joints which are a suitable size for a colony of bats. A field inspection of the project's five bridges (at Land Street, two bridges at OBT, at the railroad, and at Taft Vineland) was conducted on March 28, 2019 for signs of bat roosting near bridges. No evidence of bat inhabitance was observed at that time, therefore, there is no effect anticipated on state-protected bats.

4.3.2 Protected Plant Species

Table 4-3 lists the 28 federally and state-protected plant species known to occur within Orange County. Of these, 11 species receive federal protection; Florida bonamia (*Bonamia grandiflora*), pigeon wings (*Clitoria fragrans*), scrub buckwheat (*Eriogonum longifolium* var. *gnaphalifolium*), papery whitlow-wort (*Paronychia chartacea*) are federally threatened, and white squirrel-banana (*Deeringothamnus pulchellus*), McFarlin's lupine (*Lupinus aridorum*), Britton's bear-grass (*Nolina brittoniana*), Lewton's polygala (*Polygala lewtonii*), sandlace (*Polygonella myriophylla*), scrub plum (*Prunus geniculata*), and clasping warea (*Warea amplexifolia*) are federally endangered. The remainder are listed by the FDACS and/or FNAI. The preferred habitats of these plant species are described in **Table 4-3**.

Near the existing roadway, the dominant vegetation is bahia grass (*Paspalum notatum*) which is regularly mowed. The project area is highly urbanized but in some offsite pond locations vegetated areas remain. These are typically hardwood and coniferous forests which have been impacted by their proximity to the existing roadway and nuisance exotic species were observed at forest edges.

There is no effect on the nine species, including seven federally protected (Florida bonamia, scrub buckwheat, McFarlin's lupine, papery whitlow-wort, Lewton's polygala, sandlace, and scrub plum), with narrow habitat requirements for scrub or grottos which are absent from the project area as indicated in **Table 4-3**. It is anticipated that the project may affect, but is not likely to adversely affect the remaining 19 species, including federally protected pigeon wings, white squirrel-banana, Britton's bear-grass, and clasping warea which occur in pine flatwoods, sandhills, hammocks, swamps, and marshes.

Table 4-3
Potentially Occurring and Observed Listed Plant Species

Species	Common Name	USFWS	FDACS - DPI	Habitat	Habitat Occurrence in Relation to Project Footprint	Probability of Presence	Effect Determination
Asplenium verecundum	delicate spleenwort	-	E	limestone in grottos, on cliffs and boulders in shaded woods	Distant	None	No effect anticipated
Bonamia grandiflora	Florida bonamia	T	E	sandy soil, scrub	Distant	None	No effect
Clitoria fragrans	pigeon wings	T	E	sandhills, scrub, scrubby flatwoods	Distant	Low	May affect, not likely to adversely affect
Deeringothamnus pulchellus	white squirrel-banana	E	E	grassy flatwoods	Near	Low	May affect, not likely to adversely affect
Eriogonum longifolium Nutt. var. *gnaphalifolium* Gand.	scrub buckwheat	T*	E	sandhills, scrub	Distant	None	No effect
Illicium parviflorum	star anise	-	E	bottomland forests, wet hammocks	Contiguous	Moderate	No adverse effect anticipated
Lupinus aridorum	McFarlin's lupine	E	E	sand pine scrub	Distant	None	No effect
Lythrum flagellare	lowland loosestrife	-	E	swamps, thickets	Contiguous	Moderate	No adverse effect anticipated
Matelea floridana	Florida spiny-pod	-	E	bluffs, pine-oak-hickory woods	Near	Low	No adverse effect anticipated
Matelea pubiflora	sandhill spiny-pod	-	E	sandhills, scrub	Distant	None	No effect anticipated
Nemastylis floridana	celestial lily	-	E	marshes, wet flatwoods	Contiguous	Moderate	No adverse effect anticipated
Nolina atopocarpa	Florida beargrass	-	T	flatwoods, savannas, shell middens	Near	Low	No adverse effect anticipated
Nolina brittoniana	Britton's bear-grass	E	E	dry pinewoods, sand pine scrub	Near	Low	May affect, not likely to adversely affect
Ophioglossum palmatum	hand fern	-	E	on cabbage palms in hydric hammocks, strand swamps	Near	Low	No adverse effect anticipated
Panicum abscissum	cut-throat grass	-	E	wet pinelands, seepage areas	Near	Low	No adverse effect anticipated
Paronychia chartacea	papery whitlow-wort	T	E	scrub	Distant	None	No effect
Platanthera integra	orange rein orchid	-	E	swampy meadows, wet woods	Contiguous	Moderate	No adverse effect anticipated
Polygala lewtonii	Lewton's polygala	E	E	white sand scrub	Distant	None	No effect
Polygonella myriophylla	sandlace	E	E	scrub	Distant	None	No effect

Species	Common Name	USFWS	FDACS - DPI	Habitat	Habitat Occurrence in Relation to Project Footprint	Probability of Presence	Effect Determination
Polypodium plumula	plume polypody	-	E	hammocks	Contiguous	Moderate	No adverse effect anticipated
Polypodium ptilodon	swamp plume polypody	-	E	hammocks, swamps	Contiguous	Moderate	No adverse effect anticipated
Prunus geniculata	scrub plum	E	E	sand pine scrub	Distant	None	No effect
Salix floridana	Florida willow	-	E	wet hammocks, bottomland forests, swamps	Contiguous	Moderate	No adverse effect anticipated
Sideroxylon alachuense	Clark's buckthorn	-	E	hardwood hammocks	Contiguous	Moderate	No adverse effect anticipated
Spiranthes brevilabris	small ladiestresses	-	E	pine flatwoods	Contiguous	Moderate	No adverse effect anticipated
Stylisma abdita	Austin's dawnflower	-	E	dry pinelands, scrub	Near	Moderate	No adverse effect anticipated
Triphora trianthophoros	three-birds orchid	-	T	hammocks, rich woods	Near	Moderate	No adverse effect anticipated
Warea amplexifolia	clasping warea	E	E	dry pinelands, sandhills	Near	Moderate	May affect, not likely to adversely affect

T = Threatened, E = Endangered
* listed threatened as *Eriogonum longifolium* var. *gnaphalifolium*

Sources:

1. FDACS. Florida's Federally Listed Plant Species Search https://www.freshfromflorida.com/Divisions-Offices/Florida-Forest-Service/Our-Forests/Forest-Health/Florida-Statewide-Endangered-and-Threatened-Plant-Conservation-Program/Florida-s-Federally-Listed-Plant-Species accessed 8-26-19

4.4 Evaluation of Alternatives

4.4.1 Direct Impacts

Table 4-4 shows the expected direct impacts for the Preferred Alternative and the No-Build Alternative by FLUCFCS code. This indicates project impacts to potential wildlife habitat. This analysis was conducted on land uses within the Preferred Alternative footprint with no buffer area; this is unlike the project study area which includes a 250-ft buffer of the Preferred Alternative footprint. The impacts for the Preferred Alternative were calculated by summing the FLUCFCS categories that could potentially be used by a state or federally listed or otherwise protected species.

4.4.1.1 Preferred Alternative

The impacts for the Preferred Alternative were calculated by summing the FLUCFCS categories for that alternative. The total impact area proposed for the Preferred Alternative is 532.56 acres. Of this amount, natural habitats Upland Forest (FLUCFCS 4000 series), Water (FLUCFCS 5000 series), and Wetlands (FLUCFCS 6000 series) comprise 86.01 acres, or approximately 16 percent of the preferred alternative's footprint. The natural habitat within the Preferred Alternative which will have the largest area of impact is Upland Mixed Coniferous/Hardwood (FLUCFCS 4340); this category totals 11.57 acres and comprises approximately 2% of the project area. The majority of the project impact will be to Transportation (FLUCFCS 8100), Commercial and Services (FLUCFCS 1400), and Roads and Highways (FLUCFCS 8140); these land uses are already developed. These FLUCFCS categories comprise approximately 77 percent of the current project area.

4.4.1.2 No-Build Alternative

There are no direct impacts to wildlife and/or habitats associated with the No-Build Alternative.

Table 4-4
Proposed Land Use/ Land Cover (FLUCFCS) Impacts by Alternative

FLUCFCS Code		FLUCFCS Description	Preferred Alternative		No-Build Alternative
			Impact (ac)	Percent of Total Project Area	Impact (ac)
1000: URBAN AND BUILT UP	1330	Multiple Dwelling Units, Low Rise	0.43	0.08	0.00
	1400	Commercial and Services	55.64	10.45	0.00
	1410	Retail Sales and Services	2.39	0.45	0.00
	1420	Wholesale Sales and Services	2.08	0.39	0.00
	1490	Commercial and Services Under Construction	7.68	1.44	0.00
	1550	Other Light Industry	2.42	0.45	0.00
	1770	Institutional	0.98	0.18	0.00
	1900	Open Land	16.35	3.07	0.00
	Total		87.97	16.52	0.00
4000: UPLAND FOREST	4200	Upland Hardwood Forests	0.78	0.15	0.00
	4340	Upland Mixed Coniferous / Hardwood	11.57	2.17	0.00
	4410	Coniferous Plantations	8.87	1.67	0.00
	Total		21.22	3.98	0.00
5000: WATER	5120	Channelized Waterways, Canals	6.23	1.17	0.00
	5130	Chanelized Waterways, Ditches	6.51	1.22	0.00
	5300	Reservoirs	43.22	8.12	0.00
	Total		55.96	10.51	0.00
6000: WETLANDS	6170	Mixed Wetland Hardwoods	1.66	0.31	0.00
	6210	Cypress	6.19	1.16	0.00
	6410	Freshwater Marshes	0.98	0.18	0.00
	Total		8.83	1.66	0.00
8000: TRANSPORTATION, COMMUNICATION & UTILITIES	8100	Transportation	315.29	59.20	0.00
	8140	Roads and Highways	40.29	7.57	0.00
	8190	Transportation Facilities Under Construction	3.02	0.57	0.00
	Total		358.60	67.33	0.00
Total			**532.58**	**100.00**	**0.00**

4.4.2 Indirect, Secondary, and Cumulative Impacts

Indirect and secondary effects are those impacts that are reasonably certain to occur later in time as a result of the proposed project. They may occur outside of the area directly affected by the proposed project. Potential secondary effects include increased noise, traffic, and development, which could impact wildlife or result in a change in wildlife migration patterns. Cumulative effects include the effects of past, present, and future state, local, or private actions that are reasonably certain to occur in the project area. Future federal actions that are unrelated to the proposed project are not considered in the determination of cumulative effects because they require a separate consultation in accordance with Section 7 of the ESA.

4.4.2.1 Preferred Alternative

Indirect, secondary, and cumulative impacts associated with the proposed project would be minor because the interchange and roadways already exist. Farther from the roadway, areas currently designated for offsite stormwater treatment, secondary impacts of increased nuisance/exotic vegetation are anticipated. Species such as Brazilian pepper (*Schinus terebinthifolia*), and cogon grass (*Imperata cylindrica*) are particularly aggressive and successful colonizers in disturbed areas; therefore, the disturbance of construction may allow them to colonize and crowd out native vegetation. Nuisance/exotic vegetation has negative impacts to native wildlife as they take over the natural habitats upon which the species rely.

4.4.2.2 No-Build Alternative

There are no indirect, secondary, or cumulative impacts to wildlife associated with the No-Build Alternative.

5.0 WETLANDS AND OTHER SURFACE WATER EVALUATION

5.1 Agency Coordination

Agency coordination has been initiated through the ETDM process. The U.S. Army Corps of Engineers (USACE), SFWMD, and St. Johns River Water Management District (SJRWMD) were commenting agencies through the ETDM process. No direct agency coordination regarding wetlands has occurred for this project; however, the following project approach is anticipated.

The USACE federally regulates all wetlands within the study area. Regarding state jurisdiction, the vast majority of the project falls within the SFWMD boundary with the exception of one surface water north of West Sand Lake Road which is within the SJRWMD boundary. In instances when a project spans two Water Management Districts, it is typical for the permitting agency with the majority of the project area in its jurisdiction, to be the acting Water Management District and issue wetland impact-related permits or authorizations. This is typically done through an interagency agreement. For this project, the SFWMD is expected to be the primary state permitting agency for wetlands and surface water impacts. Other agencies, including the USFWS, Florida Department of Environmental Protection (FDEP), and the FWC review and comment on wetland permitting and potential affects to protected wildlife species.

The project does not qualify for a SFWMD General Permit, and is expected to require an Individual Permit under FAC Chapter 62-330.054. This project exceeds the thresholds for USACE Nationwide Permit #14 for Linear Transportation Projects and is therefore expected to require an Individual Permit from the USACE.

5.2 Methodology

The extent and types of wetlands in the project study limits were documented in accordance with Executive Order 11990, Protection of Wetlands, and the FDOT PD&E Manual, Part 2 Chapter 9. Wetlands were identified through the review of available literature, GIS data, and field verification. The following sources were reviewed prior to conducting the field review:

- USFWS National Wetlands Inventory (NWI) Maps;
- Land use and land cover maps (SFWMD 2008 and 2014);
- NRCS Soil Survey of Orange County, Florida (1989);
- ETDM Summary Report (2017); and
- True color aerial photography (2018).

Following the review of all available materials, field assessments were conducted on February 27, 2018 and March 28, 2019 to identify the presence of wetland vegetation, evidence of hydrology,

and hydric soil indicators. The jurisdictional limits of the wetlands were estimated using the criteria stated in the *USACE Final Regional Supplement to the Corps of Engineers Wetland Delineations Manual: Atlantic and Gulf Coastal Plain Region* (October 2010), and Florida statewide unified wetland delineation methodology as adopted by the FDEP and the Water Management Districts per FAC Chapter 62-340, and described in *The Florida Wetlands Delineation Manual*. Per FAC Chapter 62.600(D), boundaries of surface waters with slopes of 4 to 1 (horizontal to vertical) or steeper were estimated using the top of bank. Biologists evaluated wetland and surface water systems nearby the project area using the Uniform Mitigation Assessment Method (UMAM). The results presented in this report are a compilation of information collected from field assessments performed by project biologists and from the data sources described above.

5.3 Results

The project area contains nine wetlands and 56 surface waters as shown on **Figure 5-1** and summarized in **Table 5-1**. UMAM scores and functional loss analysis is summarized in **Table 5-2**. Wetland descriptions and UMAM datasheets for wetlands and surface waters proposed for impact under the Preferred Alternative are provided in **Appendix E**.

The majority of the surface waters within the project limits are existing stormwater management facilities or ponds associated with existing roadway and adjacent development; Surface Waters 20 through 56 are included in this category. Other surface waters can be categorized as roadside linear grass swales or ditches which run parallel to the existing roadway; Surface Waters 10 through 19 are included in this category. The third surface water type is canals that run parallel to the existing roadway; Surface Waters 1 through 9 are included in this category.

Insert Fig 5-1 Wetland and Surface Water Location Map

Table 5-1
Wetland and Surface Water Impacts Associated with the Preferred Alternative

Wetland / Surface Water ID	FLUCFCS Code	USFWS Classification	Preferred Alternative Impact (Acres)
SW1	5120	PEM1X	3.53
SW2	5120	PEM1X	0.03
SW3	5120	PEM1X	0.07
SW4	5120	PEM1X	0.76
SW5	5120	PEM1X	0.03
SW6	5120	PEM1X	0.08
SW7	5120	PEM1X	0.08
SW8	5120	PEM1X	0.06
SW9	5120	PEM1X	1.58
SW10	5130	PEM1X	2.65
SW11	5130	PEM1X	0.93
SW12	5130	PEM1X	0.15
SW13	5130	PEM1X	1.19
SW14	5130	PEM1X	0.26
SW15	5130	PEM1X	0.46
SW16	5130	PEM1X	0.18
SW17	5130	PEM1X	0.18
SW18	5130	PEM1X	0.13
SW19	5130	PEM1X	0.40
SW20	5300	PUBx	8.86
SW21	5300	PUBx	2.35
SW22	5300	PUBx	0.55
SW23	5300	PUBx	0.68
SW24	5300	PUBx	1.11
SW25	5300	PUBx	3.35
SW26	5300	PUBx	1.16
SW27	5300	PUBx	0.96
SW28	5300	PUBx	0.05
SW29	5300	PUBx	0.21
SW30	5300	PUBx	0.38
SW31	5300	PUBx	4.68
SW32	5300	PUBx	0.15
SW33	5300	PUBx	0.38
SW34	5300	PUBx	0.32
SW35	5300	PUBx	0.66
SW36	5300	PUBx	2.95
SW37	5300	PUBx	0.79
SW38	5300	PUBx	0.81
SW39	5300	PUBx	0.45
SW40	5300	PUBx	0.58
SW41	5300	PUBx	0.23
SW42	5300	PUBx	0.06
SW43	5300	PUBx	0.70
SW44	5300	PUBx	0.41
SW45	5300	PUBx	0.23
SW46	5300	PUBx	0.88

Wetland / Surface Water ID	FLUCFCS Code	USFWS Classification	Preferred Alternative Impact (Acres)
SW47	5300	PUBx	0.04
SW48	5300	PUBx	0.44
SW49	5300	PUBx	1.38
SW50	5300	PUBx	0.77
SW51	5300	PUBx	0.13
SW52	5300	PUBx	1.35
SW53	5300	PUBx	4.00
SW54	5300	PUBx	0.79
SW55	5300	PUBx	0.08
SW56	5300	PUBx	0.30
Surface Water Total			**55.96**
WL1	6170	PFO1	0.13
WL2	6170	PFO1	1.52
WL3	6210	PFO2	5.26
WL4	6210	PFO2	0.10
WL5	6210	PFO2	0.34
WL6	6216	PFO2	0.48
WL7	6310	PSS3	0.10
WL8	6410	PEM1	0.45
WL9	6417	PEM1	0.53
Wetland Total			**8.91**

Table 5-2
UMAM Summary for Impacts Associated with the Preferred Alternative

System ID	FLUCFCS Code	FLUCFCS Description	USFWS Classification	Impact Area for Preferred Alternative (Acres)	UMAM Score	Functional Loss
SW 1 - SW 9	5120	Channelized Waterways, Canals	PEM1X	6.23	N/A	N/A
SW 10 - SW 19	5130	Channelized Waterways, Ditches	PEM1X	6.51	N/A	N/A
SW 20 - SW 56	5300	Reservoirs	PEM1X	43.22	N/A	N/A
Surface Water Total				**55.96**	**0**	**0.00**
WL 1 - WL 2	6170	Mixed Wetland Hardwoods	PFO1	1.65	0.4	0.66
WL 3 - WL 5	6210	Cypress	PFO2	5.70	0.47	2.68
WL 6	6216	Cypress-Mixed Hardwoods	PFO2	0.48	0.43	0.21
WL 7	6310	Wetland Scrub	PSS3	0.10	0.33	0.03
WL 8	6410	Freshwater Marsh	PEM1	0.45	0.37	0.17
WL 9	6417	Freshwater Marsh with Shrubs, Brush, and Grasses	PEM1	0.53	0.37	0.20
Forested Wetland Total				**7.83**		**3.55**
Herbaceous Wetland Total				**1.08**		**0.40**
Wetland Total				**8.91**		**3.95**

5.4 Evaluation of Alternatives

5.4.1 Direct Impacts

5.4.1.1 Preferred Alternative

Impacts to wetlands will be avoided and minimized during the design process, however, for the purposes of this report, the worst case scenario of permanent fill impacts to all systems within the footprint is assumed. For the Preferred Alternative, 8.91 acres of permanent fill wetland impacts and 55.96 acres of permanent fill surface water impacts are expected.

Three wetlands contain fairly natural cypress stands and are of moderate quality. The remaining wetlands and surface waters are highly impacted by the roadway and are of poor quality. Total functional loss for wetlands is anticipated to be 3.95 units, of which 0.40 units of functional loss pertain to herbaceous systems and 3.55 units of functional loss pertain to forested systems.

Surface Waters were placed into three categories: canals, ditches, and ponds. Surface Waters classified as Channelized Waterways, Canals (FLUCFCS 5120) are man-made, open water canals with steep side slopes and mowed edges. The project will result in 6.23 acres of impacts to these canals. Surface Waters classified and Channelized Waterways, Ditches (FLUCFCS 5130) are man-made, roadside ditches or swales associated with the original roadway construction. They are periodically mowed and maintained. The project will result in 6.51 acres of impacts to these ditches. Surface Waters classified as Reservoirs (FLUCFCS 5300) are man-made, open water ponds with mowed edges. The project will result in 43.22 acres of impacts to these ponds by reshaping and re-grading the existing ponds and adding offsite ponds.

Surface Waters 1 through 11, 13 through 16, 18, 19, 21, 27, 32 through 43, 45, 46, and 52 through 56 were covered entirely or partially under either SFWMD Environmental Resource Permit (ERP) No. 48-00633-S or 48-01443-P (**Appendix F**); therefore, do not require mitigation for SFWMD. Pursuant to 33 CFR 328.3(a)(8), waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of Clean Water Act (CWA) are not waters of the United States. Therefore, mitigation is not required for the USACE. Proposed improvements to the roadway will permanently impact 31.44 acres of these previously permitted surface waters.

Post-development, a project total of 128.07 acres of additional surface water area will be created for stormwater management purposes that will provide the same functions as the existing surface waters. Systems will be replaced in-kind with similar littoral and bottom elevations.

5.4.1.2 No-Build Alternative

There are no direct impacts to wetlands or surface waters associated with the No-Build Alternative.

5.4.2 Indirect, Secondary, and Cumulative Impacts

Indirect and secondary effects are those impacts that are reasonably certain to occur later in time as a result of the proposed project. They may occur outside of the area directly affected by the proposed project. Cumulative effects include the effects of future state, local, or private actions that are reasonably certain to occur in the project area.

5.4.2.1 Preferred Alternative

No indirect impacts are anticipated to occur as a result of the Preferred Alternative. Secondary impacts of migrating edge effects will likely occur. At locations where natural areas meet development, edge effects such as increased cover of nuisance/exotic vegetation and changes in microclimate generally take place. The wetlands within the Preferred Alternative project footprint already experience edge effects due to the original interchange construction. The severity of these edge effects should not increase, however, it is expected that these effects would migrate to the new transitional area between remaining wetlands and new construction. Due to the developed nature of the surrounding area, no cumulative impacts are anticipated to occur.

5.4.2.2 No-Build Alternative

There are no indirect, secondary, or cumulative impacts to wetlands associated with the No-Build Alternative.

5.5 Wetland Impact Mitigation

The project study area is located within the service areas of the Hatchineha Ranch, Collany, Reedy Creek, Split Oak, Florida, Shingle Creek, Bullfrog Bay, Southport Ranch, and Quickdraw Mitigation Banks. The project is located within the Shingle Creek, Boggy Creek, and St. Johns River (Canaveral Marshes to Wekiva) Basins. For impacts to wetlands, it is anticipated that mitigation would be required by both the SFWMD and USACE. Mitigation is not anticipated for impacts to surface waters. Mitigation credits would be purchased from one of the aforementioned permitted wetland mitigation banks. UMAM scores and functional losses by representative system type are summarized in **Table 5-2**.

All UMAM scores, UMAM calculations, preliminary wetland and surface water boundaries and determinations discussed are subject to revisions and approval by regulatory agencies during the permitting process. The exact type of mitigation to offset impacts will be coordinated with the USACE and the SFWMD during the permitting phase(s) of this project. Mitigation will be addressed pursuant to Chapter 373.4137, FS in order to satisfy all mitigation requirements of Part IV, Chapter 373, FS and 33 U.S.C. 1344.

This project is in conformance with Executive Order 11990, Protection of Wetlands; consideration was given to avoiding and/or minimizing wetland impacts. The proposed project will have no

significant short-term or long-term adverse impacts to wetlands, there is no practicable alternative to construction in wetlands, and measures have been taken to minimize harm to wetlands.

6.0 PERMITTING

The USACE and SFWMD regulate impacts to wetlands within the project area. Other agencies, including the USFWS, U.S. Environmental Protection Agency (EPA), and the FWC, review and comment on wetland permit applications. The FWC also issues permits for gopher tortoise relocation activities and protected bird nest take. In addition, the FDEP regulates stormwater discharges from construction sites. The complexity of the permitting process will depend on the impact to jurisdictional areas. It is anticipated that the following permits will be required for this project:

Permit	Issuing Agency
Section 404 Dredge and Fill Permit	USACE
ERP	SFWMD
National Pollutant Discharge Elimination System (NPDES) Permit	FDEP

6.1 Section 404 Dredge and Fill Permit

It is anticipated that a standard permit will be required from the USACE. A standard permit will require compliance with the 404(b)(1) guidelines, avoidance and minimization, and that unavoidable impacts have been mitigated in the form of wetlands creation, restoration, and/or enhancement.

6.2 ERP

SFWMD requires an ERP when construction of any project results in the creation or modification of a surface water management system or results in impacts to jurisdictional wetlands. The ERP permitting process depends on the size of the project and/or the extent of wetland impacts. This project is anticipated to require an individual permit.

6.3 NPDES

40 CFR Part 122 prohibits point source discharges of stormwater to waters of the U.S. without an NPDES permit. Under the State of Florida's delegated authority to administer the NPDES program, construction sites that will result in greater than one acre of disturbance must file for and obtain either coverage under an appropriate generic permit contained in Chapter 62-621, FAC, or an individual permit issued pursuant to Chapter 62-620, FAC.

7.0 CONCLUSIONS

7.1 Protected Species and Habitats

Federally listed species which may be affected, but are not likely to be adversely affected by the project include:

- Eastern indigo snake; and
- Wood stork.

The project is anticipated to have no effect on the following federally listed species:

- Sand skink;
- Florida scrub-jay;
- Crested caracara;
- Red-cockaded woodpecker; and
- Everglade snail kite.

There is no adverse effect anticipated on the following state-protected species:

- Gopher tortoise;
- Florida sandhill crane;
- Wading birds including the little blue heron, reddish egret, tricolored heron, and roseate spoonbill; and
- Southeastern American kestrel.

There is no effect anticipated on the following state-protected species:

- Florida pine snake;
- Florida burrowing owl;
- Shorebirds including the snowy plover, black skimmer, and least tern; and
- Various state-protected bat species.

The project will have no effect on the bald eagle, southern fox squirrel, or bats. There is no adverse effect anticipated to the Florida black bear. These four species or groups of animals which may occur in the project vicinity are not listed as threatened, endangered, or SSC, but receive other legal protection.

Multiple avenues of protection will be employed to negate and minimize any potential affects to these species. Some of the measures employed may include detailed surveys and agency coordination during the project design phase, including providing appropriate mitigation to offset

impacts. During construction, best management practices (BMPs), adherence to FDOT's *Standard Specifications for Road and Bridge Construction*, and use of preconstruction surveys are strategies that will be considered, as needed, for protection of listed species.

7.2 Wetlands

A total of 8.91 acres of wetlands and 55.96 acres of surface waters are proposed to be impacted by the Preferred Alternative. Both forested (7.83 acres) and herbaceous (1.08 acres) wetlands exist within the project footprint. The surface waters consist of ditches, canals, and reservoirs which are manmade and were excavated in order to drain the surrounding areas and existing roadway. In some instances, the systems have slopes steeper than 4 feet to 1 foot (horizontal to vertical), and some systems were excavated in hydric soils.

It is possible that some wetlands and surface waters will be maintained in the post-development condition, however, for the purposes of this report, the systems are assumed to be permanently impacted. An Individual Permit from SFWMD and a Standard Permit from USACE are expected to be required.

The total functional loss for wetlands is estimated to be 3.95 using the UMAM: 3.55 units of functional loss for forested wetlands and 0.40 units of functional loss for herbaceous wetlands. Functional loss for surface waters is not applicable because these systems were previously permitted and will be replaced in-kind. The FDOT will address impacts to wetland and/or surface waters and provide appropriate wetland mitigation in future phases of this project.

7.3 Implementation Measures

Implementation measures are actions that the FDOT is required to take per procedure, standard specifications, or other agency requirements. These are standard measures which will be implemented at a later project phase. For this project, implementation measures that address protected species and wetlands-related items include:

- Practicable measures to avoid or minimize impacts will be further addressed during final design for the project;
- BMPs will be used for erosion control during construction to minimize impacts to any wetlands and surface waters that are affected by the proposed project; and
- Unavoidable impacts to wetlands and surface waters will be mitigated pursuant to 373.4137 FS to satisfy all mitigation requirements of Part IV, Chapter 373 FS and 33 U.S.C. 1344 should state and/or federal regulations require it.

7.4 Commitments

Based upon findings of the preliminary data collection, general corridor surveys, and ongoing coordination with the USFWS and FWC, the FDOT is considering the following project commitments:

1. The most recent version of the USFWS Standard Protection Measures for the Eastern Indigo Snake will be adhered to during construction of the proposed project (**Appendix D**).
2. The FDOT will follow the FDOT Supplemental Standard Specification 7-1.4.1 Additional Requirements for the Florida black bear to minimize human-bear interactions associated with construction sites during project construction.
3. A gopher tortoise burrow survey within suitable tortoise habitat will be conducted prior to construction.
4. Impacts to SFH for the federally protected wood stork will be mitigated through the purchase of credits from a USFWS-approved mitigation bank pursuant to Section 373.4137, F.S. or as otherwise agreed to by the FDOT and the appropriate regulatory agencies.

8.0 REFERENCES

Anderson, Patti J. and Richard E. Weaver. 2010. Notes on Florida's Endangered and Threatened Plants. Florida Department of Agriculture and Consumer Services.

Cowardin, Lewis M., Carter, Virginia, Golet, Francis C., and Edward T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service Publication, Washington D.C.

Delany, Michael F. 1996. Letter. April 16, 1996. On file at U.S. Fish and Wildlife Service, South Florida Ecosystem Office; Vero Beach, Florida.

Florida Association of Environmental Soil Scientists. 2007. Hydric Soils of Florida Handbook, 4th Edition, Gainesville, Florida.

Florida Department of Transportation. 1999. Florida Land Use, Cover and Forms Classification System. Surveying and Mapping Thematic Mapping Section. Tallahassee, Florida.

Florida Department of Transportation. 2019. Standard Specifications for Road and Bridge Construction. Tallahassee, Florida.

Florida Fish and Wildlife Conservation Commission. 2008. Bald Eagle Management Plan. Florida Fish and Wildlife Conservation Commission, Tallahassee, Florida.

Florida Fish and Wildlife Conservation Commission https://public.myfwc.com/FWRI/EagleNests/nestlocator.aspx#search [Accessed September 1, 2019].

Florida Fish and Wildlife Conservation Commission. 2018. Florida's Official Endangered and Threatened Species List (Updated December 2018).

Florida Natural Areas Inventory. 2001. Field Guide to the Rare Animals of Florida. http://www.fnai.org/FieldGuide/pdf/Charadrius_melodus.PDF

South Florida Water Management District. 2014. ERP Information Manual. Regulation Division South Florida Water Management District; West Palm Beach, Florida.

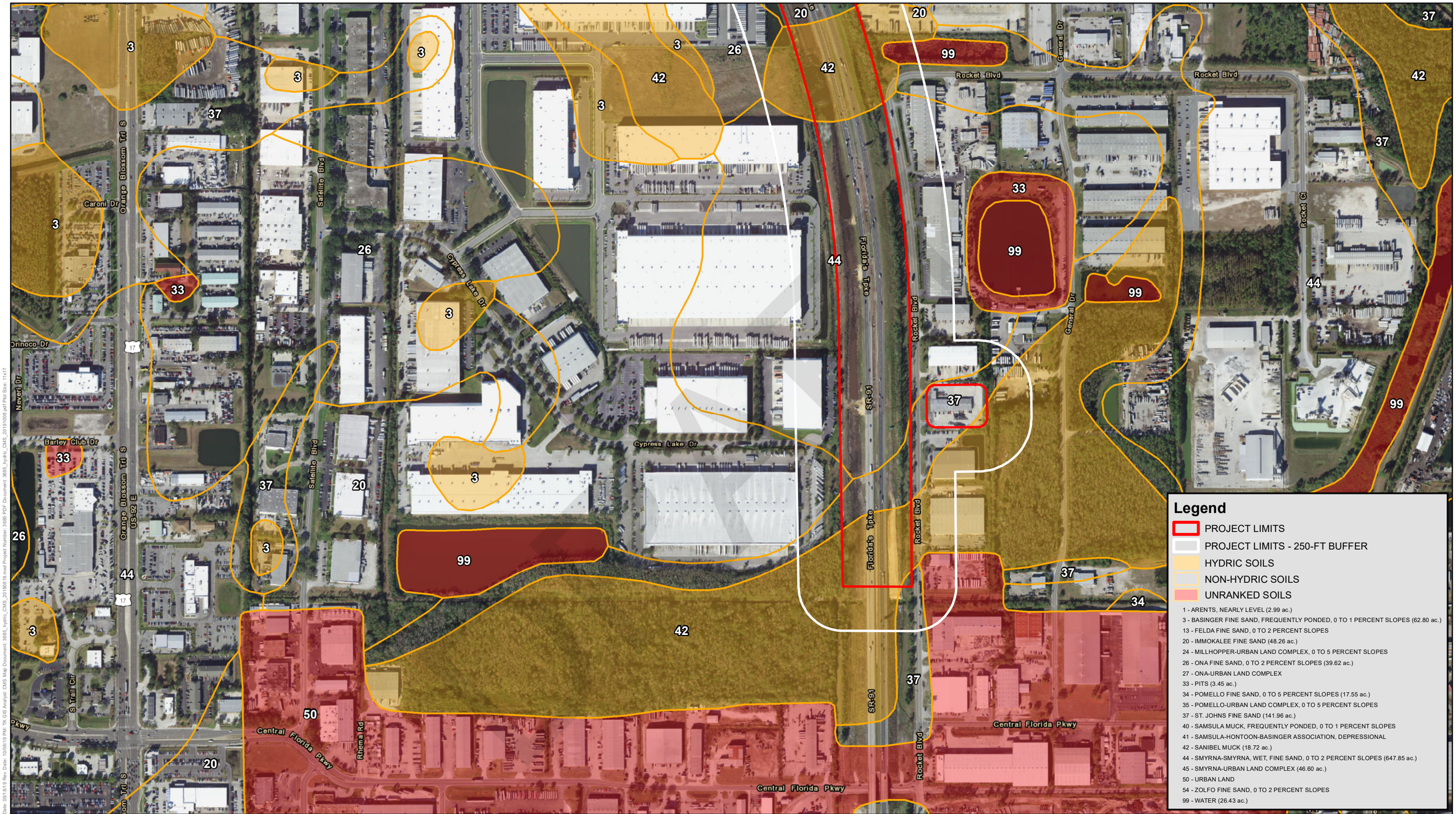
U.S. Army Corps of Engineers Environmental Laboratory. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0). U.S. Army Engineer Research and Development Center, Vicksburg, Mississippi.

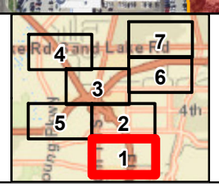
U.S. Department of Agriculture. 1989. NRCS. Soil Survey of Orange County, Florida. https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/florida/orangeFL1989/orangeFL1989.pdf [Accessed September 3, 2019].

U.S. Fish and Wildlife Service. 2019. USFWS. Letter: Consultation Key for the Florida Bonneted Bat; 04EF2000-2014-I-0320-R001. https://www.fws.gov/verobeach/ProgrammaticPDFs/20191022_ letter_ServicetoCorps_FBB-ProgrammaticKey.pdf [Accessed October 20, 2019].

APPENDIX A

Project Area NRCS Soils Map and Descriptions





Appendix A - Existing NRCS Soil Types within Study Area Map

Page 1 of 7

FPID #: 438547-1-22-01

Orlando South Ultimate Interchange PD&E Study

Orange County, Florida

0 500 1,000 1,500 Feet

Data Source:
- Hardesty & Hanover
- FDOT
- ESA
- USDA NRCS

Imagery Source:
- ESRI Aerial Imagery

Coordinate System:
NAD 1983 Florida
State Plane East

N

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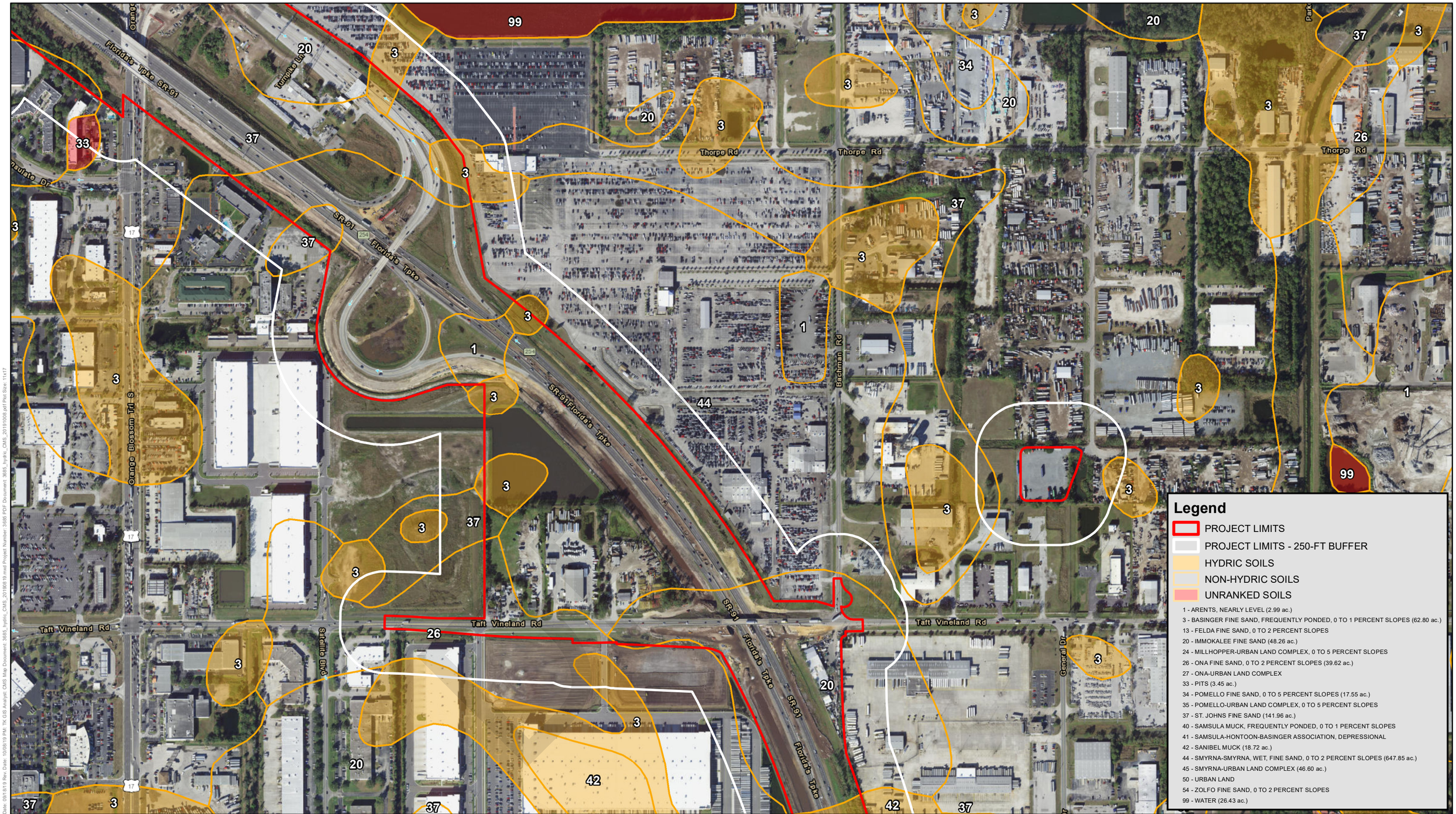

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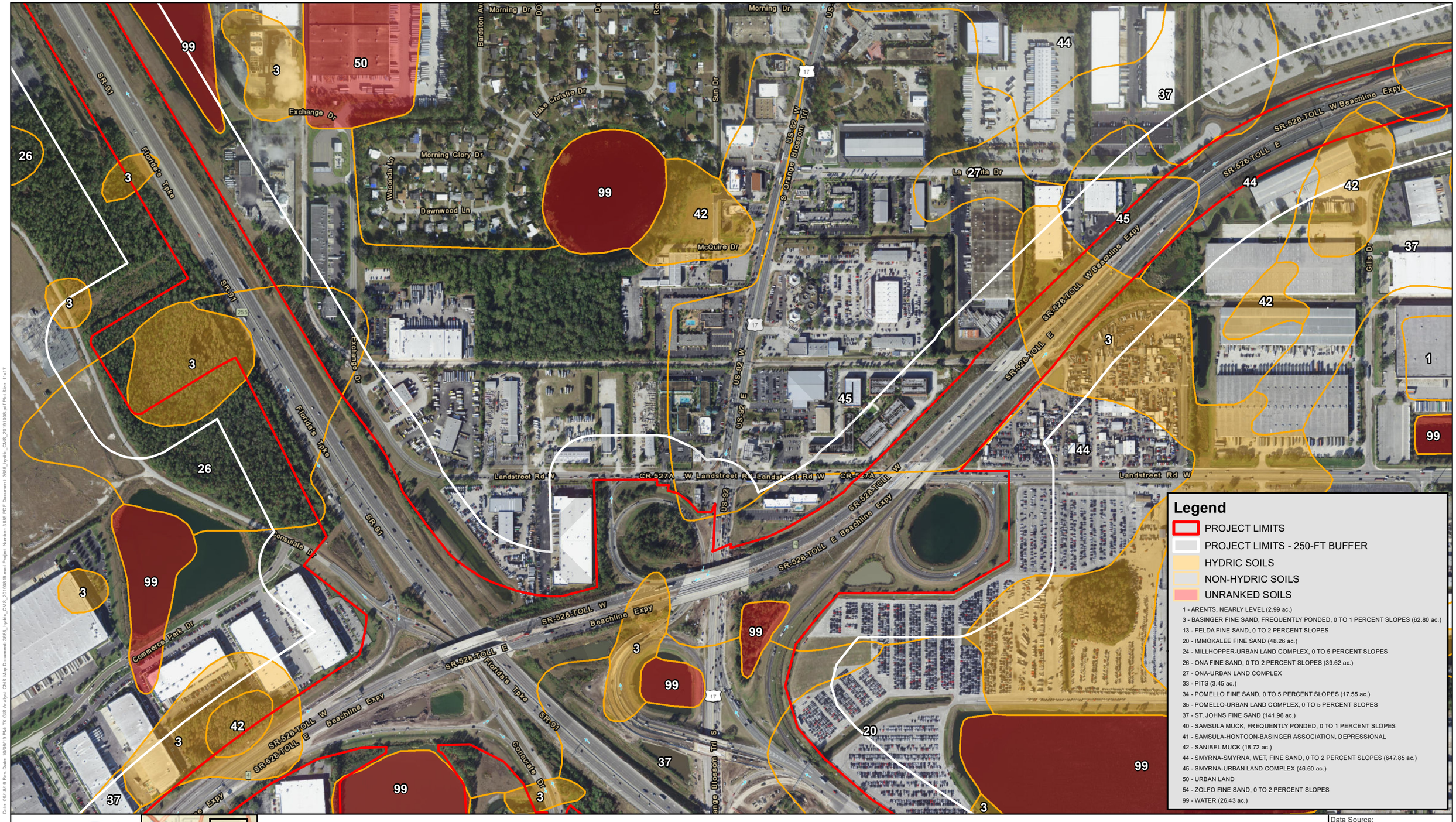
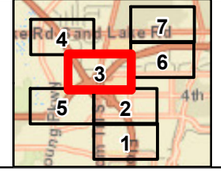


Legend

- PROJECT LIMITS
- PROJECT LIMITS - 250-FT BUFFER
- HYDRIC SOILS
- NON-HYDRIC SOILS
- UNRANKED SOILS

1 - ARENTS, NEARLY LEVEL (2.99 ac.)
3 - BASINGER FINE SAND, FREQUENTLY PONDED, 0 TO 1 PERCENT SLOPES (62.80 ac.)
13 - FELDA FINE SAND, 0 TO 2 PERCENT SLOPES
20 - IMMOKALEE FINE SAND (48.26 ac.)
24 - MILLHOPPER-URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES
26 - ONA FINE SAND, 0 TO 2 PERCENT SLOPES (39.62 ac.)
27 - ONA-URBAN LAND COMPLEX
33 - PITS (3.45 ac.)
34 - POMELLO FINE SAND, 0 TO 5 PERCENT SLOPES (17.55 ac.)
35 - POMELLO-URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES
37 - ST. JOHNS FINE SAND (141.96 ac.)
40 - SAMSULA MUCK, FREQUENTLY PONDED, 0 TO 1 PERCENT SLOPES
41 - SAMSULA-HONTOON-BASINGER ASSOCIATION, DEPRESSIONAL
42 - SANIBEL MUCK (18.72 ac.)
44 - SMYRNA-SMYRNA, WET, FINE SAND, 0 TO 2 PERCENT SLOPES (647.85 ac.)
45 - SMYRNA-URBAN LAND COMPLEX (46.60 ac.)
50 - URBAN LAND
54 - ZOLFO FINE SAND, 0 TO 2 PERCENT SLOPES
99 - WATER (26.43 ac.)



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Orlando South Ultimate Interchange PD&E Study
Orange County, Florida

0 500 1,000 1,500 Feet

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- FDOT
- ESA
- USDA NRCS

Imagery Source:
- ESRI Aerial Imagery

Coordinate System:
NAD 1983 Florida
State Plane East

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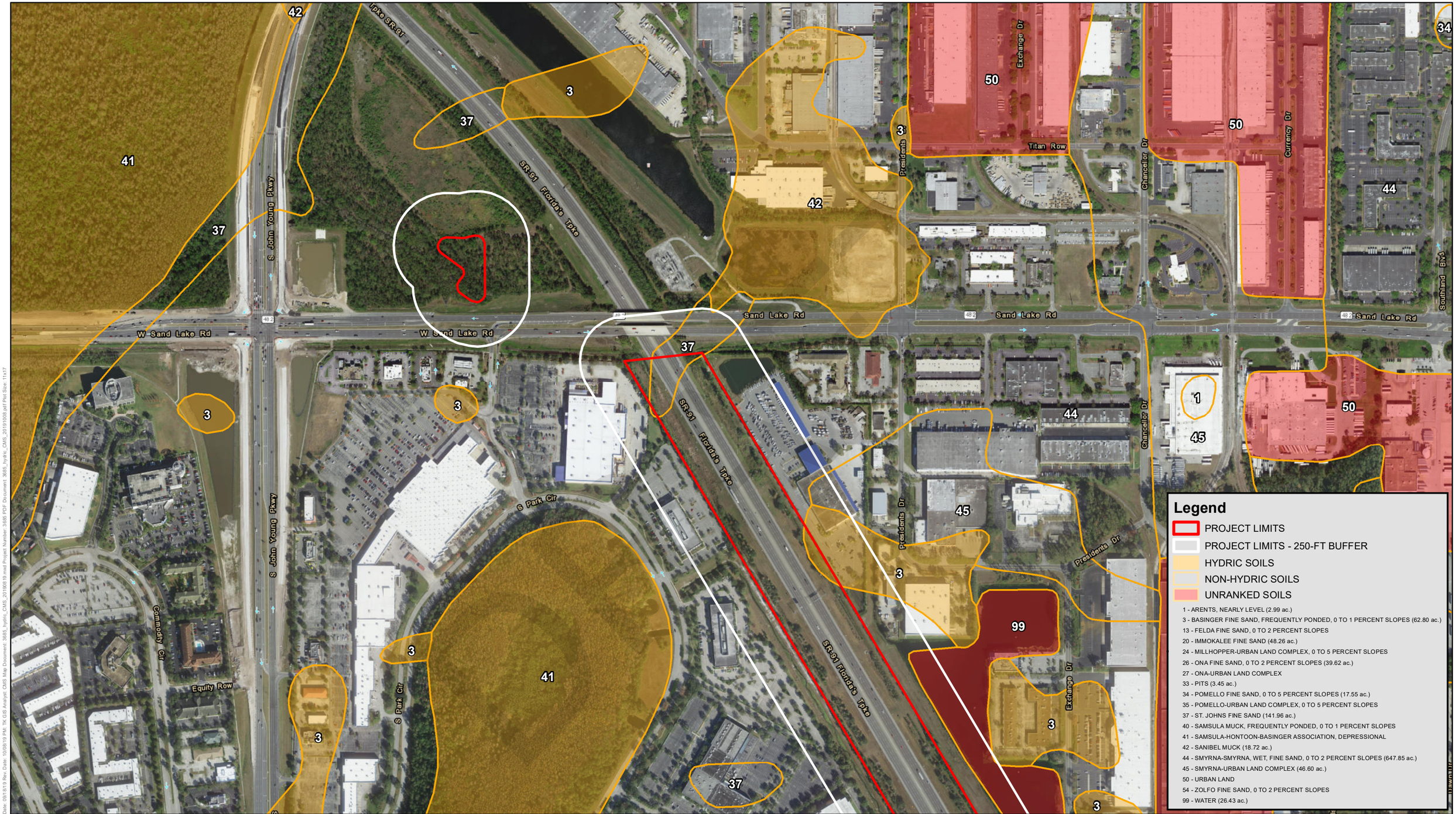

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Imagery Source:
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Coordinate System:
NAD 1983 Florida
State Plane East

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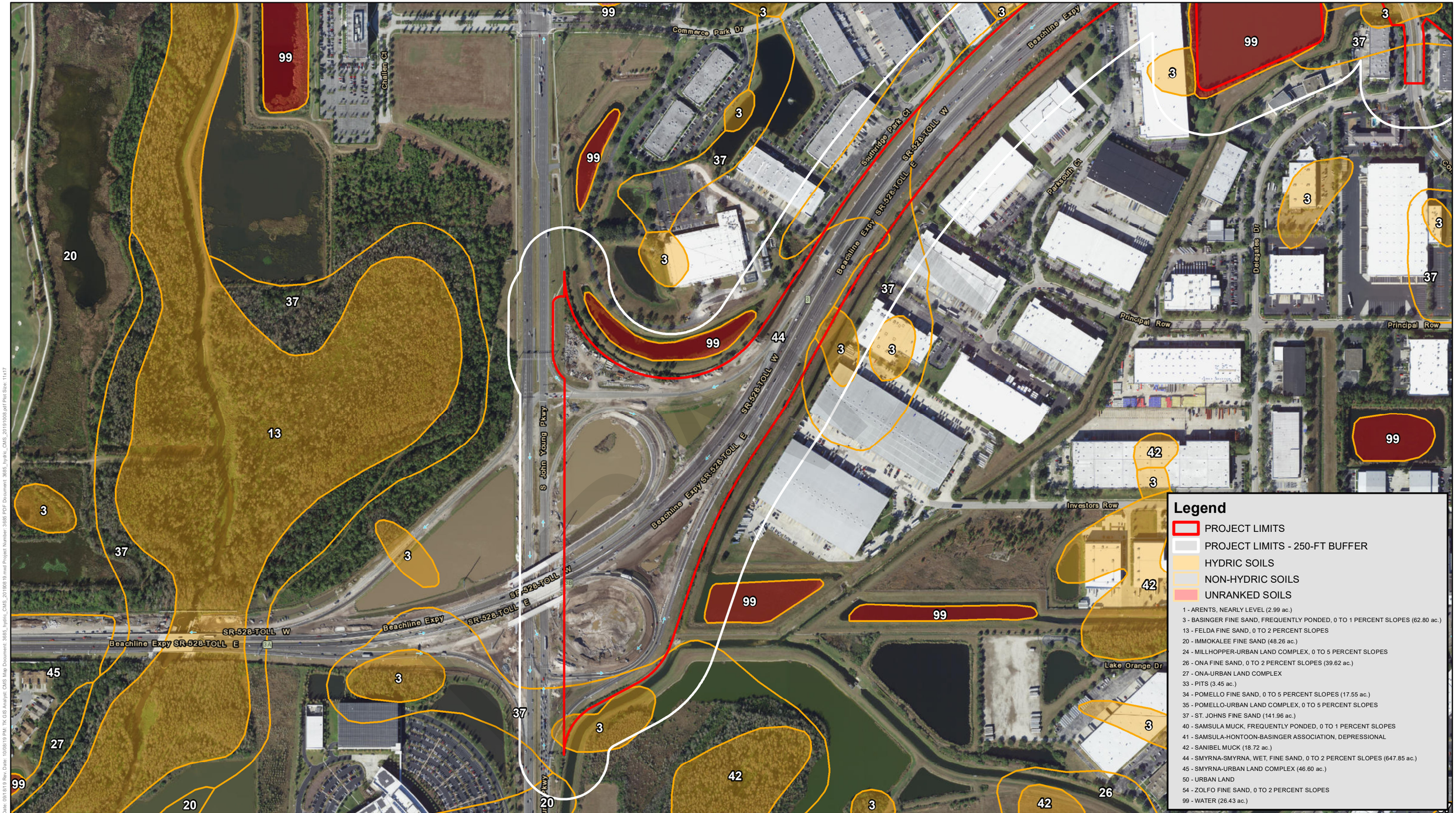

Legend

- PROJECT LIMITS
- PROJECT LIMITS - 250-FT BUFFER
- HYDRIC SOILS
- NON-HYDRIC SOILS
- UNRANKED SOILS

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Orange County, Florida

Feet
0 500 1,000 1,500

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- ESA
- USDA NRCS

Imagery Source:
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Coordinate System:
NAD 1983 Florida
State Plane East

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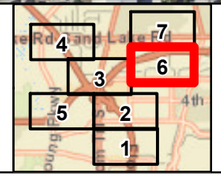

Appendix A - Existing NRCS Soil Types within Study Area Map

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FPID #: 438547-1-22-01

Orlando South Ultimate Interchange PD&E Study

Orange County, Florida

0 500 1,000 1,500 Feet

Data Source:
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- ESA
- USDA NRCS

Imagery Source:
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Coordinate System:
NAD 1983 Florida State Plane East

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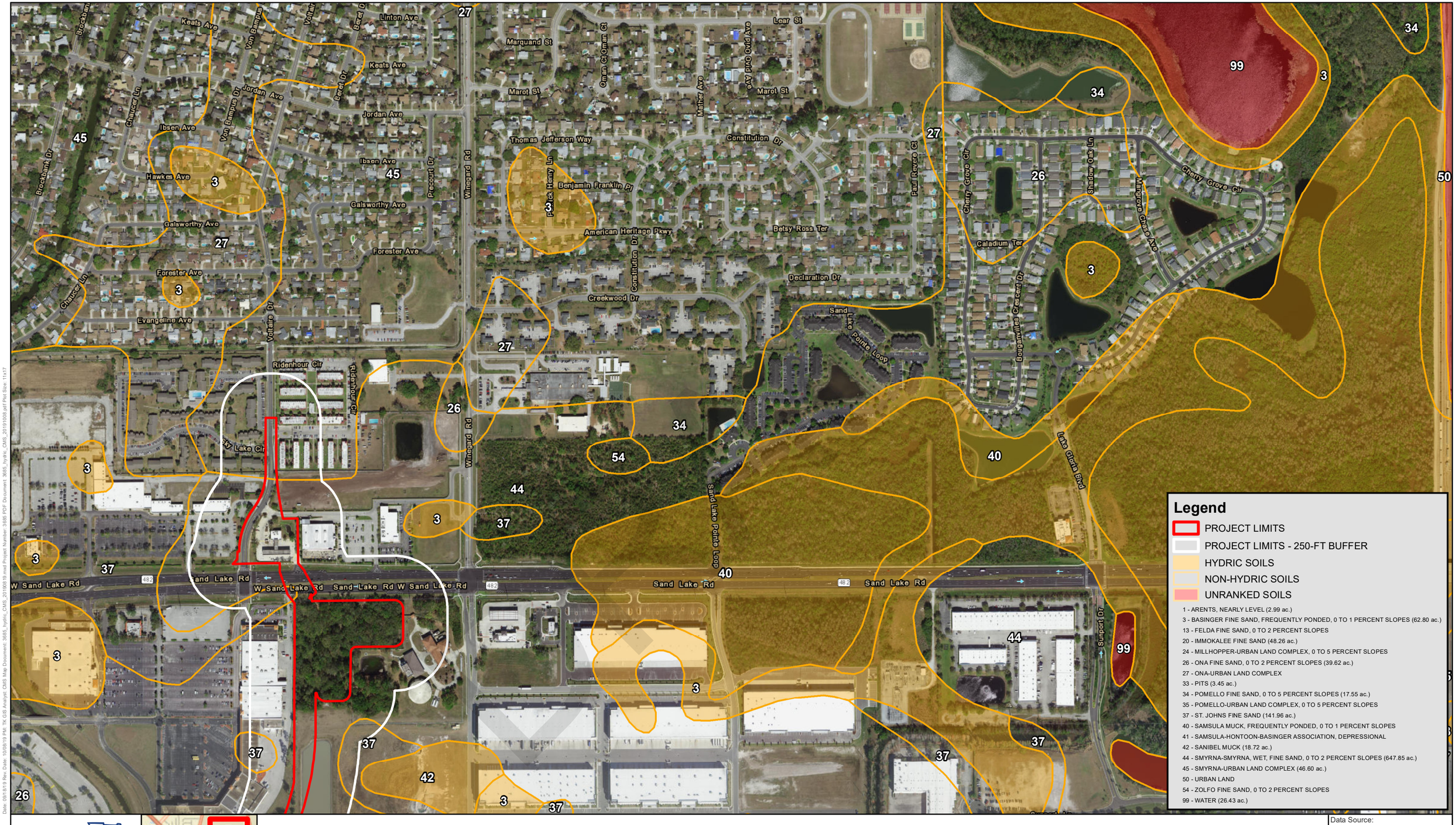

Legend

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- NON-HYDRIC SOILS
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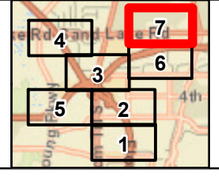

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Orlando South Ultimate Interchange PD&E Study
Orange County, Florida

0 500 1,000 1,500 Feet

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- ESA
- USDA NRCS

Imagery Source:
- ESRI Aerial Imagery

Coordinate System:
NAD 1983 Florida
State Plane East

N

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Appendix A: Project Area NRCS Soils Descriptions

Arents (MUID 1, non-hydric)
This soil type comprises approximately 0.6 percent of the soils located in the study area. These soils do not have diagnostic horizons because they have been deeply mixed by plowing, spading, or other methods of moving by humans. Accompanying land uses generally are pasture, cropland, forest, and/or wildlife habitat.

Basinger Fine Sand (MUID 3, hydric)
This soil type comprises approximately five percent of the soils located in the study area. This soil type is described as very deep, very poorly and poorly drained, rapidly permeable soil in low flats, sloughs, depressions and poorly defined drainageways. Slopes range from zero to two percent. Natural vegetation on this soil series could be expected to be scattered slash pine (*Pinus ellitottii*), longleaf pine (*Pinus palustris*), southern slash pine (*Pinus elliottii* var. *densa*), scattered cypress (*Taxodium* spp.) with an understory dominated by gallberry (*Ilex glabra*), pineland threeawn (*Aristida* sp.), cabbage palm (*Sabal palmetto*), St. Johnswort (*Hypericum* spp.), cutthroat grass (*Coleataenia abscissa*), blue maidencane (*Amphicarpum muhlenbergianium*), low panicum (*Panicum* spp.), wax myrtle (*Morella cerifera*), and sand cordgrass (*Spartina bakeri*).

Immokalee Fine Sand (MUID 20, non-hydric)
This soil type comprises approximately six percent of the soils located within the study area. This soil type is described as nearly level, poorly drained with zero to two percent slopes. Under natural conditions, the seasonal high water table is within a depth of six to 18 inches for one to six months during most years. Natural vegetation is comprised of South Florida slash pine, saw palmetto (*Serenoa repens*), wax myrtle, chalky bluestem (*Andropogon virginicus*), creeping bluestem (*Schizachyrium scoparium*), and wiregrass (*Aristida stricta*).

Ona Fine Sand (MUID 26, non-hydric)
This soil type comprises approximately three percent of the soils located within the study area. This soil type is described as poorly drained, moderately permeable soils that formed in thick sandy marine sediments. They occur in the flatwood areas of central and southern Florida and have slopes ranging from zero to two percent. Under natural conditions, the water table is at depths of 10 to 40 inches for periods of four to six months during most years. Natural vegetation on this soil series could be expected to be slash pine, longleaf pine, gallberry, widely spaced saw palmetto, huckleberry (*Gaylussacia* spp.), and pineland threeawn.

Pits (MUID 33, unranked)
This unit consists of areas that have been excavated for sand or gravel. Slopes range mostly from zero to 25 percent and steep escarpments are along the edges of the pits.

Pomello Fine Sand (MUID 34, non-hydric)
This soil type comprises approximately two percent of the soils located within the study area. This soil type is described as very deep, moderately well to somewhat poorly drained soils that formed in sandy marine sediments. The water table is typically within 18 to 48 inches and slopes range from zero to five percent. Natural vegetation on this soil series could be expected to be scrub oak (*Quercus inopina*), dwarf live oak (*Quercus minima*), saw palmetto, longleaf pine, slash pine, and pineland threeawn.

Sanibel Muck (MUID 42, hydric)
This soil type comprises approximately two percent of the soils located within the study area. This soil type is described as very poorly drained sandy soils with organic surfaces; they occur on nearly level to depressional areas with slopes less than two percent. The water table is at depths of less than 10 inches for six to 12 months during most years; water is above the surface for periods of two to six months during wet seasons. Natural vegetation on this soil series could be expected to be sawgrass (*Cladium jamaicense*), melaleuca (*Melaleuca quinquenervia*), and wax myrtle.

Smyrna-Smyrna, Wet, Fine Sand (MUID 44, non-hydric)
This soil type comprises approximately 62 percent of the soils located within the study area. This soil type is described as very deep, poorly to very poorly drained soils with slopes between zero and two percent. The water table is at depths of less than 18 inches for one to four months during most years the water table is between 12 and 40 inches for more than six months. In rainy season, the water table rises above the surface briefly and in depressions, water stands above the surface for six to nine months or more in most years. Natural vegetation on this soil series could be expected to be longleaf and slash pines, saw palmetto, running oak (*Quercus pumila*), gallberry, wax myrtle, and pineland threeawn.

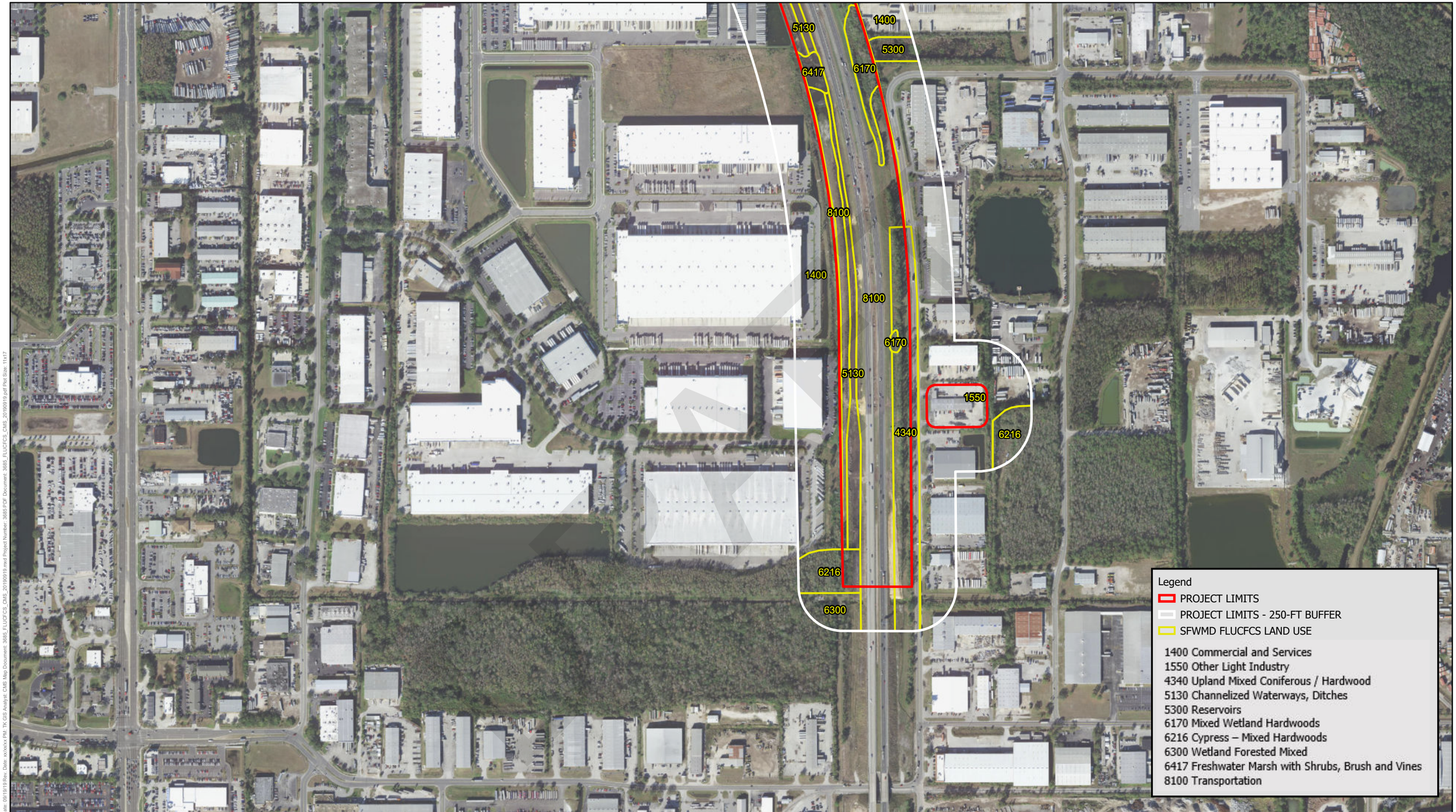
Smyrna-Urban Land Complex (MUID 45, non-hydric)
This soil type comprises approximately two percent of the soils located within the study area. These are nearly level Smyrna soils or Smyrna soils that have been reworked or reshaped. Most areas have drainage ditches that alter the depth to the seasonal high water table.

St. John's Fine Sand (MUID 37, non-hydric)
This soil type comprises approximately 14 percent of the soils located within the study area. This soil type consists of poorly drained soils that formed in sandy marine sediment. These soils occur on low-lying plains on flatwoods, slopes are less than two percent.

Urban Land (MUID 50, unranked)
Soils which have been altered as areas become urbanized. Examples of fill material in urban soils: natural soil materials that have been moved around by humans, construction debris, materials dredged from waterways, coal ash, municipal solid waste, a combination of the aforementioned.

Water (MUID 99, unranked)
This soil type comprises approximately three percent of the soils located within the study area. These soils occur under waterbodies with year-round surface water. They are ranked as neither hydric nor non-hydric.

APPENDIX B
Project Area Land Use Map and Descriptions



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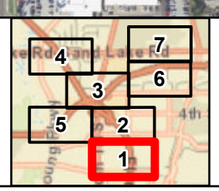


Appendix B - Field-Verified Land Use/Land Cover (FLUCFCS) within Study Area Map

FPID #: 438547-1-22-01
Orlando South Ultimate Interchange PD&E Study
Orange County, Florida

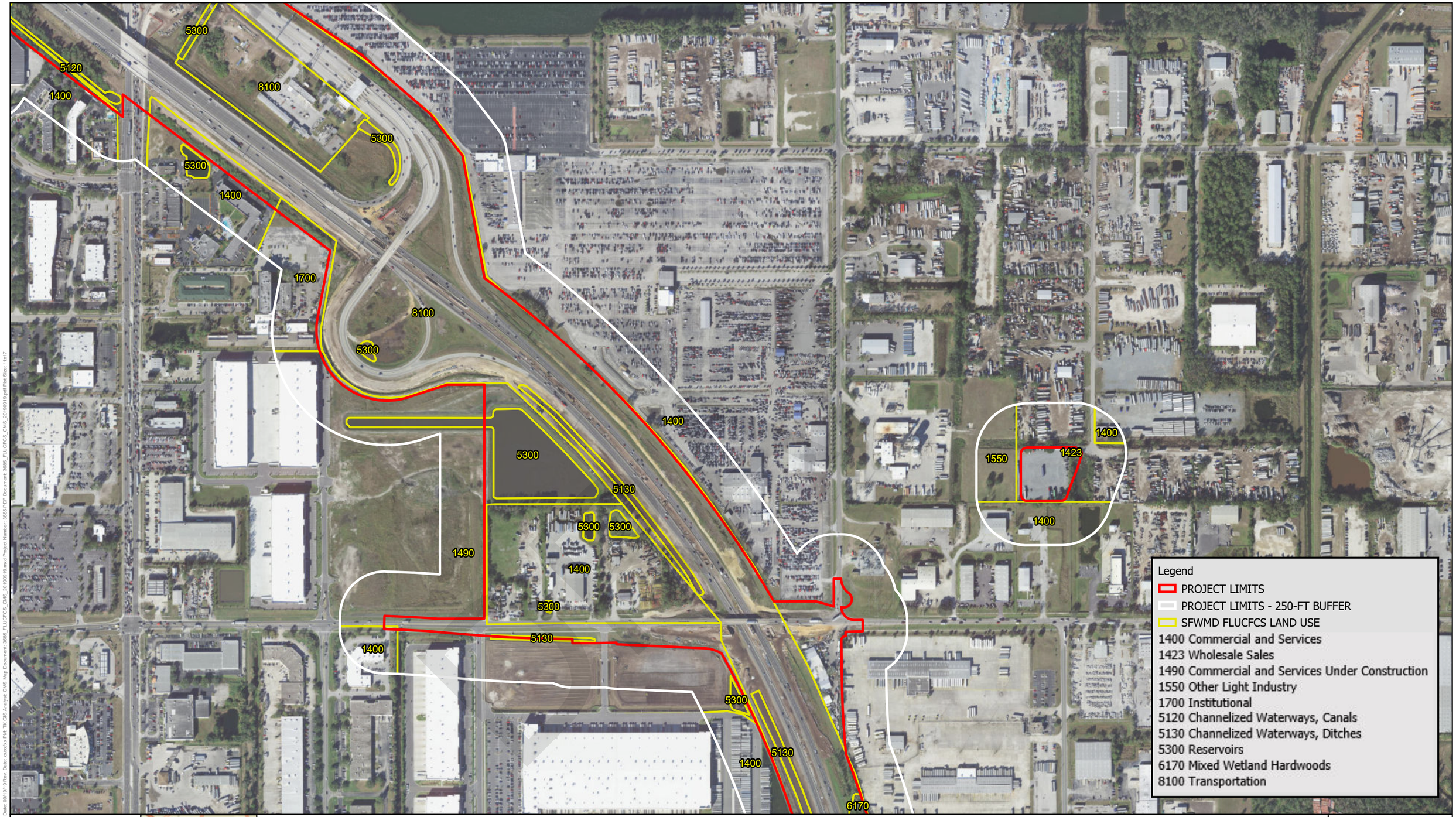
0 500 1,000 1,500 Feet

Data Source:
- Herdesty & Hanover
- FDOT
- ESA
- SFWMD FLUCFCS (2014)

Imagery Source:
- ESRI Aerial Imagery

Coordinate System:
NAD 1983 Florida
State Plane East

N



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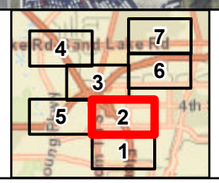

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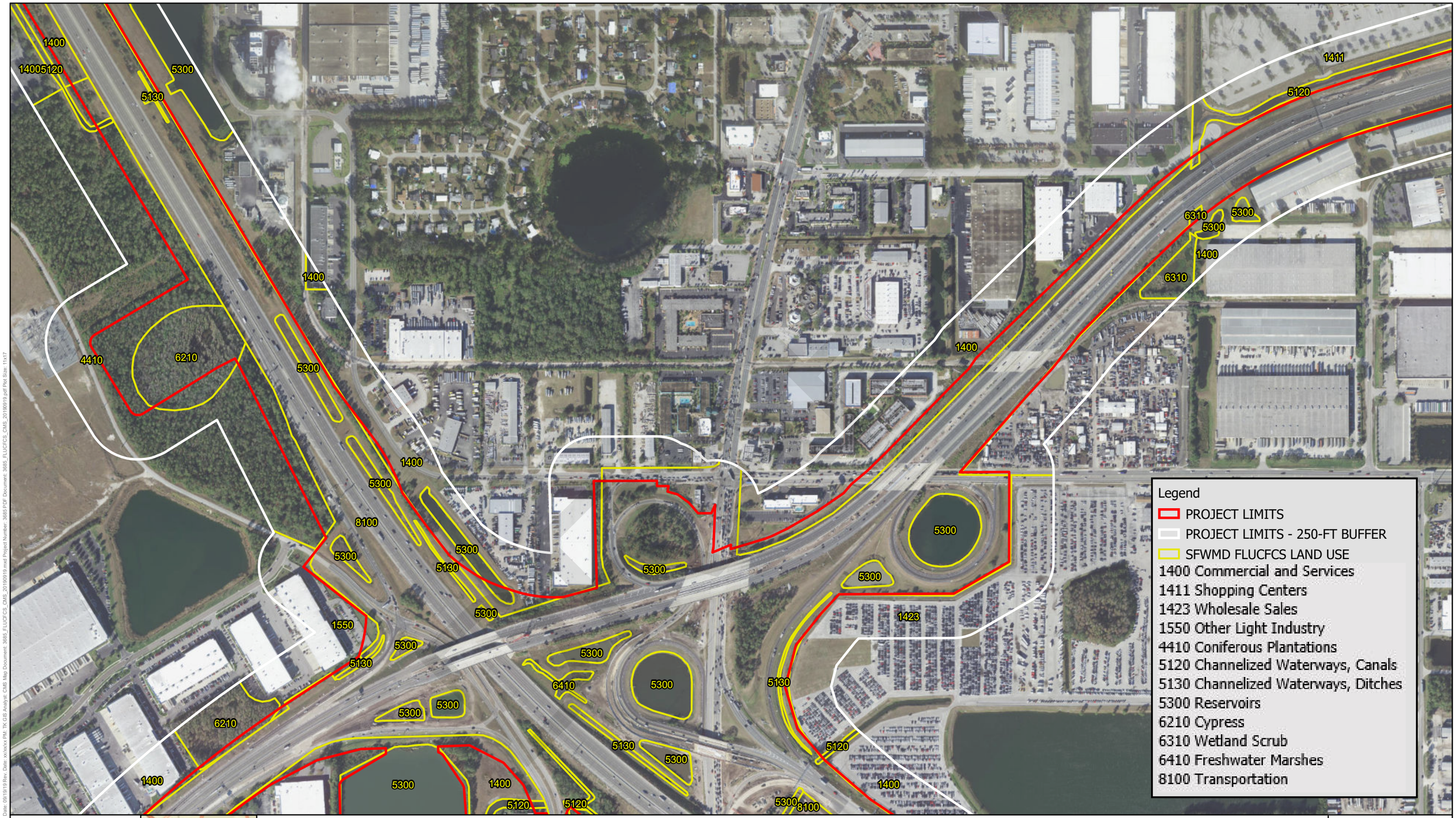

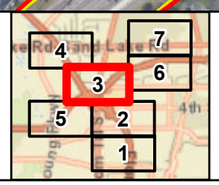

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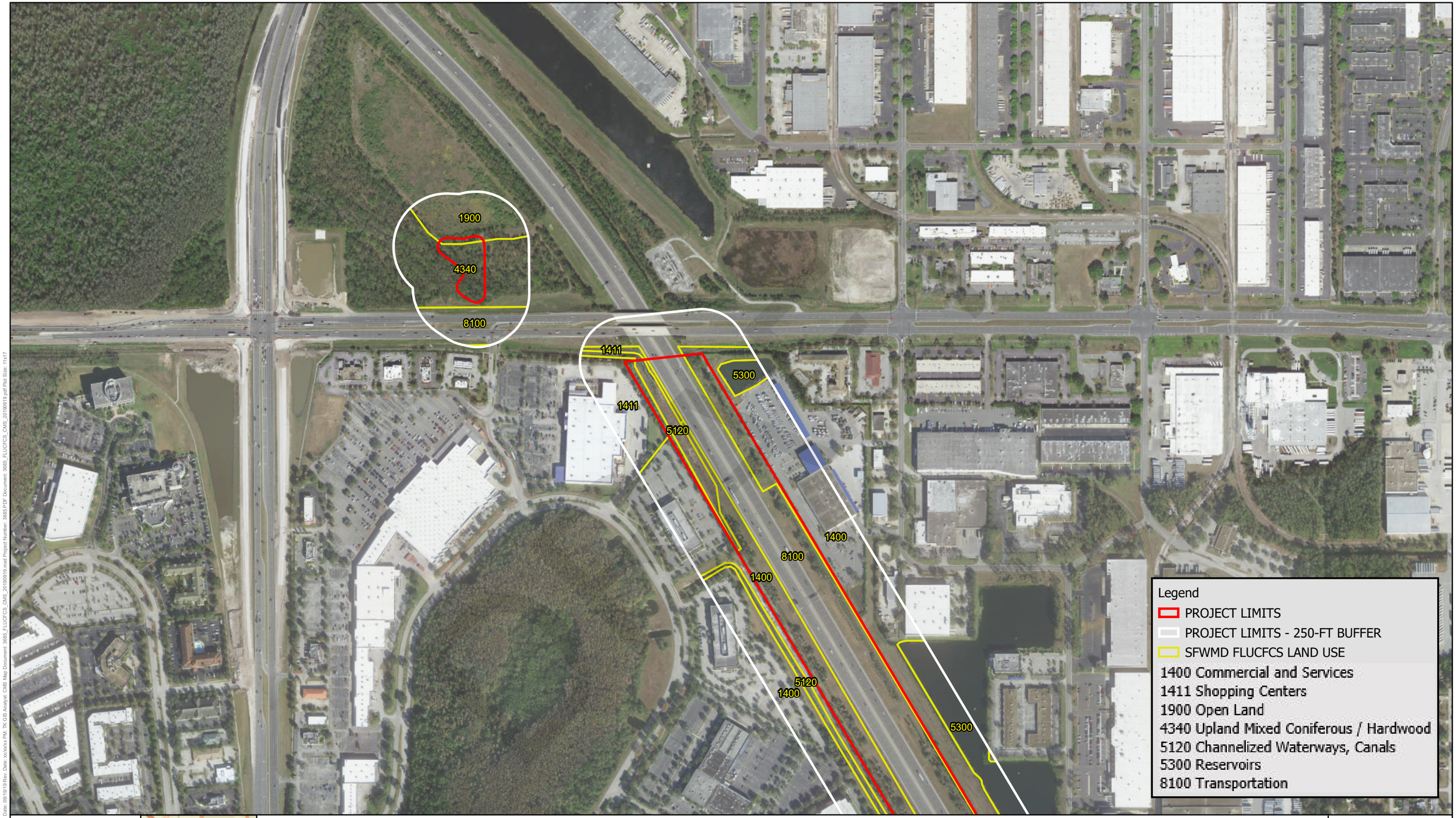

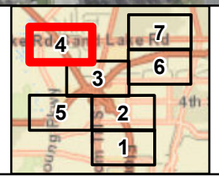

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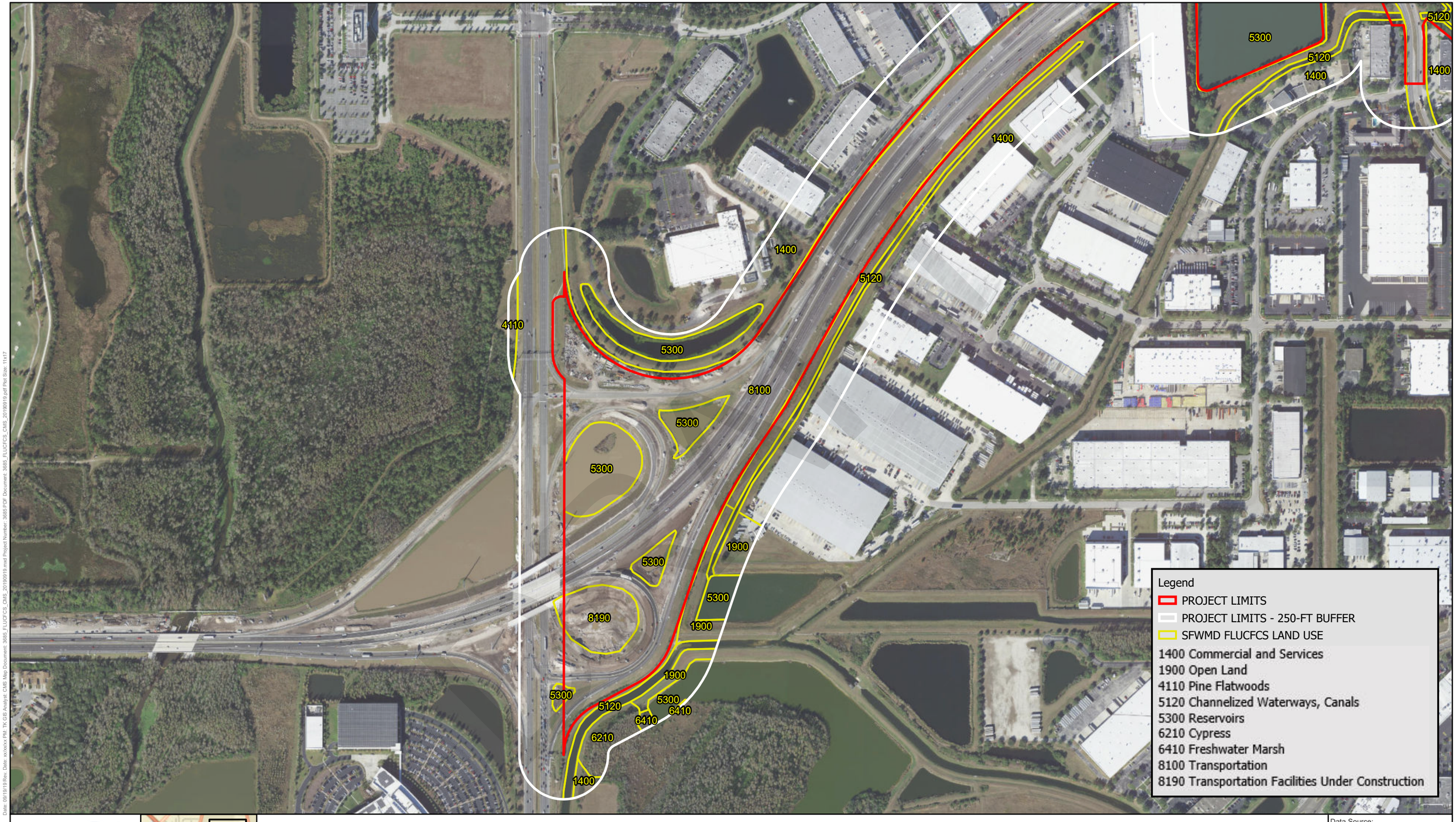

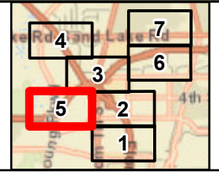

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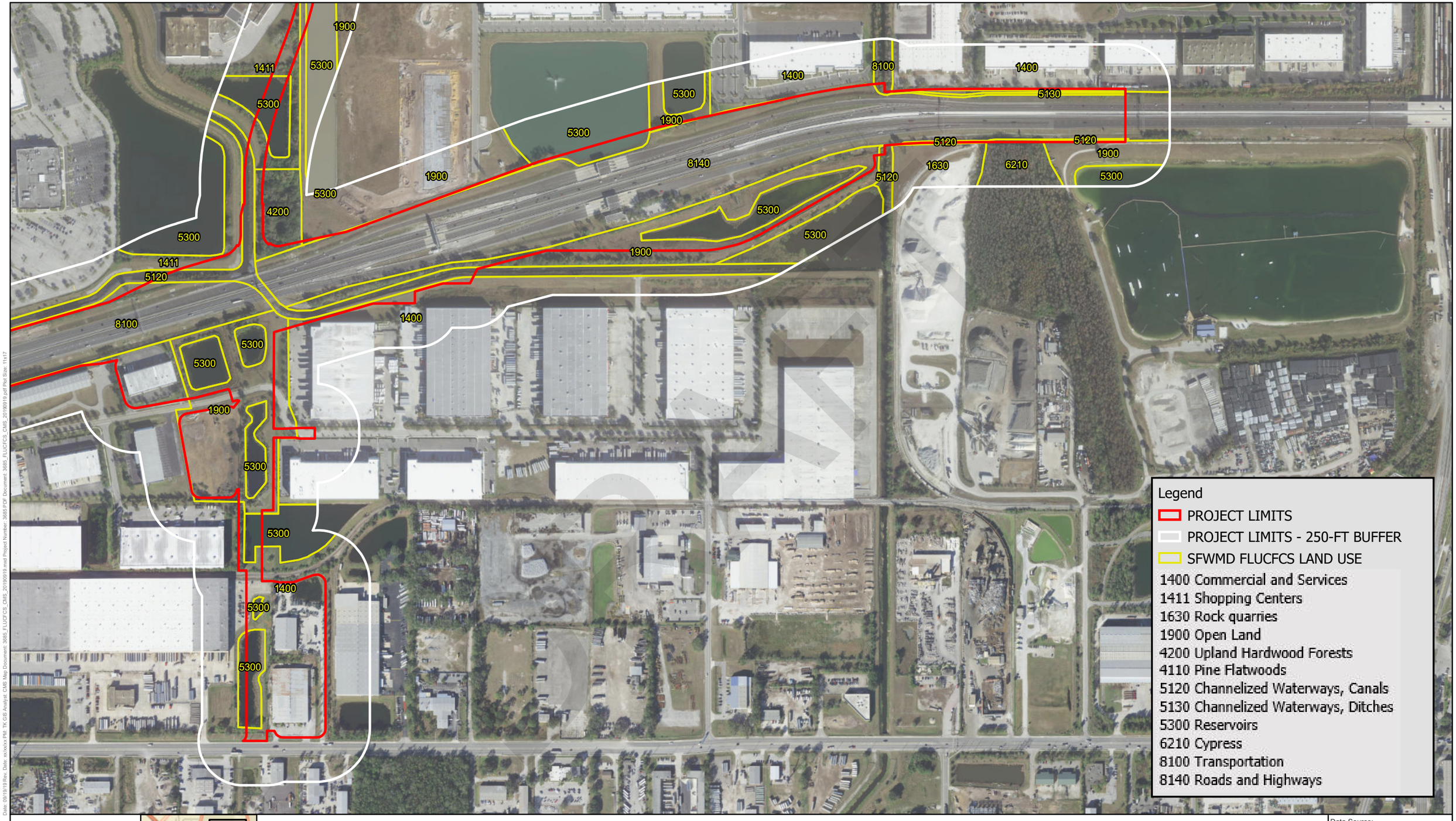

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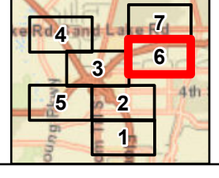

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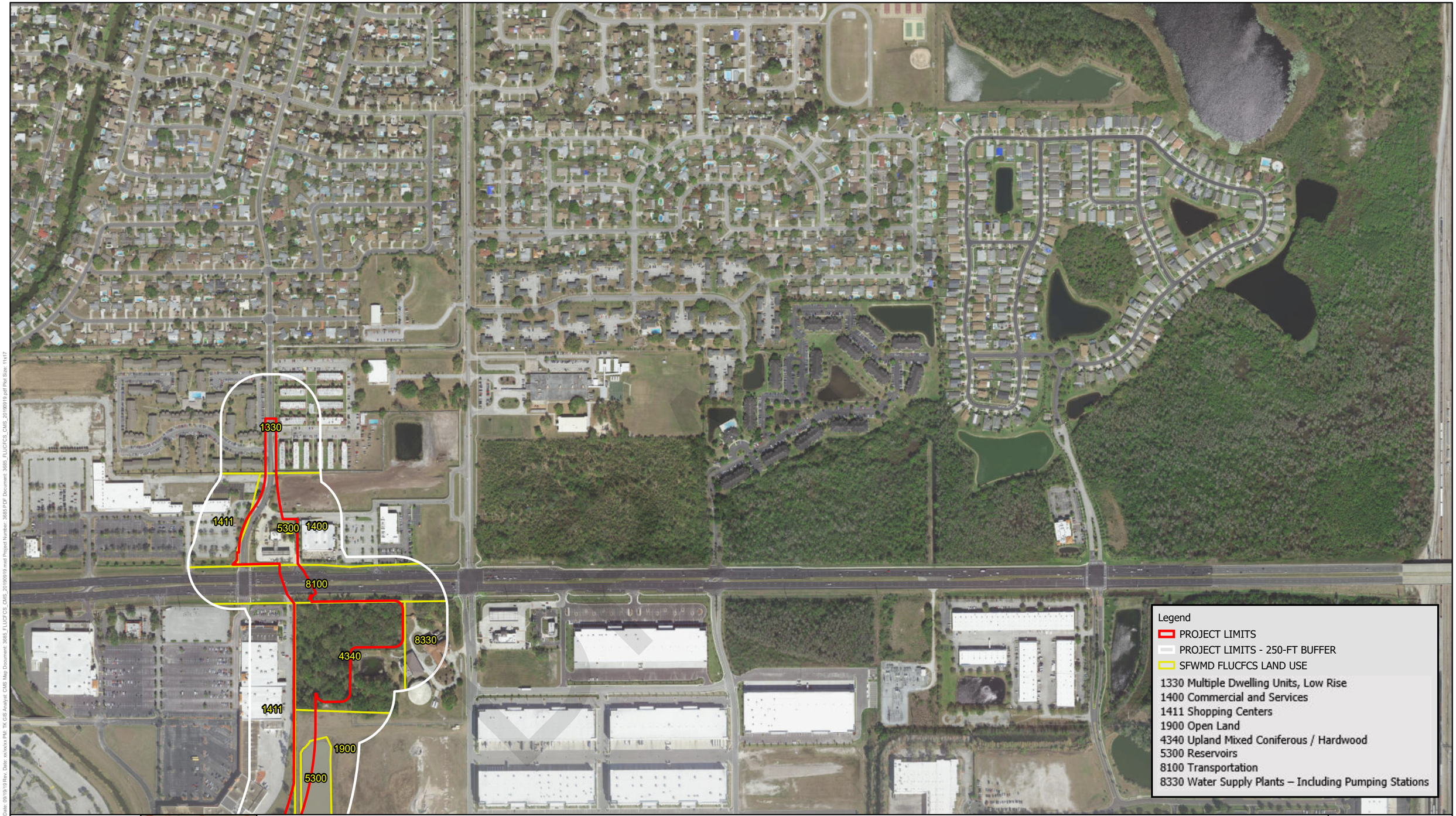

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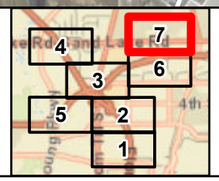

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NAD 1983 Florida
State Plane East

N

Appendix B: Project Area Land Use Descriptions

Multiple Dwelling Units, Low Rise (FLUCFCS 1330)
Residential land use consisting of multiple dwellings which are two stories or less.

Commercial and Services (FLUCFCS 1400)
This land use classification describes areas predominantly associated with the distribution of products and services.

Retail Sales and Services (FLUCFCS 1410)
Primarily devoted to the sale of products and services. Comprised of elements of central business districts, shopping centers and office buildings including associated structures.

Wholesale Sales and Services (FLUCFCS 1420)
Those land uses associated with the storage and wholesale distribution of products and materials. The primary structures associated with this category are large capacity and of boxlike shape designed to hold large quantities of products.

Commercial and Services Under Construction (FLUCFCS 1490)
Areas designated for commercial and service uses which are being constructed.

Other Light Industry (FLUCFCS 1550)
Steel fabrication, small boat manufacturing, electronic manufacturing and assembly plants are typical examples of light industrial enterprises.

Rock Quarries (FLUCFCS 1630)
This category identifies the excavation of building materials and can be found, in part, in the St. Augustine, Brooksville and Fort Myers areas. Equipment used in this category is a major identifying feature.

Institutional (FLUCFCS 1770)
Educational, religious, health, and military facilities are typical components of this category. Included within a particular institutional unit are all buildings, grounds, and parking lots that compose the facility.

Open Land (FLUCFCS 1900)
This category includes undeveloped land within urban areas and inactive land with street patterns but without structures. Open land normally does not exhibit any structures or any indication of intended use.

Upland Coniferous Forest (FLUCFCS 4100)
This category includes any natural forest stand whose canopy is at least 66 percent dominated by coniferous species is classified as coniferous forest.

Upland Hardwood Forests (FLUCFCS 4200)
This classification has a crown canopy with at least 66 percent dominance by hardwood tree species. This class is reserved for naturally occurring stands.

Upland Mixed Coniferous / Hardwood (FLUCFCS 4340)
This class is reserved for those forested areas in which neither upland conifers nor hardwoods achieve a 66 percent crown canopy dominance.

Coniferous Plantations (FLUCFCS 4410)
These are almost exclusively pine forests artificially generated by planting seedling stock or seeds. These stands are characterized by high numbers of trees per acre and their uniform appearance.

Channelized Waterways (FLUCFCS 5120)
This category includes rivers, creeks, canals and other linear water bodies where the water course is interrupted by a control structure.

Within the project area, land uses that fall within this category are both roadside ditches and larger scale canals associated with the existing roadway and nearby developments.

Reservoirs (FLUCFCS 5300)
Reservoirs are artificial impoundments of water. They are used for irrigation, flood control, municipal and rural water supplies, recreation and hydroelectric power generation. Dams, levees, other water control structures or the excavation itself usually will be evident.

The reservoirs within the study area consist primarily of existing stormwater management facilities with control structures.

Mixed Wetland Hardwoods (FLUCFCS 6170)
This category is reserved for those wetland hardwood communities which are composed of a large variety of hardwood species tolerant of hydric conditions yet exhibit an ill-defined mixture of species.

Cypress (FLUCFCS 6210)
This community is composed of pond cypress (*Taxodium ascendens*) or bald cypress (*Taxodium distichum*) which is either pure or predominant. In the case of pond cypress, common associates are swamp tupelo (*Nyssa biflora*), slash pine (*Pinus elliottii*), and black titi (*Cliftonia monophylla*). In the case of the bald cypress, common associates are water tupelo (*Nyssa aquatica*), swamp cottonwood (*Populus heterophylla*), red maple (*Acer rubrum*), American elm (*Ulmus americana*), pumpkin ash (*Fraxinus pennsylvanica*). Bald cypress may be associated with laurel oak (*Quercus laurifolia*), sweetgum (*Liquidambar styraciflua*) and sweetbay (*Magnolia virginiana*) on less moist sites.

Wetland Forested Mix (FLUCFCS 6300)
This category includes mixed wetland forest communities in which neither hardwoods nor conifers achieves a 66 percent dominance of the crown canopy composition.

Wetland Scrub (FLUCFCS 6310)
This community is associated with topographic depressions and poorly drained soil. Associated species include pond cypress, swamp tupelo, willows, and other low scrub with no dominate species.

Freshwater Marshes (FLUCFCS 6410)
The communities in this category are characterized by having one or more of the following species predominate: sawgrass (*Cladium jamaicense*), cattail (*Typha* spp.), arrowhead (*Sagittaria lancifolia*), maidencane (*Amphicarpum hemitomon*), buttonbush (*Cephalanthus occidentalis*), cordgrass (*Spartina*

spp.), giant cutgrass (*Zizaniopsis miliacea*), switchgrass (*Panicum virgatum*), bulrush (*Schoenoplectus* spp.), and needle rush (*Juncus roemerianus*).

Transportation (FLUCFCS 8100)
Transportation facilities are used for the movement of people and goods; therefore, they are major influences on land and many land use boundaries are outlined by them. This category encompasses rail-oriented facilities including stations, round-houses, repair and switching yards and related areas. Airport facilities include runways, intervening land, terminals, service buildings, navigational aids, fuel storage, parking lots and a limited buffer zone.

Roads and Highways (FLUCFCS 8140)
This category is a subset of transportation which focuses on roads and highways. This category includes road and highways that exceed 100 feet in width over long segments and have four or more lanes and median strips. A portion of the existing Beachline Expressway is coded as Roads and Highways.

Transportation Facilities Under Construction (FLUCFCS 8190)
This category refers to areas clearly being constructed for transportation purposes. Within the project area, this classification is found at the interchange of the Beachline Expressway and South John Young Parkway.

Water Supply Plants – Including Pumping Stations (FLUCFCS 8330)
This category includes treatment plants, settling basins, water storage towers and well fields.

APPENDIX C
Representative Habitat Photographs

Representative Roadside Ditch

Representative Reservoir

Representative Natural Wetland

Representative Pine and Hardwood Forest

Representative Bridge Structure

APPENDIX D

Standard Protection Measures for the Eastern Indigo Snake

STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE
U.S. Fish and Wildlife Service
August 12, 2013

The eastern indigo snake protection/education plan (Plan) below has been developed by the U.S. Fish and Wildlife Service (USFWS) in Florida for use by applicants and their construction personnel. At least **30 days prior** to any clearing/land alteration activities, the applicant shall notify the appropriate USFWS Field Office via e-mail that the Plan will be implemented as described below (North Florida Field Office: jaxregs@fws.gov; South Florida Field Office: verobeach@fws.gov; Panama City Field Office: panamacity@fws.gov). As long as the signatory of the e-mail certifies compliance with the below Plan (including use of the attached poster and brochure), no further written confirmation or "approval" from the USFWS is needed and the applicant may move forward with the project.

If the applicant decides to use an eastern indigo snake protection/education plan other than the approved Plan below, written confirmation or "approval" from the USFWS that the plan is adequate must be obtained. At least 30 days prior to any clearing/land alteration activities, the applicant shall submit their unique plan for review and approval. The USFWS will respond via e-mail, typically within 30 days of receiving the plan, either concurring that the plan is adequate or requesting additional information. A concurrence e-mail from the appropriate USFWS Field Office will fulfill approval requirements.

The Plan materials should consist of: 1) a combination of posters and pamphlets (see **Poster Information** section below); and 2) verbal educational instructions to construction personnel by supervisory or management personnel before any clearing/land alteration activities are initiated (see **Pre-Construction Activities** and **During Construction Activities** sections below).

POSTER INFORMATION

Posters with the following information shall be placed at strategic locations on the construction site and along any proposed access roads (a final poster for Plan compliance, to be printed on 11" x 17" or larger paper and laminated, is attached):

DESCRIPTION: The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

SIMILAR SNAKES: The black racer is the only other solid black snake resembling the eastern indigo snake. However, black racers have a white or cream chin, thinner bodies, and WILL BITE if handled.

LIFE HISTORY: The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands

and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and above-ground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.

PROTECTION UNDER FEDERAL AND STATE LAW: The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. "Taking" of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. "Take" is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of $25,000 for civil violations and up to $50,000 and/or imprisonment for criminal offenses, if convicted.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

IF YOU SEE A <u>LIVE</u> EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and allow the live eastern indigo snake sufficient time to move away from the site without interference;
- Personnel must NOT attempt to touch or handle snake due to protected status.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant's designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

IF YOU SEE A <u>DEAD</u> EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and immediately notify supervisor or the applicant's designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Thoroughly soak the dead snake in water and then freeze the specimen. The appropriate wildlife agency will retrieve the dead snake.

Telephone numbers of USFWS Florida Field Offices to be contacted if a live or dead eastern indigo snake is encountered:

North Florida Field Office – (904) 731-3336
Panama City Field Office – (850) 769-0552
South Florida Field Office – (772) 562-3909

PRE-CONSTRUCTION ACTIVITIES

1. The applicant or designated agent will post educational posters in the construction office and throughout the construction site, including any access roads. The posters must be clearly visible to all construction staff. A sample poster is attached.

2. Prior to the onset of construction activities, the applicant/designated agent will conduct a meeting with all construction staff (annually for multi-year projects) to discuss identification of the snake, its protected status, what to do if a snake is observed within the project area, and applicable penalties that may be imposed if state and/or federal regulations are violated. An educational brochure including color photographs of the snake will be given to each staff member in attendance and additional copies will be provided to the construction superintendent to make available in the onsite construction office (a final brochure for Plan compliance, to be printed double-sided on 8.5" x 11" paper and then properly folded, is attached). Photos of eastern indigo snakes may be accessed on USFWS and/or FWC websites.

3. Construction staff will be informed that in the event that an eastern indigo snake (live or dead) is observed on the project site during construction activities, all such activities are to cease until the established procedures are implemented according to the Plan, which includes notification of the appropriate USFWS Field Office. The contact information for the USFWS is provided on the referenced posters and brochures.

DURING CONSTRUCTION ACTIVITIES

1. During initial site clearing activities, an onsite observer may be utilized to determine whether habitat conditions suggest a reasonable probability of an eastern indigo snake sighting (example: discovery of snake sheds, tracks, lots of refugia and cavities present in the area of clearing activities, and presence of gopher tortoises and burrows).

2. If an eastern indigo snake is discovered during gopher tortoise relocation activities (i.e. burrow excavation), the USFWS shall be contacted within one business day to obtain further guidance which may result in further project consultation.

3. Periodically during construction activities, the applicant's designated agent should visit the project area to observe the condition of the posters and Plan materials, and replace them as needed. Construction personnel should be reminded of the instructions (above) as to what is expected if any eastern indigo snakes are seen.

POST CONSTRUCTION ACTIVITIES

Whether or not eastern indigo snakes are observed during construction activities, a monitoring report should be submitted to the appropriate USFWS Field Office within 60 days of project completion. The report can be sent electronically to the appropriate USFWS e-mail address listed on page one of this Plan.

APPENDIX E

UMAM Datasheets and Wetland Descriptions

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Orlando South Ultimate Interchange		WL 1 and 2

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
6170 Mixed Wetland Hardwoods	PFO1	Impact	1.65 ac.

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Shingle Creek	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

These wetlands are adjacent to SR 91 and connected throughout the area via culverts and roadway ditches.

Assessment area description

These remnant wetlands have been severed by SR 91 and impacted by adjacent industrial development. Additionally, nuisance/exotic vegetation and vines have become established along the edge. The canopy is dominated by red maple (*Acer rubrum*) and American elm (*Ulmus americana*). Subdominant vegetation includes Brazilian pepper (*Schinus terebinthifolia*), Peruvian primrosewillow (*Ludwigia peruviana*), wax myrtle (*Morella cerifera*), and grape vine (*Vitis* sp.).

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
SR 91	None

Functions	Mitigation for previous permit/other historic use
wildlife nesting and foraging, flood attenuation	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Small/medium mammals, amphibians, songbirds, wading birds, small fish etc.	wading birds (T), wood stork (T)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

None

Additional relevant factors:

None

Assessment conducted by:	Assessment date(s):
T. Kuba	2/27/2018

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Orlando South Ultimate Interchange		WL 1 and 2
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Kuba	2/27/2018

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current: 3	with: 0
These wetlands are traversed by SR 91 and connected via culverts and roadway ditches. Other surrounding areas are highly commercialized and industrialized development. Significantly reduced wildlife utilization due to its location within surrounding areas that are largely developed.		
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 5	with: 0
Standing water observed in the deeper areas. Hydroperiod likely reduced due to surrounding development, roadside ditches, and the excavated pond to the east. No observed use by animals with specific hydrological requirements. Runoff from SR 91 may be reducing water quality.		
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 4	with: 0
These remnant wetlands have been severed by SR 91 and impacted by adjacent industrial development. Additionally, nuisance/exotic vegetation and vines have become established along the edge. The canopy is dominated by red maple (*Acer rubrum*) and American elm (*Ulmus americana*). Subdominant vegetation includes Brazilian pepper (*Schinus terebinthifolia*), Peruvian primrosewillow (*Ludwigia peruviana*), wax myrtle (*Morella cerifera*), and grape vine (*Vitis* sp.).		

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres: 0.40	with: 0

Delta = [with-current]
0.40

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

If mitigation
Time lag (t-factor) =
Risk factor =

For impact assessment areas
FL = delta x acres = 0.66

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Orlando South Ultimate Interchange		WLs 3, 4, and 5

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
6210 Cypress	PFO2	Impact	5.70 ac.

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Shingle Creek	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

These wetlands are adjacent to SR 91 and connected throughout the area via culverts and roadway ditches.

Assessment area description

These remnant wetlands have been severed by SR 91 and impacted by adjacent industrial and commercial development. Additionally, nuisance/exotic vegetation and vines have become established along the edge. The canopy is dominated by cypress (Taxodium spp.), with red maple (*Acer rubrum*) saplings recruiting in along the edge. Subdominant vegetation includes Brazilian pepper (*Schinus terebinthifolia*), Peruvian primrosewillow (*Ludwigia peruviana*), wax myrtle (*Morella cerifera*), cabbage palm (*Sabal palmetto*), slash pine (*Pinus elliottii*), and grape vine (*Vitis* sp.).

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
SR 91	None

Functions	Mitigation for previous permit/other historic use
wildlife nesting and foraging, flood attenuation	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Small/medium mammals, amphibians, songbirds, wading birds, small fish etc.	wading birds (T), wood stork (T)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

None

Additional relevant factors:

None

Assessment conducted by:	Assessment date(s):
T. Kuba	2/27/2018

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Orlando South Ultimate Interchange		WL 3, 4, and 5
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Kuba	2/27/2018

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support w/o pres or current: 3 with: 0	These wetlands abut SR 91 and connected via culverts and roadway ditches. Other surrounding areas are highly commercialized and industrialized development. Significantly reduced wildlife utilization due to its location within surrounding areas that are largely developed.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current: 5 with: 0	Standing water observed in the deeper areas. Hydroperiod likely reduced due to surrounding development and roadside ditches as evidenced by recruitment of red maple. No observed use by animals with specific hydrological requirements. Runoff from SR 91 may be reducing water quality.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current: 6 with: 0	These remnant wetlands have been severed by SR 91 and impacted by adjacent industrial and commercial development. Additionally, nuisance/exotic vegetation and vines have become established along the edge. The canopy is dominated by cypress (*Taxodium* spp.), with red maple (*Acer rubrum*) saplings recruiting in along the edge. Subdominant vegetation includes Brazilian pepper (*Schinus terebinthifolia*), Peruvian primrosewillow (*Ludwigia peruviana*), wax myrtle (Morella cerifera), cabbage palm (*Sabal palmetto*), slash pine (*Pinus elliottii*), and grape vine (*Vitis* sp.).

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres: 0.47	with: 0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 2.68

Delta = [with-current]
0.47

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Orlando South Ultimate Interchange		WL 6

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
6216 Cypress - Mixed Hardwood	PFO2	Impact	0.48 ac.

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Shingle Creek	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This wetland is adjacent to SR 91 and connected throughout the area via culverts and roadway ditches.

Assessment area description

This remnant wetland has been severed by SR 91 and impacted by adjacent industrial and commercial development. Additionally, nuisance/exotic vegetation and vines have become established along the edge. The canopy is dominated by cypress (*Taxodium* spp.), red maple (*Acer rubrum*), and American elm (*Ulmus americana*). Subdominant vegetation includes Brazilian pepper (*Schinus terebinthifolia*), peruvian primrosewillow (*Ludwigia peruviana*), wax myrtle (*Morella cerifera*), cabbage palm (*Sabal palmetto*), slash pine (*Pinus elliottii*), and grape vine (*Vitis* sp.).

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
SR 91	None

Functions	Mitigation for previous permit/other historic use
wildlife nesting and foraging, flood attenuation	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Small/medium mammals, amphibians, songbirds, wading birds, small fish etc.	wading birds (T), wood stork (T)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

None

Additional relevant factors:

None

Assessment conducted by:	Assessment date(s):
T. Kuba	2/27/2018

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Orlando South Ultimate Interchange		WL 6
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Kuba	2/27/2018

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500(6)(a) Location and Landscape Support	3	0	This wetland abuts SR 91 and connected via culverts and roadway ditches. Other surrounding areas are highly commercialized and industrialized development. Significantly reduced wildlife utilization due to its location within surrounding areas that are largely developed.
.500(6)(b)Water Environment (n/a for uplands)	5	0	Standing water observed in the deeper areas. Hydroperiod likely reduced due to surrounding development and roadside ditches as evidenced by recruitment of red maple. No observed use by animals with specific hydrological requirements. Runoff from SR 91 may be reducing water quality.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	5	0	This remnant wetland has been severed by SR 91 and impacted by adjacent industrial and commercial development. Additionally, nuisance/exotic vegetation and vines have become established along the edge. The canopy is dominated by cypress (*Taxodium* spp.), red maple (*Acer rubrum*), and American elm (*Ulmus americana*). Subdominant vegetation includes Brazilian pepper (*Schinus terebinthifolia*), Peruvian primrosewillow (*Ludwigia peruviana*), wax myrtle (*Morella cerifera*), cabbage palm (*Sabal palmetto*), slash pine (*Pinus elliottii*), and grape vine (*Vitis* sp.).

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.43	0

Delta = [with-current]
0.43

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

If mitigation
Time lag (t-factor) =
Risk factor =

For impact assessment areas
FL = delta x acres = 0.21

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Orlando South Ultimate Interchange		WL 7

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
6310 Wetland Scrub	PSS3	Impact	0.10 ac.

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Shingle Creek	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This wetland is adjacent to SR 91 and connected throughout the area via culverts and roadway ditches.

Assessment area description

This remnant wetland has been severed by SR 91, adjacent stormwater infrastructure, and impacted by adjacent industrial and commercial development. Additionally, nuisance/exotic vegetation has become established inside along the edge. The wetland is comprised of Carolina willow (*Salix caroliniana*), wax myrtle (*Morella cerifera*), cattail (*Typha* sp.), and Peruvian primrosewillow (*Ludwigia peruviana*).

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
SR 91	None

Functions	Mitigation for previous permit/other historic use
wildlife nesting and foraging, flood attenuation	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Small/medium mammals, amphibians, songbirds, wading birds, small fish etc.	wading birds (T), wood stork (T)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

None

Additional relevant factors:

None

Assessment conducted by:	Assessment date(s):
T. Kuba	2/27/2018

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Orlando South Ultimate Interchange		WL 7
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Kuba	2/27/2018

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500(6)(a) Location and Landscape Support	3	0	This wetland abuts SR 91 and connected via culverts and roadway ditches. Other surrounding areas are highly commercialized and industrialized development. Significantly reduced wildlife utilization due to its location within surrounding areas that are largely developed.
.500(6)(b)Water Environment (n/a for uplands)	4	0	Standing water observed. Hydrology likely impacted due to adjacent development and construction. No observed use by animals with specific hydrological requirements. Runoff from SR 91 may be reducing water quality.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	3	0	This remnant wetland has been severed by SR 91 and impacted by adjacent industrial and commercial development and stormwater infrastructure. Additionally, nuisance/exotic vegetaion has become established inside along the edge. The wetland is comprised of Carolina willow (*Salix caroliniana*), wax myrtle (*Morella cerifera*), cattail (*Typha* sp.), and peruvian primrosewillow (*Ludwigia peruviana*).

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.33	0

Delta = [with-current]
0.33

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

If mitigation
Time lag (t-factor) =
Risk factor =

For impact assessment areas
FL = delta x acres = 0.03

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Orlando South Ultimate Interchange		WL 8

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
6410 Freshwater Marsh	PEM1	Impact	0.45 ac.

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Shingle Creek	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This wetland is adjacent to SR 91, adjacent to the SR 528 infield area and connected throughout the area via culverts and roadway ditches.

Assessment area description

This remnant wetland has been severed by SR 91 and impacted by adjacent industrial and commercial development. Additionally, nuisance/exotic vegetation has become established inside along the edge. The wetland is comprised of Brazilian pepper (*Schinus terebinthifolia*), cattail (*Typha* sp.), Peruvian primrosewillow (*Ludwigia peruviana*), Carolina willow (*Salix caroliniana*), and cabbage palm (Sabal palmetto).

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
SR 91	None

Functions	Mitigation for previous permit/other historic use
wildlife nesting and foraging, flood attenuation	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Small/medium mammals, amphibians, songbirds, wading birds, small fish etc.	wading birds (T), wood stork (T)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

None

Additional relevant factors:

None

Assessment conducted by:	Assessment date(s):
T. Kuba	2/27/2018

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Orlando South Ultimate Interchange		WL 8
Impact or Mitigation	Assessment conducted by:	Assessment date:
Impact	T. Kuba	2/27/2018

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500(6)(a) Location and Landscape Support	3	0	This wetland abuts SR 91, SR 528, and is connected via culverts and roadway ditches. Other surrounding areas are highly commercialized and industrialized development. Significantly reduced wildlife utilization due to its location within surrounding areas that are largely developed.
.500(6)(b)Water Environment (n/a for uplands)	4	0	Standing water observed. Hydrology likely impacted due to adjacent development and construction. No observed use by animals with specific hydrological requirements. Runoff from SR 91 and SR 528 may be reducing water quality.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	4	0	This remnant wetland has been severed by SR 91 and impacted by adjacent industrial and commercial development. Additionally, nuisance/exotic vegetation has become established inside along the edge. The wetland is comprised of Brazilian pepper (*Schinus terebinthifolia*), cattail (*Typha* sp.), Peruvian primrosewillow (*Ludwigia peruviana*), Carolina willow (*Salix caroliniana*), and cabbage palm (*Sabal palmetto*).

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.37	0

Delta = [with-current]
0.37

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

If mitigation
Time lag (t-factor) =
Risk factor =

For impact assessment areas
FL = delta x acres = 0.17

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Orlando South Ultimate Interchange		WL 9

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
6417 Freshwater Marsh with Shrubs, Brush, and Grasses	PEM1	Impact	0.53 ac.

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Shingle Creek	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This wetland is adjacent to SR 91 and connected throughout the area via culverts and roadway ditches.

Assessment area description

This remnant wetland has been severed by SR 91 and impacted by adjacent industrial and commercial development. Additionally, nuisance/exotic vegetation has become established inside along the edge. The wetland is comprised of cattail (*Typha* sp.), Peruvian primrosewillow (*Ludwigia peruviana*), wax myrtle (*Morella cerifera*), and a few scattered red maple (*Acer rubrum*).

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
SR 91	None

Functions	Mitigation for previous permit/other historic use
wildlife nesting and foraging, flood attenuation	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Small/medium mammals, amphibians, songbirds, wading birds, small fish etc.	wading birds (T), wood stork (T)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

None

Additional relevant factors:

None

Assessment conducted by:	Assessment date(s):
T. Kuba	2/27/2018

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Orlando South Ultimate Interchange		WL 9
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Kuba	2/27/2018

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	This wetlands abuts SR 91 and is connected via culverts and roadway ditches. Other surrounding areas are highly commercialized and industrialized development. Significantly reduced wildlife utilization due to its location within surrounding areas that are largely developed.	3	0
.500(6)(b)Water Environment (n/a for uplands)	Standing water observed. Hydrology likely impacted due to adjacent development and construction. No observed use by animals with specific hydrological requirements. Runoff from SR 91 may be reducing water quality.	4	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	This remnant wetland has been severed by SR 91 and impacted by adjacent industrial and commercial development. Additionally, nuisance/exotic vegetation has become established inside along the edge. the wetland is comprised of cattail (*Typha* sp.), Peruvian primrosewillow (*Ludwigia peruviana*), wax myrtle (*Morella cerifera*), and a few scattered red maple (*Acer rubrum*).	4	0

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.37	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 0.20

Delta = [with-current]
0.37

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

Appendix E: Wetland Descriptions

Wetlands 1 and 2 – Mixed Wetland Hardwoods (FLUCFCS 6170 / PFO1)

These remnant wetlands have been severed by SR 91 and impacted by adjacent industrial development. Nuisance/exotic vegetation and vines have become established along the edge. The canopy is dominated by red maple (*Acer rubrum*) and American elm (*Ulmus americana*). Subdominant vegetation includes Brazilian pepper (*Schinus terebinthifolia*), Peruvian primrose willow (*Ludwigia peruviana*), wax myrtle (*Morella cerifera*), and grape vine (*Vitis* sp.).

Wetlands 3, 4, and 5 – Cypress (FLUCFCS 6210 / PFO2)

These remnant wetlands have been severed by SR 91 and impacted by adjacent industrial and commercial development. Nuisance/exotic vegetation and vines have become established along the edge. The canopy is dominated by cypress (*Taxodium* spp.), with red maple (*Acer rubrum*) saplings recruiting along the edge. Subdominant vegetation includes Brazilian pepper (*Schinus terebinthifolia*), Peruvian primrose willow (*Ludwigia peruviana*), wax myrtle (*Morella cerifera*), cabbage palm (*Sabal palmetto*), slash pine (*Pinus elliottii*), and grape vine (*Vitis* sp.).

Wetland 6 – Cypress – Mixed Hardwood (FLUCFCS 6216 / PFO2)

This remnant wetland has been severed by SR 91 and impacted by adjacent industrial and commercial development. Nuisance/exotic vegetation and vines have become established along the edge. The canopy is dominated by cypress (*Taxodium* spp.), red maple (*Acer rubrum*), and American elm (*Ulmus americana*). Subdominant vegetation includes Brazilian pepper (*Schinus terebinthifolia*), Peruvian primrose willow (*Ludwigia peruviana*), wax myrtle (*Morella cerifera*), cabbage palm (*Sabal palmetto*), slash pine (*Pinus elliottii*), and grape vine (*Vitis* sp.).

Wetland 7 – Wetland Scrub (FLUCFCS 6310 / PSS3)

This remnant wetland has been severed by SR 91 and impacted by adjacent industrial and commercial development and stormwater infrastructure. Nuisance/exotic vegetation has become established inside the system along the edge. The wetland is comprised of Carolina willow (*Salix caroliniana*), wax myrtle (*Morella cerifera*), cattail (*Typha* sp.), and Peruvian primrose willow (*Ludwigia peruviana*).

Wetland 8 – Freshwater Marsh (FLUCFCS 6410 / PEM1)

This remnant wetland has been severed by SR 91 and impacted by adjacent industrial and commercial development. Nuisance/exotic vegetation has become established inside the system along the edge. The wetland is comprised of Brazilian pepper (*Schinus terebinthifolia*), cattail (*Typha* sp.), Peruvian primrose willow (*Ludwigia peruviana*), Carolina willow (*Salix caroliniana*), and cabbage palm (*Sabal palmetto*).

Wetland 9 – Freshwater Marsh with Shrubs, Brush, and Grasses (FLUCFCS 6417 / PEM1)

This remnant wetland has been severed by SR 91 and impacted by adjacent industrial and commercial development. Nuisance/exotic vegetation has become established inside the system along the edge. The wetland is comprised of cattail (*Typha* sp.), Peruvian primrose willow (*Ludwigia peruviana*), wax myrtle (*Morella cerifera*), and a few scattered red maple (*Acer rubrum*).

APPENDIX F
Previously Issued SFWMD Permits

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

BEG. PERMIT NUMBER:

48-01443-P

APPLICATION NUMBER:

031229-15

APPLICATION/PERMIT FILE RECORD & ACTION SHEE

Name: Widening of Florida's Turnpike (SR 91) from Beeline to I4

Permit No. 48-01443

Application No. 031222-

This file contains:

☐ ORIGINAL APPLICATION ☐ PERMIT ☐ SPECIAL CONDITION

☐ STAFF CALCULATION SHEET(S) ☐ DRAWING (S) ☐ STAFF REPORT

Chronological Correspondence/Action Record

Date	Subject	By	Comments
4/26/04	Staff Report Mailed	GH	A. Leavens
5/12/04	Permit Issued		S. Elfers

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
ENVIRONMENTAL RESOURCE PERMIT NO. 48-01443-P
DATE ISSUED: MAY 12, 2004

FORL #0145
Rev. 6/95

PERMITTEE: FLORIDA'S TURNPIKE ENTERPRISE
(WIDENING OF FLORIDA'S TURNPIKE (SR 91) FROM BEELIN)
P O BOX 613069,
OCOEE , FL 34761

PROJECT DESCRIPTION: CONSTRUCTION AND OPERATION OF A SURFACE WATER MANAGEMENT SYSTEM TO SERVE A 299.4 ACRE HIGHWAY PROJECT KNOWN AS TURNPIKE WIDENING BETWEEN THE BEELINE EXPRESSWAY AND I-4.

PROJECT LOCATION: ORANGE COUNTY , SECTION 19,20,28,29,33 TWP 23S RGE 29E
SECTION 3,4 TWP 24S RGE 29E

PERMIT DURATION: See Special Condition No:1. See attached Rule 40E-4.321, Florida Administrative Code.

This Permit is issued pursuant to Application No. 031222-15 , dated December 22, 2003. Permittee agrees to hold and save the South Florida Water Management District and its successors harmless from any and all damages, claims or liabilities which may arise by reason of the construction, operation, maintenance or use of activities authorized by this Permit. This Permit is issued under the provisions of Chapter 373 , Part IV Florida Statutes (F.S.), and the Operating Agreement Concerning Regulation Under Part IV, Chapter 373 F.S., between South Florida Water Management District and the Department of Environmental Protection. Issuance of this Permit constitutes certification of compliance with state water quality standards where neccessary pursuant to Section 401, Public Law 92-500, 33 USC Section 1341 , unless this Permit is issued pursuant to the net improvement provisions of Subsections 373.414(1)(b), F.S., or as otherwise stated herein.

This Permit may be transferred pursuant to the appropriate provisions of Chapter 373, F.S, and Sections 40E-1.6107(1) and (2), and 40E-4.351(1), (2), and (4), Florida Administrative Code (F.A.C.). This Permit may be revoked, suspended, or modified at any time pursuant to the appropriate provisions of Chapter 373, F.S, and Sections 40E-4.351(1), (2), and (4), F.A.C.

This Permit shall be subject to the General Conditions set forth in Rule 40E-4.381, F.A.C., unless waived or modified by the Governing Board. The Application, and the Environmental Resource Permit Staff Review Summary of the Application, including all conditions, and all plans and specifications incorporated by reference, are a part of this Permit. All activities authorized by this Permit shall be implemented as set forth in the plans, specifications, and performance criteria as set forth and incorporated in the Environmental Resource Permit Staff Review Summary. Within 30 days after completion of construction of the permitted activity, the Permittee shall submit a written statement of completion and certification by a registered professional engineer or other appropriate individual, pursuant to the appropriate provisions of Chapter 373, F.S. and Sections 40E-4.361 and 40E-4.381, F.A.C.

In the event the property is sold or otherwise conveyed, the Permittee will remain liable for compliance with this Permit until transfer is approved by the District pursuant to Rule 40E-1.6107, F.A.C.

SPECIAL AND GENERAL CONDITIONS ARE AS FOLLOWS:
SEE PAGES 2 - 3 OF 6 (16 SPECIAL CONDITIONS).
SEE PAGES 4 - 6 OF 6 (19 GENERAL CONDITIONS).

FILED WITH THE CLERK OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT

On ORIGINAL SIGNED BY:
By ELIZABETH VEGUILLA
DEPUTY CLERK

SOUTH FLORIDA WATER MANAGEMENT DISTRICT, BY ITS GOVERNING BOARD

By ORIGINAL SIGNED BY:
LORI OJALA
SECRETARY

SPECIAL CONDITIONS

1. The construction phase of this permit shall expire on May 13, 2009.

2. Operation of the surface water management system shall be the responsibility of FLORIDA'S TURNPIKE ENTERPRISE

3. Discharge Facilities: See Exhibits 11 & 12.

4. The permittee shall be responsible for the correction of any erosion, shoaling or water quality problems that result from the construction or operation of the surface water management system.

5. Measures shall be taken during construction to insure that sedimentation and/or turbidity violations do not occur in the receiving water.

6. The authorization for construction of the surface water management system is issued pursuant to the water quality net improvement provisions referenced in Rule Section 40E-4.303(1), Florida Administrative Code; therefore, the state water quality certification is waived.

7. The District reserves the right to require that additional water quality treatment methods be incorporated into the drainage system if such measures are shown to be necessary.

8. Lake side slopes shall be no steeper than 5:1 (horizontal:vertical) to a depth of two feet below the control elevation. Side slopes shall be nurtured or planted from 2 feet below to 1 foot above control elevation to insure vegetative growth, unless shown on the plans.

9. Facilities other than those stated herein shall not be constructed without an approved modification of this permit.

10. A stable, permanent and accessible elevation reference shall be established on or within one hundred (100) feet of all permitted discharge structures no later than the submission of the certification report. The location of the elevation reference must be noted on or with the certification report.

11. The permittee shall provide routine maintenance of all of the components of the surface water management system in order to remove all trapped sediments/debris. All materials shall be properly disposed of as required by law. Failure to properly maintain the system may result in adverse flooding conditions.

12. This permit is issued based on the applicant's submitted information which reasonably demonstrates that adverse water resource related impacts will not be caused by the completed permit activity. Should any adverse impacts caused by the completed surface water management system occur, the District will require the permittee to provide appropriate mitigation to the District or other impacted party. The District will require the permittee to modify the surface water management system, if necessary, to eliminate the cause of the adverse impacts.

13. Minimum road crown elevation: See Exhibit 14.

14. Silt fencing shall be installed at the limits of construction to protect all of the preserve areas from silt and sediment deposition during the construction of the project. A floating turbidity barrier shall be installed during the construction of the final discharge structure into the adjacent canal/water body. The silt fencing and the turbidity barrier shall be installed in accordance with "Florida Land Development Manual" Chapter 6 "Stormwater and Erosion and Sediment Control Best Management Practices for Developing Areas". The sediment controls shall be installed prior to the commencement of any clearing or construction and the installation must be inspected by the District's Environmental Resource Compliance staff. The silt fencing and turbidity barriers shall remain in place and be maintained in good functional condition until all adjacent construction activities

have been completed and all fill slopes have been stabilized. Upon completion of the project and the stabilization of the fill, the permittee shall contact the District's Environmental Resource Compliance staff to inspect the site and approve the removal of the silt fencing and turbidity barriers.

15. Prior to to commencement of construction in wetlands and in accordance with the work schedule attached the permittee shall submit documentation from the Florida Department of Environmental Protection that 8.94 fresh water forested mitigation credits have been deducted from the ledger for Florida Mitigation Bank, (DEP ERP #492924779)

16. The permittee must obtain a Water Use permit prior to construction dewatering unless the work qualifies for a general permit pursuant to Subsection 40E-20.302(3) F.A.C., also known as the "No Notice" Rule.

GENERAL CONDITIONS

1. All activities authorized by this permit shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit and Part IV, Chapter 373. F.S.

2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by District staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.

3. Activities approved by this permit shall be conducted in a manner which does not cause violations of State water quality standards. The permittee shall implement best management practices for erosion and pollution control to prevent violation of State water quality standards. Temporary erosion control shall be implemented prior to and during construction, and permanent control measures shall be completed within 7 days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has been established. All practices shall be in accordance with the guidelines and specifications described in Chapter 6 of the Florida Land Development Manual; A Guide to Sound Land and Water Management (Department of Environmental Regulation, 1988), incorporated by reference in Rule 40E-4.091, F.A.C. unless a project-specific erosion and sediment control plan is approved as part of the permit. Thereafter the permittee shall be responsible for the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.

4. The permittee shall notify the District of the anticipated construction start date within 30 days of the date that this permit is issued. At least 48 hours prior to commencement of activity authorized by this permit, the permittee shall submit to the District an Environmental Resource Permit Construction Commencement Notice Form Number 0960 indicating the actual start date and the expected construction completion date.

5. When the duration of construction will exceed one year, the permittee shall submit construction status reports to the District on an annual basis utilizing an annual status report form. Status report forms shall be submitted the following June of each year.

6. Within 30 days after completion of construction of the permitted activity, the permitee shall submit a written statement of completion and certification by a professional engineer or other individual authorized by law, utilizing the supplied Environmental Resource/Surface Water Management Permit Construction Completion/Certification Form Number 0881A, or Environmental Resource/Surface Water Management Permit Construction Completion Certification - For Projects Permitted prior to October 3, 1995 Form No. 0881B, incorporated by reference in Rule 40E-1.659, F.A.C. The statement of completion and certification shall be based on onsite observation of construction or review of as-built drawings for the purpose of determining if the work was completed in compliance with permitted plans and specifications. This submittal shall serve to notify the District that the system is ready for inspection. Additionally, if deviation from the approved drawings are discovered during the certification process, the certification must be accompanied by a copy of the approved permit drawings with deviations noted. Both the original and revised specifications must be clearly shown. The plans must be clearly labeled as "as-built" or "record" drawings. All surveyed dimensions and elevations shall be certified by a registered surveyor.

for conversion of Environmental Resource Permit from Construction Phase to Operation Phase, Form No. 0920; the District determines the system to be in compliance with the permitted plans and specifications; and the entity approved by the District in accordance with Sections 9.0 and 10.0 of the Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District, accepts responsibility for operation and maintenance of the system. The permit shall not be transferred to such approved operation and maintenance entity until the operation phase of the permit becomes effective. Following inspection and approval of the permitted system by the District, the permittee shall initiate transfer of the permit to the approved responsible operating entity if different from the permittee. Until the permit is transferred pursuant to Section 40E-1.6107, F.A.C., the permittee shall be liable for compliance with the terms of the permit.

8. Each phase or independent portion of the permitted system must be completed in accordance with the permitted plans and permit conditions prior to the initiation of the permitted use of site infrastructure located within the area served by that portion or phase of the system. Each phase or independent portion of the system must be completed in accordance with the permitted plans and permit conditions prior to transfer of responsibility for operation and maintenance of the phase or portion of the system to a local government or other responsible entity.

9. For those systems that will be operated or maintained by an entity that will require an easement or deed restriction in order to enable that entity to operate or maintain the system in conformance with this permit, such easement or deed restriction must be recorded in the public records and submitted to the District along with any other final operation and maintenance documents required by Sections 9.0 and 10.0 of the Basis of Review for Environmental Resource Permit applications within the South Florida Water Management District, prior to lot or units sales or prior to the completion of the system, whichever comes first. Other documents concerning the establishment and authority of the operating entity must be filed with the Secretary of State, county or municipal entities. Final operation and maintenance documents must be received by the District when maintenance and operation of the system is accepted by the local government entity. Failure to submit the appropriate final documents will result in the permittee remaining liable for carrying out maintenance and operation of the permitted system and any other permit conditions.

10. Should any other regulatory agency require changes to the permitted system, the permittee shall notify the District in writing of the changes prior to implementation so that a determination can be made whether a permit modification is required.

11. This permit does not eliminate the necessity to obtain any required federal, state, local and special district authorizations prior to the start of any activity approved by this permit. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40E-4 or Chapter 40E-40, F.A.C..

12. The permittee is hereby advised that Section 253.77, F.S. states that a person may not commence any excavation, construction, or other activity involving the use of sovereign or other lands of the State, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund without obtaining the required lease, license, easement, or other form of consent authorizing the proposed use. Therefore, the permittee is responsible for obtaining any necessary authorizations from the Board of Trustees prior to commencing activity on sovereignty lands or other state-owned lands.

13. The permittee must obtain a Water Use permit prior to construction dewatering, unless the work qualifies for a general permit pursuant to Subsection 40E-20.302(3), F.A.C., also known as the "No Notice" Rule.

14. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any system authorized by the

permit.

15. Any delineation of the extent of a wetland or other surface water submit of the permit application, including plans or other supporting documenta not be considered binding, unless a specific condition of this permit o determination under Section 373.421(2), F.S., provides otherwise.

16. The permittee shall notify the District in writing within 30 days of conveyance, or other transfer of ownership or control of a permitted sys real property on which the permitted system is located. All transfers o or transfers of a permit are subject to the requirements of Rules 40E-1.61 1.6107, F.A.C.. The permittee transferring the permit shall remain corrective actions that may be required as a result of any violations pr sale, conveyance or other transfer of the system.

17. Upon reasonable notice to the permittee, District authorized staff w identification shall have permission to enter, inspect, sample and test the insure conformity with the plans and specifications approved by the permit.

18. If historical or archaeological artifacts are discovered at any time on t site, the permittee shall immediately notify the appropriate District servi

19. The permittee shall immediately notify the District in writing of any submitted information that is later discovered to be inaccurate.

40E-4.321 Duration of Permits

(1) Unless revoked or otherwise modified the duration of an environmental resource permit issued under this chapter or Chapter 40E-40, F.A.C. is as follows:

(a) For a conceptual approval, two years from the date of issuance or the date specified as a condition of the permit, unless within that period an application for an individual or standard general permit is filed for any portion of the project. If an application for an environmental resource permit is filed, then the conceptual approval remains valid until final action is taken on the environmental resource permit application. If the application is granted, then the conceptual approval is valid for an additional two years from the date of issuance of the permit. Conceptual approvals which have no individual or standard general environmental resource permit applications filed for a period of two years shall expire automatically at the end of the two year period.

(b) For a conceptual approval filed concurrently with a development of regional impact (DRI) application for development approval (ADA) and a local government comprehensive plan amendment, the duration of the conceptual approval shall be two years from whichever one of the following occurs at the latest date:

1. the effective date of the local government's comprehensive plan amendment.
2. the effective date of the local government development order.
3. the date on which the District issues the conceptual approval, or
4. the latest date of the resolution of any Chapter 120.57, F.A.C., administrative proceeding or other legal appeals.

(c) For an individual or standard general environmental resource permit, five years from the date of issuance or such amount of time as made a condition of the permit.

(d) For a noticed general permit issued pursuant to chapter 40-E-400, F.A.C., five years from the date the notice of intent to use the permit is provided to the District.

?)(a) Unless prescribed by special permit condition, permits expire automatically according to the timeframes indicated in this rule. If application for extension is made in writing pursuant to subsection (3), the permit shall remain in full force and effect until:

1. the Governing Board takes action on an application for extension of an individual permit, or
2. staff takes action on an application for extension of a standard general permit.

(b) Installation of the project outfall structure shall not constitute a vesting of the permit.

(3) The permit extension shall be issued provided that a permittee files a written request with the District showing good cause prior to the expiration of the permit. For the purpose of this rule, good cause shall mean a set of extenuating circumstances outside of the control of the permittee. Requests for extensions, which shall include documentation of the extenuating circumstances and how they have delayed this project, will not be accepted more than 180 days prior to the expiration date.

(4) Substantial modifications to Conceptual Approvals will extend the duration of the Conceptual Approval for two years from the date of issuance of the modification. For the purposes of this section, the term "substantial modification" shall mean a modification which is reasonably expected to lead to substantially different water resource or environmental impacts which require a detailed review.

(5) Substantial modifications to individual or standard general environmental resource permits issued pursuant to a permit application extend the duration of the permit for three years from the date of issuance of the modification. Individual or standard general environmental resource permit modifications do not extend the duration of a conceptual approval.

(6) Permit modifications issued pursuant to subsection 40E-4.331(2)(b), F.A.C. (letter modifications) do not extend the duration of a permit.

(7) Failure to complete construction or alteration of the surface water management system and obtain operation phase approval from the District within the permit duration shall require a new permit authorization in order to continue construction unless a permit extension is granted.

Specific authority 373.044, 373.113 F.S. Law Implemented 373.413, 373.416, 373.419, 373.426 F.S. History—New 9-3-81, Amended 1-31-82, 12-1-82, Formerly 16K-4.07(4), Amended 7-1-86, 4/20/94, Amended 7-1-86, 4/20/94, 10-3-95

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
3301 Gun Club Road, West Palm Beach, Florida 33406 • (561) 686-8800 • FL WATS 1-800-432-2045 • TDD (561) 697-2574
Mailing Address: P.O. Box 24680, West Palm Beach, FL 33416-4680 • www.sfwmd.gov

April 26, 2004

Florida's Turnpike Enterprise
P.O. Box 613069
Ocoee, FL 34761

Subject: Application No. 031222-15, **Widening of Florida's Turnpike (SR 91) from Beeline to I-4**
Orange County, S19,20,28,29,33/T23S/R29E, S3,4/T24S/R29E

Enclosed is a copy of the South Florida Water Management District's staff report covering the permit application referenced therein. It is requested that you read this staff report thoroughly and understand its contents. The recommendations as stated in the staff report will be presented to our Governing Board for consideration on **May 12, 2004.**

Should you wish to object to the staff recommendation or file a petition, please provide written objections, petitions and/or waivers (refer to the attached "Notice of Rights") to:

Elizabeth Veguilla, Deputy Clerk
South Florida Water Management District
Post Office Box 24680
West Palm Beach, Florida 33416-4680

The "Notice of Rights" addresses the procedures to be followed if you desire a public hearing or other review of the proposed agency action. You are advised, however, to be prepared to defend your position regarding the permit application when it is considered by the Governing Board for final agency action, even if you agree with the staff recommendation, as the Governing Board may take final agency action which differs materially from the proposed agency action.

Please contact the District if you have any questions concerning this matter.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a "Notice of Rights" has been mailed to the addressee this 26th day of April, 2004 in accordance with Section 120.60 (3), Florida Statutes.

Sincerely,

Damon Meiers, P.E., Deputy Director
Environmental Resource Regulation Department

DM/gh

CERTIFIED #7002 3150 0003 3738 9375
RETURN RECEIPT REQUESTED

NOTICE OF RIGHTS

Section 120.569(1), Fla. Stat. (1999), requires that "each notice shall inform the recipient of any administrative hearing or judicial review that is available under this section, s. 120.57, or s. 120.68; shall indicate the procedure which must be followed to obtain the hearing or judicial review, and shall state the time limits which apply." Please note that this Notice of Rights is not intended to provide legal advice. Not all the legal proceedings detailed below may be an applicable or appropriate remedy. You may wish to consult an attorney regarding your legal rights.

Petition for Administrative Proceedings

1. A person whose substantial interests are affected by the South Florida Water Management District's (SFWMD) action has the right to request an administrative hearing on that action. The affected person may request either a formal or an informal hearing, as set forth below. A point of entry into administrative proceedings is governed by Rules 28-106.111 and 40E-1.511, Fla. Admin. Code, (also published as an exception to the Uniform Rules of Procedure as Rule 40E-0.109), as set forth below. Petitions are deemed filed upon receipt of the original documents by the SFWMD Clerk.

a. Formal Administrative Hearing: If a genuine issue(s) of material fact is in dispute, the affected person seeking a formal hearing on a SFWMD decision which does or may determine their substantial interests shall file a petition for hearing pursuant to Sections 120.569 and 120.57(1), Fla. Stat. or for mediation pursuant to Section 120.573, Fla. Stat. within 21 days, except as provided in subsections c. and d. below, of either written notice through mail or posting or publication of notice that the SFWMD has or intends to take final agency action. Petitions must substantially comply with the requirements of Rule 28-106.201(2), Fla. Admin. Code, a copy of the which is attached to this Notice of Rights.

b. Informal Administrative Hearing: If there are no issues of material fact in dispute, the affected person seeking an informal hearing on a SFWMD decision which does or may determine their substantial interests shall file a petition for hearing pursuant to Sections 120.569 and 120.57(2), Fla. Stat. or for mediation pursuant to Section 120.573, Fla. Stat. within 21 days, except as provided in subsections c. and d. below, of either written notice through mail or posting or publication of notice that the SFWMD has or intends to take final agency action. Petitions must substantially comply with the requirements of Rule 28-106.301(2), Fla. Admin. Code, a copy of the which is attached to this Notice of Rights.

c. Administrative Complaint and Order: If a Respondent objects to a SFWMD Administrative Complaint and Order, pursuant to Section 373.119, Fla. Stat. (1997), the person named in the Administrative Complaint and Order may file a petition for a hearing no later than 14 days after the date such order is served. Petitions must substantially comply with the requirements of either subsection a. or b. above.

d. State Lands Environmental Resource Permit: Pursuant to Section 373.427, Fla. Stat., and Rule 40E-1.511(3), Fla. Admin. Code (also published as an exception to the Uniform Rules of Procedure as Rule 40E-0.109(2)(c)), a petition objecting to the SFWMD's agency action regarding consolidated applications for Environmental Resource Permits and Use of Sovereign Submerged Lands (SLERPs), must be filed within 14 days of the notice of consolidated intent to grant or deny the SLERP. Petitions must substantially comply with the requirements of either subsection a. or b. above.

e. Emergency Authorization and Order: A person whose substantial interests are affected by a SFWMD Emergency Authorization and Order, has a right to file a petition under Sections 120.569, 120.57(1), and 120.57(2), Fla. Stat., as provided in subsections a. and b. above. However, the person, or the agent of the person responsible for causing or contributing to the emergency conditions shall take whatever action necessary to cause immediate compliance with the terms of the Emergency Authorization and Order.

f. Order for Emergency Action: A person whose substantial interests are affected by a SFWMD Order for Emergency Action has a right to file a petition pursuant to Rules 28-107.005 and 40E-1.611, Fla. Admin. Code, copies of which are attached to this Notice of Rights, and Section 373.119(3), Fla. Stat., for a hearing on the Order. Any subsequent agency action or proposed agency action to initiate a formal revocation proceeding shall be separately noticed pursuant to section g. below.

g. Permit Suspension, Revocation, Annulment, and Withdrawal: If the SFWMD issues an administrative complaint to suspend, revoke, annul, or withdraw a permit, the permittee may request a hearing to be conducted in accordance with Sections 120.569 and 120.57, Fla. Stat., within 21 days of either written notice through mail or posting or publication of notice that the SFWMD has or intends to take final agency action. Petitions must substantially comply with the requirements of Rule 28-107.004(3), Fla. Admin. Code, a copy of the which is attached to this Notice of Rights.

2. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the SFWMD's final action may be different from the position taken by it previously. Persons whose substantial interests may be affected by

any such final decision of the SFWMD shall have, pursuant to Rule 40E-1.511(2), Fla. Admin. Code (also published as an exception to the Uniform Rules of Procedure as Rule 40E-0.109(2)(c)), an additional 21 days from the date of receipt of notice of said decision to request an administrative hearing. However, the scope of the administrative hearing shall be limited to the substantial deviation.

3. Pursuant to Rule 40E-1.511(4), Fla. Admin. Code, substantially affected persons entitled to a hearing pursuant to Section 120.57(1), Fla. Stat., may waive their right to such a hearing and request an informal hearing before the Governing Board pursuant to Section 120.57(2), Fla. Stat., which may be granted at the option of the Governing Board.

4. Pursuant to Rule 28-106.111(3), Fla. Admin. Code, persons may file with the SFWMD a request for extension of time for filing a petition. The SFWMD, for good cause shown, may grant the extension. The request for extension must contain a certificate that the petitioner has consulted with all other parties, if any, concerning the extension and that the SFWMD and all other parties agree to the extension.

CIRCUIT COURT

5. Pursuant to Section 373.617, Fla. Stat., any substantially affected person who claims that final agency action of the SFWMD relating to permit decisions constitutes an unconstitutional taking of property without just compensation may seek judicial review of the action in circuit court by filing a civil action in the circuit court in the judicial circuit in which the affected property is located within 90 days of the rendering of the SFWMD's final agency action.

6. Pursuant to Section 403.412, Fla. Stat., any citizen of Florida may bring an action for injunctive relief against the SFWMD to compel the SFWMD to enforce the laws of Chapter 373, Fla. Stat., and Title 40E, Fla. Admin. Code. The complaining party must file with the SFWMD Clerk a verified complaint setting forth the facts upon which the complaint is based and the manner in which the complaining party is affected. If the SFWMD does not take appropriate action on the complaint within 30 days of receipt, the complaining party may then file a civil suit for injunctive relief in the 15th Judicial Circuit in and for Palm Beach County or circuit court in the county where the cause of action allegedly occurred.

7. Pursuant to Section 373.433, Fla. Stat., a private citizen of Florida may file suit in circuit court to require the abatement of any stormwater management system, dam, impoundment, reservoir, appurtenant work or works that violate the provisions of Chapter 373, Fla. Stat.

DISTRICT COURT OF APPEAL

8. Pursuant to Section 120.68, Fla. Stat., a party who is adversely affected by final SFWMD action may seek judicial review of the SFWMD's final decision by filing a notice of appeal pursuant to Florida Rule of Appellate Procedure 9.110 in the Fourth District Court of Appeal or in the appellate district where a party resides and filing a second copy of the notice with the SFWMD Clerk within 30 days of rendering of the final SFWMD action.

LAND AND WATER ADJUDICATORY COMMISSION

9. A party to a "proceeding below" may seek review by the Land and Water Adjudicatory Commission (FLAWAC) of SFWMD's final agency action to determine if such action is consistent with the provisions and purposes of Chapter 373, Fla. Stat. Pursuant to Section 373.114, Fla. Stat., and Rules 42-2.013 and 42-2.0132, Fla. Admin. Code, a request for review of (a) an order or rule of the SFWMD must be filed with FLAWAC within 20 days after rendition of the order or adoption of the rule sought to be reviewed; (b) an order of the Department of Environmental Protection (DEP) requiring amendment or repeal of a SFWMD rule must be filed with FLAWAC within 30 days of rendition of the DEP's order, and (c) a SFWMD order entered pursuant to a formal administrative hearing under Section 120.57(1), Fla. Stat., must be filed no later than 20 days after rendition of the SFWMD's final order. Simultaneous with filing, a copy of the request for review must be served on the DEP Secretary, any person named in the SFWMD or DEP final order, and all parties to the proceeding below. A copy of Rule 42-2.013, Fla. Admin. Code is attached to this Notice of Rights.

PRIVATE PROPERTY RIGHTS PROTECTION ACT

10. A property owner who alleges a specific action of the SFWMD has inordinately burdened an existing use of the real property, or a vested right to a specific use of the real property, may file a claim in the circuit court where the real property is located within 1 year of the SFWMD action pursuant to the procedures set forth in Subsection 70.001(4)(a), Fla. Stat.

LAND USE AND ENVIRONMENTAL DISPUTE RESOLUTION

11. A property owner who alleges that a SFWMD development order (as that term is defined in Section 70.51(2)(a), Fla. Stat. to include permits) or SFWMD enforcement action is unreasonable, or unfairly burdens the use of the real property, may file a request for relief with the SFWMD within 30 days of receipt of the SFWMD's order or notice of agency action pursuant to the procedures set forth in Subsections 70.51(4) and (6), Fla. Stat.

MEDIATION

12. A person whose substantial interests are, or may be, affected by the SFWMD's action may choose mediation as an alternative remedy under Section 120.573, Fla. Stat. Pursuant to Rule 28-106.111(2), Fla. Admin. Code, the petition for mediation shall be filed within 21 days of either written notice through mail or posting or

publication of notice that the SFWMD has or intends to take final agency action. Choosing mediation will not affect the right to an administrative hearing if mediation does not result in settlement.

Pursuant to Rule 28-106.402, Fla. Admin. Code, the contents of the petition for mediation shall contain the following information:

(1) the name, address, and telephone number of the person requesting mediation and that person's representative, if any;

(2) a statement of the preliminary agency action;

(3) an explanation of how the person's substantial interests will be affected by the agency determination; and

(4) a statement of relief sought.

As provided in Section 120.573, Fla. Stat. (1997), the timely agreement of all the parties to mediate will toll the time limitations imposed by Sections 120.569 and 120.57, Fla. Stat., for requesting and holding an administrative hearing. Unless otherwise agreed by the parties, the mediation must be concluded within 60 days of the execution of the agreement. If mediation results in settlement of the dispute, the SFWMD must enter a final order incorporating the agreement of the parties. Persons whose substantial interest will be affected by such a modified agency decision have a right to petition for hearing within 21 days of receipt of the final order in accordance with the requirements of Sections 120.569 and 120.57, Fla. Stat., and SFWMD Rule 28-106.201(2), Fla. Admin. Code. If mediation terminates without settlement of the dispute, the SFWMD shall notify all parties in writing that the administrative hearing process under Sections 120.569 and 120.57, Fla. Stat., remain available for disposition of the dispute, and the notice will specify the deadlines that then will apply for challenging the agency action.

VARIANCES AND WAIVERS

13. A person who is subject to regulation pursuant to a SFWMD rule and believes the application of that rule will create a substantial hardship or will violate principles of fairness (as those terms are defined in Subsection 120.542(2), Fla. Stat.) and can demonstrate that the purpose of the underlying statute will be or has been achieved by other means, may file a petition with the SFWMD Clerk requesting a variance from or waiver of the SFWMD rule. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have concerning the SFWMD's action. Pursuant to Rule 28-104.002(2), Fla. Admin. Code, the petition must include the following information:

(a) the caption shall read:
Petition for (Variance from) or (Waiver of) Rule (Citation)

(b) The name, address, telephone number and any facsimile number of the petitioner;

(c) The name, address telephone number and any facsimile number of the attorney or qualified representative of the petitioner, (if any);

(d) the applicable rule or portion of the rule;

(e) the citation to the statue the rule is implementing;

(f) the type of action requested;

(g) the specific facts that demonstrate a substantial hardship or violation of principals of fairness that would justify a waiver or variance for the petitioner;

(h) the reason why the variance or the waiver requested would serve the purposes of the underlying statute; and

(i) a statement of whether the variance or waiver is permanent or temporary, If the variance or waiver is temporary, the petition shall include the dates indicating the duration of the requested variance or waiver.

A person requesting an emergency variance from or waiver of a SFWMD rule must clearly so state in the caption of the petition. In addition to the requirements of Section 120.542(5), Fla. Stat. pursuant to Rule 28-104.004(2), Fla. Admin. Code, the petition must also include:

a) the specific facts that make the situation an emergency; and

b) the specific facts to show that the petitioner will suffer immediate adverse effect unless the variance or waiver is issued by the SFWMD more expeditiously than the applicable timeframes set forth in Section 120.542, Fla. Stat.

WAIVER OF RIGHTS

14. Failure to observe the relevant time frames prescribed above will constitute a waiver of such right.

28-106.201 INITIATION OF PROCEEDINGS
(INVOLVING DISPUTED ISSUES OF MATERIAL FACT)

(2) All petitions filed under these rules shall contain:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding, and an explanation of how the petitioner's substantial interests will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;

(e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and

(f) A demand for relief.

28-106.301 INITIATION OF PROCEEDINGS
(NOT INVOLVING DISPUTED ISSUES OF MATERIAL FACT)

(2) All petitions filed under these rules shall contain:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding, and an explanation of how the petitioner's substantial interests will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and

(e) A demand for relief.

28-107.004 SUSPENSION, REVOCATION, ANNULMENT, OR WITHDRAWAL

(3) Requests for hearing filed in accordance with this rule shall include:

(a) The name and address of the party making the request, for purposes of service;

(b) A statement that the party is requesting a hearing involving disputed issues of material fact, or a hearing not involving disputed issues of material fact; and

(c) A reference to the notice, order to show cause, administrative complaint, or other communication that the party has received from the agency.

42-2.013 REQUEST FOR REVIEW PURSUANT TO SECTION 373.114 OR 373.217

(1) In any proceeding arising under Chapter 373, F.S., review by the Florida Land and Water Adjudicatory Commission may be initiated by the Department or a party by filing a request for such review with the Secretary of the Commission and serving a copy on any person named in the rule or order, and on all parties to the proceeding which resulted in the order sought to be reviewed. A certificate of service showing completion of service as required by this subsection shall be a requirement for a determination of sufficiency under Rule 42-2.0132. Failure to file the request with the Commission within the time period provided in Rule 42-2.0132 shall result in dismissal of the request for review.

(2) The request for review shall identify the rule or order requested to be reviewed, the proceeding in which the rule or order was entered and the nature of the rule or order. A copy of the rule or order sought to be reviewed shall be attached. The request for review shall state with particularity:

(a) How the order or rule conflicts with the requirements, provisions and purposes of Chapter 373, F.S., or rules duly adopted thereunder;

(b) How the rule or order sought to be reviewed affects the interests of the party seeking review;

(c) The oral or written statement, sworn or unsworn, which was submitted to the agency concerning the matter to be reviewed and the date and location of the statement, if the individual or entity requesting the review has not participated in a proceeding previously instituted pursuant to Chapter 120, F.S., on the order for which review is sought;

(d) If review of an order is being sought, whether and how the activity authorized by the order would substantially affect natural resources of statewide or regional significance, or whether the order raises issues of policy, statutory interpretation, or rule interpretation that have regional or statewide significance from a standpoint of agency precedent, and all the factual bases in the record which the petitioner claims support such determination(s); and

(e) The action requested to be taken by the Commission as a result of the review, whether to rescind or modify the order, or remand the proceeding to the water management district for further action, or to require the water management district to initiate rulemaking to adopt, amend or repeal a rule.

28-107.005 EMERGENCY ACTION

(1) If the agency finds that immediate serious danger to the public health, safety, or welfare requires emergency action, the agency shall summarily suspend, limit, or restrict a license.

(2) the 14-day notice requirement of Section 120.569(2)(b), F. does not apply and shall not be construed to prevent a hearing at the earliest time practicable upon request of an aggrieved party.

(3) Unless otherwise provided by law, within 20 days after emergency action taken pursuant to paragraph (1) of this rule, the agency shall initiate a formal suspension or revocation proceeding in compliance with Sections 120.569, 120.57. and 120.60, F.S.

40E-1.611 EMERGENCY ACTION

(1) An emergency exists when immediate action is necessary to protect public health, safety or welfare; the health of animals, fish or aquatic life; the works of the District; a public water supply, or recreational, commercial, industrial, agricultural or other reasonable uses of land and water resources.

(2) The Executive Director may employ the resources of the District to take whatever remedial action necessary to alleviate the emergency condition without the issuance of an emergency order, or in the event an emergency order has been issued, after the expiration of the requisite time for compliance with that order.

Last Date For Agency Action: 13-MAY-2004

INDIVIDUAL ENVIRONMENTAL RESOURCE PERMIT STAFF REPORT

Project Name: Widening Of Florida'S Turnpike (Sr 91) From Beeline To I-4

Permit No.: 48-01443-P

Application No.: 031222-15

Application Type: Environmental Resource (New Construction/Operation)

Location: Orange County, S19,20,28,29,33/T23S/R29E
S3,4/T24S/R29E

Permittee : Florida'S Turnpike Enterprise

Operating Entity : Florida'S Turnpike Enterprise

Project Area: 299.4 acres

Project Land Use: Highway

Drainage Basin: SHINGLE CREEK

Receiving Body: Existing road system

Class: CLASS III

Special Drainage District: NA

Total Acres Wetland Onsite:	21.73	
Total Acres Wetland Preserved Onsite:	15.77	
Total Acres Impacted Onsite :	5.96	
Offsite Mitigation Credits-Mit.Bank:	8.94	Florida Mitigation Bank

Conservation Easement To District : No

Sovereign Submerged Lands: No

DRAFT
Subject to Governing Board Approval

PROJECT PURPOSE:

This application is a request for an Environmental Resource Permit to authorize construction and operation of a surface water management system to serve a 299.4 acre road widening project for Florida's Turnpike between the Beeline Expressway and I-4. Staff recommends approval with conditions.

PROJECT EVALUATION:

PROJECT SITE DESCRIPTION:

The site is located within the Turnpike right-of-way between the Beeline Expressway and I-4.

There are no permitted surface water management facilities within the project area. The site contains the existing Turnpike facilities, Shingle Creek and existing wetlands.

The proposed activities are designed to fall within the existing right-of-way of the turnpike. Of seven forested contiguous wetlands within the project right of way 4 are proposed for impacts. All of the wetlands have varying degrees of hydrologic alterations and exotic or nuisance species invasion due to the long history of commercial development along this length of the turnpike. Direct impacts of 5.96 acres are proposed to be offset with the purchase of 8.94 freshwater forested mitigation credits from the Florida Mitigation Bank (DEP ERP #492924779). DEP Bureau of Survey and Mapping has issued a DSL 33 regarding the state title at this point of Shingle Creek: stating that records are insufficient to determine ownership. Therefore, proprietary requirements that would normally apply to state owned lands not be applied to this project.

PROPOSED PROJECT:

Construction proposed consists of the water management system serving the Turnpike widening project between the Beeline Expressway and I-4. The water management system consists of inlets and culverts directing runoff to dry detention ponds and then to conveyance swales to existing receiving bodies. A floodplain compensating storage area is also being constructed along the west side of the Turnpike between John Young Parkway and Sand Lake Road. The project area contains 299.4 acres. The total area draining to the water management system contains 227.31 acres. The excluded areas include the conveyance swales and the compensating storage area that can not be directed to the water management system.

The Turnpike is being widened from four to eight lanes in this area, the pavement area increases from 54.54 to 92.01 acres. The facilities are existing and pre-date District permitting requirements. The proposed new lanes will receive water quality treatment except for that portion in the vicinity of the Shingle Creek crossing. In this area runoff will continue to flow to roadside swales, ditches, and wetlands. Additional treatment volume will be provided in other ponds to make up for this loss. Because not all new pavement can be treated, State water quality certification is waived, (See Special Conditions).

The project area is divided into five major basins, corresponding with the discharge points and 35 sub-basins with dry detention ponds. Exhibit 7 shows the water quality treatment volume required and provided. Exhibit 8 shows the pre and post construction peak discharge for the 25 year 72 hour design storm for the five major basins discharging to Shingle Creek. Exhibits 9 and 10 show the average wet season water table elevation. Exhibit 11 shows the pond control elevations and weir elevations. Exhibit 12 shows the construction details of the typical weir structures. Exhibit 13 shows the pond areas and control elevations. Exhibit 14 shows the peak stage for the 25 year 72 hour storm and the minimum road elevations.
All elevations are shown in NAVD 1988 Datum, which is .9' lower than NGVD 1929 Datum.

LAND USE:

The land use information shows both the 37.47 acres of new and existing pavement.

Construction:
Project:

	This Phase	Total Project	
Pavement	92.01	92.01	acres
Pervious	196.40	196.40	acres
Water Mgnt Acreage	10.99	10.99	acres
Total:	**299.40**	**299.40**	

WATER QUANTITY :

Discharge Rate :

As shown in Exhibit No. 8, the proposed project discharge is within the allowable limit for the area.

Dischε ''orm Frequency : 25 YEAR-3 DAY Design Rainfall : 9.3 inches

Road Design :

As shown in Exhibit 14, minimum road center lines have been set at or above the calculated design storm flood elevation.

Road Storm Frequency : 25 YEAR-3 DAY Design Rainfall: 9.3 inches

Flood Plain/Compensating Storage:

Approximately 16.57 acre feet of encroachment into the 100 year floodplain result from construction of this project. Compensating storage in the amount of 18.17 acre feet is provided in the compensating storage area between 84.5' and 88.1' NAVD to make up for the encroachment and additional runoff volume.

Displaced Volume	Compensating Volume	100-Year Stage Elevation
16.57 ac-ft	18.17 ac-ft	88.1 ft-NGVD

WATER QUALITY :

No adverse water quality impacts are anticipated as a result of the proposed project. Water quality treatment for 2.5 inches over the new pavement is provided in the dry detention ponds. In the vicinity of the Shingle Creek Crossing, no ponds are proposed. Runoff will sheet flow to the roadside swales and wetlands. Constructing ponds in this area would have resulted in additional wetland impacts. To make up for this lost volume treatment for existing pavement was provided in other ponds (See Exhibit 7). Because not all new pavement can be treated, State water quality certification is waived, (See Special Condititions).

WETLANDS:

Wetland Description:

The turnpike lies in industrial and commercial development areas for the length of the road within this permit. The original construction of the turnpike pre-dates storm water rules. As a consequence, the wetlands have been receiving untreated water from the existing roadway. All but one of the 4 impacted areas are to different points of the Shingle Creek wetland system that the turnpike bridges in the northern half of the project. Shingle Creek has been channelized for a distance both upstream and downstream from the turnpike intersection. The proximity of the wetlands to, and access from, the turnpike has allowed discarded trash and debris to collect within the wetlands. In addition the wetlands have been subject to

long-term stresses of hydrologic alterations, invasion by exotic and nuisance species and trash deposition from adjacent road traffic.

Wetland Impacts:

The proposed project area includes 7 separate wetlands totaling 30.71 acres. Of those totals, impacts are proposed to 5.96 acres representing 4 different wetlands. All of the impacts are within the existing right of way. The impacted areas are hydrologically altered, invaded with exotic and nuisance species and have been receiving untreated water from the Turnpike since its original construction.

Alternatives for avoiding or minimizing wetland impacts are minimal at best with the widening of an existing roadway. Extra effort has been made in the placement and control elevation of the compensating storage pond to avoid direct or secondary impacts from its construction. The absence of buffers for the remaining unimpacted wetlands has been calculated as a secondary impact to the wetland for a width of 25 feet water ward of the edge of the project activities for a total estimated 4.21 acres of secondary impacts. Secondary impacts from gradient draw downs have been avoided with the design of the projects ponds and compensating storage areas. An extensive erosion control plan has been included in the project design so as to avoid erosional impacts to surface waters, wetlands or offsite areas.

Mitigation will be the purchase of mitigation bank credits from the Florida Mitigation Bank. The bank is partially within the Shingle Creek Basin. The mitigation offsets the impact in the same basin so there is no potential for significantly adverse cumulative impacts.

Mitigation Proposal:

The project was originally listed under the DOT Senate bill for mitigation but was removed for reasons of practicality. When listed the mitigation was estimated to require a 1.5:1 mitigation to impact ratio. Functional analyses of the direct impacts of 5.96 acres and secondary impacts of 4.21 acres combined with basis of review guidelines for ratios support the proposed 8.94 freshwater forested mitigation credits from the Florida Mitigation Bank (DEP ERP #492924779). A copy of the commitment letter is attached as an exhibit.

Wetland Inventory :

CONSTRUCTION NEW -WIDENING OF FLA'S TPK ONSITE

Pre-Development		Post-Development				
	Total Existing	**Impacted**	**Undisturbed**	**Enhanced**	**Preserved**	**Restored/ Created**
Fresh Water Forested	21.73	5.96	15.77			
Total:	**21.73**	**5.96**	**15.77**			

Wetland Inventory :

MITBANK	Florida Mitigation Bank OFFSITE
Pre-Development	**Post-Development**
	Mitigation Bank Cr Used
Fresh Water Forested	8.94
Total:	**8.94**

CERTIFICATION AND MAINTENANCE OF THE WATER MANAGEMENT SYSTEM:

It is suggested that the permittee retain the services of a Professional Engineer registered in the State of Florida for periodic observation of construction of the surface water management (SWM) system. This will facilitate the completion of construction completion certification Form #0881 which is required pursuant to Section 10 of the Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District, and Rule 40E-4361(2), Florida Administrative Code (F.A.C.).

Pursuant to Chapter 40E-4 F.A.C., this permit may not be converted from the construction phase to the operation phase until certification of the SWM system is submitted to and accepted by this District. Rule 40E-4.321(7) F.A.C. states that failure to complete construction of the SWM system and obtain operation phase approval from the District within the permit duration shall require a new permit authorization unless a permit extension is granted.

For SWM systems permitted with an operating entity who is different from the permittee, it should be noted that until the permit is transferred to the operating entity pursuant to Rule 40E-1.6107, F.A.C., the permittee is liable for compliance with the terms of this permit.

The permittee is advised that the efficiency of a SWM system will normally decrease over time unless the system is periodically maintained. A significant reduction in flow capacity can usually be attributed to partial blockages of the conveyance system. Once flow capacity is compromised, flooding of the project may result. Maintenance of the SWM system is required to protect the public health, safety and the natural resources of the state. Therefore, the permittee must have periodic inspections of the SWM system performed to ensure performance for flood protection and water quality purposes. If deficiencies are found, it is the responsibility of the permittee to correct these deficiencies in a timely manner.

RELATED CONCERNS:

Water Use Permit Status:

The applicant has indicated that no irrigation water is proposed for the project.

The applicant has indicated that dewatering is required for construction of this project. No construction dewatering will commence until a construction dewatering permit from the District is obtained.

This permit does not release the permittee from obtaining all necessary Water Use authorization(s) prior to the commencement of activities which will require such authorization, including construction dewatering and irrigation, unless the work qualifies for a No-Notice Short-Term Dewatering permit pursuant to Chapter 40E-20.302(3) or is exempt pursuant to Section 40E-2.051, FAC.

Right-Of-Way Permit Status:

A Right-of-Way Permit is not required for this project.

DRI Status:

This project is not a DRI.

Historical/Archeological Resources:

No information has been received that indicates the presence of archaeological or historical resources or that the proposed activities could cause adverse impacts to archaeological or historical resources.

DCA/CZM Consistency Review:

The District has not received a finding of inconsistency from the Florida Department of Community Affairs or other commenting agencies regarding the provisions of the federal Coastal Zone Management Plan.

Third Party Interest:

No third party has contacted the District with concerns about this application.

Enforcement:

There has been no enforcement activity associated with this application.

STAFF RECOMMENDATION:

The Staff recommends that the following be issued :

Construction and operation of a surface water management system to serve a 299.4 acre highway project known as Turnpike Widening between the Beeline Expressway and I-4.

Based on the information provided, District rules have been adhered to.

Staff recommendation is for approval subject to the attached General and Special Conditions.

DRAFT
Subject to Governing Board Approval

STAFF REVIEW:

NATURAL RESOURCE MANAGEMENT DIVISION APPROVAL

ENVIRONMENTAL EVALUATION

Susan C. Elfers

SUPERVISOR

Marc S. Ady

DIVISION DIRECTOR :

Robert G. Robbins

DATE: 4/25/04

SURFACE WATER MANAGEMENT DIVISION APPROVAL

ENGINEERING EVALUATION

Alan L. Leavens

SUPERVISOR

Edward W. Yaun, P.E.

DIVISION DIRECTOR :

Anthony M. Waterhouse, P.E.

DATE: 4/23/04

GENERAL CONDITIONS

1. All activities authorized by this permit shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit and Part IV, Chapter 373, F.S.

2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by District staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.

3. Activities approved by this permit shall be conducted in a manner which does not cause violations of State water quality standards. The permittee shall implement best management practices for erosion and pollution control to prevent violation of State water quality standards. Temporary erosion control shall be implemented prior to and during construction, and permanent control measures shall be completed within 7 days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has bee ı established. All practices shall be in accordance with the guidelines and specifications described in Chapter 6 of the Florida Land Development Manual; A Guide to Sound Land and Water Management (Department of Environmental Regulation, 1988), incorporated by reference in Rule 40E-4.091, F.A.C. unless a project-specific erosion and sediment control plan is approved as part of the permit. Thereafter the permittee shall be responsible for the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.

4. The permittee shall notify the District of the anticipated construction start date within 30 days of the date that this permit is issued. At least 48 hours prior to commencement of activity authorized by this permit, the permittee shall submit to the District an Environmental Resource Permit Construction Commencement Notice Form Number 0960 indicating the actual start date and the expected construction completion date.

5. When the duration of construction will exceed one year, the permittee shall submit construction status reports to the District on an annual basis utilizing an annual status report form. Status report forms shall be submitted the following June of each year.

6. Within 30 days after completion of construction of the permitted activity, the permitee shall submit a written statement of completion and certification by a registered professional engineer or other appropriate individual as authorized by law, utilizing the supplied Environmental Resource Permit Construction Completion/Certification Form Number 0881. The statement of completion and certification shall be based on onsite observation of construction or review of as-built drawings for the purpose of determining if the work was completed in compliance with permitted plans and specifications. This submittal shall serve to notify the District that the system is ready for inspection. Additionally, if deviation from the approved drawings is discovered during the certification process, the certification must be accompanied by a copy of the approved permit drawings with deviations noted. Both the original and revised specifications must be clearly shown. The plans must be clearly labeled as "As-built" or "Record" drawing. All surveyed dimensions and elevations shall be certified by a registered surveyor.

7. The operation phase of this permit shall not become effective: until the permittee has complied with the requirements of condition (6) above, and submitted a request for conversion of Environmental Resource Permit from Construction Phase to Operation Phase, Form No. 0920; the District determines the system to be in compliance with the permitted plans and specifications; and the entity approved by the District in accordance with Sections 9.0 and 10.0 of the Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District,

accepts responsibility for operation and maintenance of the system. The permit shall not be transferred to such approved operation and maintenance entity until the operation phase of the permit becomes effective. Following inspection and approval of the permitted system by the District, the permittee shall initiate transfer of the permit to the approved responsible operating entity if different from the permittee. Until the permit is transferred pursuant to Section 40E-1.6107, F.A.C., the permittee shall be liable for compliance with the terms of the permit.

8. Each phase or independent portion of the permitted system must be completed in accordance with the permitted plans and permit conditions prior to the initiation of the permitted use of site infrastructure located within the area served by that portion or phase of the system. Each phase or independent portion of the system must be completed in accordance with the permitted plans and permit conditions prior to transfer of responsibility for operation and maintenance of the phase or portion of the system to a local government or other responsible entity.

9. For those systems that will be operated or maintained by an entity that will require an easement or deed restriction in order to enable that entity to operate or maintain the system in conformance with this permit, such easement or deed restriction must be recorded in the public records and submitted to the District along with any other final operation and maintenance documents required by Sections 9.0 and 10.0 of the Basis of Review for Environmental Resource Permit applications within the South Florida Water Management District, prior to lot or units sales or prior to the completion of the system, whichever comes first. Other documents concerning the establishment and authority of the operating entity must be filed with the Secretary of State, county or municipal entities. Final operation and maintenance documents must be received by the District when maintenance and operation of the system is accepted by the local government entity. Failure to submit the appropriate final documents will result in the permittee remaining liable for carrying out maintenance and operation of the permitted system and any other permit conditions.

10. Should any other regulatory agency require changes to the permitted system, the permittee shall notify the District in writing of the changes prior to implementation so that a determination can be made whether a permit modification is required.

11. This permit does not eliminate the necessity to obtain any required federal, state, local and special district authorizations prior to the start of any activity approved by this permit. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40E-4 or Chapter 40E-40, F.A.C..

12. The permittee is hereby advised that Section 253.77, F.S. states that a person may not commence any excavation, construction, or other activity involving the use of sovereign or other lands of the State, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund without obtaining the required lease, license, easement, or other form of consent authorizing the proposed use. Therefore, the permittee is responsible for obtaining any necessary authorizations from the Board of Trustees prior to commencing activity on sovereignty lands or other state-owned lands.

13. The permittee must obtain a Water Use permit prior to construction dewatering, unless the work qualifies for a general permit pursuant to Subsection 40E-20.302(3), F.A.C., also known as the "No Notice" Rule.

14. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any system authorized by the permit.

GENERAL CONDITIONS

15. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding, unless a specific condition of this permit or a formal determination under Section 373.421(2), F.S., provides otherwise.

16. The permittee shall notify the District in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of a permitted system or the real property on which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of Rules 40E-1.6105 and 40E-1.6107, F.A.C.. The permittee transferring the permit shall remain liable for corrective actions that may be required as a result of any violations prior to the sale, conveyance or other transfer of the system.

17. Upon reasonable notice to the permittee, District authorized staff with proper identification shall have permission to enter, inspect, sample and test the system to insure conformity with the plans and specifications approved by the permit.

18. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the appropriate District service center.

19. The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.

SPECIAL CONDITIONS

1. The construction phase of this permit shall expire on May 13, 2009.
2. Operation of the surface water management system shall be the responsibility of FLORIDA'S TURNPIKE ENTERPRISE.
3. Discharge Facilities: See Exhibits 11 & 12.
4. The permittee shall be responsible for the correction of any erosion, shoaling or water quality problems that result from the construction or operation of the surface water management system.
5. Measures shall be taken during construction to insure that sedimentation and/or turbidity violations do not occur in the receiving water.
6. The authorization for construction of the surface water management system is issued pursuant to the water quality net improvement provisions referenced in Rule Section 40E-4.303(1), Florida Administrative Code; therefore, the state water quality certification is waived.
7. The District reserves the right to require that additional water quality treatment methods be incorporated into the drainage system if such measures are shown to be necessary.
8. Lake side slopes shall be no steeper than 5:1 (horizontal:vertical) to a depth of two feet below the control elevation. Side slopes shall be nurtured or planted from 2 feet below to 1 foot above control elevation to insure vegetative growth, unless shown on the plans.
9. Facilities other than those stated herein shall not be constructed without an approved modification of this permit.
10. A stable, permanent and accessible elevation reference shall be established on or within one hundred (100) feet of all permitted discharge structures no later than the submission of the certification report. The location of the elevation reference must be noted on or with the certification report.
11. The permittee shall provide routine maintenance of all of the components of the surface water management system in order to remove all trapped sediments/debris. All materials shall be properly disposed of as required by law. Failure to properly maintain the system may result in adverse flooding conditions.
12. This permit is issued based on the applicant's submitted information which reasonably demonstrates that adverse water resource related impacts will not be caused by the completed permit activity. Should any adverse impacts caused by the completed surface water management system occur, the District will require the permittee to provide appropriate mitigation to the District or other impacted party. The District will require the permittee to modify the surface water management system, if necessary, to eliminate the cause of the adverse impacts.
13. Minimum road crown elevation: See Exhibit 14.
14. Silt fencing shall be installed at the limits of construction to protect all of the preserve areas from silt and sediment deposition during the construction of the project. A floating turbidity barrier shall be installed during the construction of the final discharge structure into the adjacent canal/water body. The silt fencing and the turbidity barrier shall be installed in accordance with "Florida Land Development Manual" Chapter 6 "Stormwater and Erosion and Sediment Control Best Management Practices for Developing Areas". The sediment controls shall be installed prior to the commencement of any clearing or construction and the installation must be inspected by the District's Environmental Resource Compliance staff. The silt fencing and turbidity barriers shall remain in place and be maintained in good functional condition until all adjacent construction activities have been completed and all fill slopes have been stabilized. Upon completion of the project and the stabilization of the fill, the permittee shall contact the District's Environmental Resource Compliance staff to inspect the site and approve the removal of the silt fencing and turbidity barriers.

SPECIAL CONDITIONS

15. Prior to to commencement of construction in wetlands and in accordance with the work schedule attached the permittee shall submit documentation from the Florida Department of Environmental Protection that 8.94 fresh water forested mitigation credits have been deducted from the ledger for Florida Mitigation Bank, (DEP ERP #492924779)

16. The permittee must obtain a Water Use permit prior to construction dewatering, unless the work qualifies for a general permit pursuant to Subsection 40E-20.302(3), F.A.C., also known as the "No Notice" Rule.

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
ENVIRONMENTAL RESOURCE PERMIT NO. 48-01254-P
DATE ISSUED: JANUARY 12, 2005

FORM #0145
Rev. 08/95

PERMITTEE: FLORIDA DEPARTMENT OF TRANSPORTATION
(SR 528/BEE LINE EXPRESSWAY WIDENING FROM I-4 TO MC)
FLORIDA TURNPIKE ENTERPRISE,PO BOX 613069
OCOEE , FL 34761

PROJECT DESCRIPTION: CONSTRUCTION AND OPERATION OF A SURFACE WATER MANAGEMENT SYSTEM TO SERVE 460 ACRES OF A HIGHWAY PROJECT KNOWN AS S.R. 528/BEELINE EXPRESSWAY WIDENING FROM I-4 TO MCCOY ROAD.

PROJECT LOCATION: ORANGE COUNTY , SECTION 1,12 TWP 24S RGE 28E
SECTION 3,8 TWP 24S RGE 29E

PERMIT DURATION: See Special Condition No:1. See attached Rule 40E-4.321, Florida Administrative Code.

This Permit is issued pursuant to Application No. 040702-13 , date(July 2, 2004. Permittee agrees to hold and save the South Florida Water Management District and its successors harmless from any and all damages, claims or liabilities which may arise by reason of the construction, operation, maintenance or use of activities authorized by this Permit. This Permit is issued under the provisions of Chapter 373 , Part IV Florida Statutes (F.S.), and the Operating Agreement Concerning Regulation Under Part IV, Chapter 373 F.S., between South Florida Water Management District and the Department of Environmental Protection. Issuance of this Permit constitutes certification of compliance with state water quality standards where neccessary pursuant to Section 401, Public Law 92-500, 33 USC Section 1341 , unless this Permit is issued pursuant to the net improvement provisions of Subsections 373.414(1)(b), F.S., or as otherwise stated herein.

This Permit may be transferred pursuant to the appropriate provisions of Chapter 373, F.S, and Sections 40E-1.6107(1) and (2), and 40E-4.351(1), (2), and (4), Florida Administrative Code (F.A.C.). This Permit may be revoked, suspended, or modified at any time pursuant to the appropriate provisions of Chapter 373, F.S. and Sections 40E-4.351(1), (2), and (4), F.A.C.

This Permit shall be subject to the General Conditions set forth in Rule 40E-4.381, F.A.C., unless waived or modified by the Governing Board. The Application, and the Environmental Resource Permit Staff Review Summary of the Application, including all conditions, and all plans and specifications incorporated by reference, are a part of this Permit. All activities authorized by this Permit shall be implemented as set forth in the plans, specifications, and performance criteria as set forth and incorporated in the Environmental Resource Permit Staff Review Summary. Within 30 days after completion of construction of the permitted activity, the Permittee shall submit a written statement of completion and certification by a registered professional engineer or other appropriate individual, pursuant to the appropriate provisions of Chapter 373, F.S. and Sections 40E-4.361 and 40E-4.381, F.A.C.

In the event the property is sold or otherwise conveyed, the Permittee will remain liable for compliance with this Permit until transfer is approved by the District pursuant to Rule 40E-1.6107, F.A.C.

SPECIAL AND GENERAL CONDITIONS ARE AS FOLLOWS:

SEE PAGES 2 - 3 OF 6 (18 SPECIAL CONDITIONS).
SEE PAGES 4 - 6 OF 6 (19 GENERAL CONDITIONS).

FILED WITH THE CLERK OF THE SOUTH
FLORIDA WATER MANAGEMENT DISTRICT

SOUTH FLORIDA WATER MANAGEMENT
DIS[illegible], BY ITS GOVERNING BOARD

On ORIGINAL SIGNED BY:
By ELIZABETH VEGUILLA
DEPUTY CLERK

ORIGINAL SIGNED BY:
By RACHEL RICH
DISTRICT CLERK

SPECIAL CONDITIONS

1. The construction phase of this permit shall expire on January 12, 2010.

2. Operation of the surface water management system shall be the responsibility of the permittee.

3. Discharge Facilities:

   Listed in Exhibit 6.

4. The permittee shall be responsible for the correction of any erosion, shoaling or water quality problems that result from the construction or operation of the surface water management system.

5. Measures shall be taken during construction to insure that sedimentation and/or turbidity violations do not occur in the receiving water.

6. The District reserves the right to require that additional water quality treatment methods be incorporated into the drainage system if such measures are shown to be necessary.

7. Lake side slopes shall be no steeper than 5:1 (horizontal:vertical) to a depth of two feet below the control elevation. Side slopes shall be nurtured or planted from 2 feet below to 1 foot above control elevation to insure vegetative growth, unless shown on the plans.

8. Facilities other than those stated herein shall not be constructed without an approved modification of this permit.

9. A stable, permanent and accessible elevation reference shall be established on or within one hundred (100) feet of all permitted discharge structures no later than the submission of the certification report. The location of the elevation reference must be noted on or with the certification report.

10. The permittee shall provide routine maintenance of all of the components of the surface water management system in order to remove all trapped sediments/debris. All materials shall be properly disposed of as required by law. Failure to properly maintain the system may result in adverse flooding conditions.

11. This permit is issued based on the applicant's submitted information which reasonably demonstrates that adverse water resource related impacts will not be caused by the completed permit activity. Should any adverse impacts caused by the completed surface water management system occur, the District will require the permittee to provide appropriate mitigation to the District or other impacted party. The District will require the permittee to modify the surface water management system, if necessary, to eliminate the cause of the adverse impacts.

12. Silt fencing shall be installed at the limits of construction to protect all of the preserve areas from silt and sediment deposition during the construction of the project. A floating turbidity barrier shall be installed during the construction of the final discharge structure into the adjacent canal/water body. The silt fencing and the turbidity barrier shall be installed in accordance with "Florida Land Development Manual" Chapter 6 "Stormwater and Erosion and Sediment Control Best Management Practices for Developing Areas". The sediment controls shall be installed prior to the commencement of any clearing or construction and the installation must be inspected by the District's Environmental Resource Compliance staff. The silt fencing and turbidity barriers shall remain in place and be maintained in good functional condition until all adjacent construction activities have been completed and all fill slopes have been stabilized. Upon completion of the project and the stabilization of the fill, the permittee shall contact the District's Environmental Resource Compliance staff to inspect the site and approve the removal of the silt fencing and turbidity barriers.

13. The District reserves the right to require remedial measures to be taken by the permittee if monitoring or other information demonstrates that adverse impacts to onsite or offsite wetlands, upland conservation areas or buffers, or other surface waters have occurred due to project related activities.

14. Prior to commencement of construction in wetlands and in accordance with the work schedule in the attached exhibits, the permittee shall submit documentation from the Florida Department of Environmental Protection that 9 freshwater forested mitigation bank credits have been deducted from the ledger for the Florida Mitigation Bank (DEP ERP # 492924779).

15. Endangered species, threatened species and/or species of special concern have been observed onsite and/or the project contains suitable habitat for these species. It shall be the permittee's responsibility to coordinate with the Florida Fish and Wildlife Conservation Commission and/or the U.S. Fish and Wildlife Service for appropriate guidance, recommendations and/or necessary permits to avoid impacts to listed species.

16. The following exhibits for the permit are incorporated by reference herein and are located in the permit file:

    Exhibit No. 13 - 30 Pond Detail Sheets
    Exhibit No. 31 - 34 Outfall Detail Sheets
    Exhibit No. 35 - 90 Roadway Plan Sheets

17. Prior to construction in Basin 12, the floodplain compensation storage area proposed in the vicinity of Pond 12A, Basin 12 will have to be condemned and acquired through eminent domain by the FDOT. The FDOT will need to replace any existing function/use in this area and provide proof of the mitigation measures necessitated and taken within the same basin, if any, due to the changed land use prior to any construction activities within the basin. FDOT must also provide proof of ownership of the parcel of land in question prior to any construction activities in this basin.

18. The authorization for construction of the surface water management system is issued pursuant to the water quality net improvement provisions referenced in Rule Section 40E-4.303(1), Florida Administrative Code; therefore, the state water quality certification is waived.

GENERAL CONDITIONS

1. All activities authorized by this permit shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit and Part IV, Chapter 373. F.S.

2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by District staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.

3. Activities approved by this permit shall be conducted in a manner which does not cause violations of State water quality standards. The permittee shall implement best management practices for erosion and pollution control to prevent violation of State water quality standards. Temporary erosion control shall be implemented prior to and during construction, and permanent control measures shall be completed within 7 days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has been established. All practices shall be in accordance with the guidelines and specifications described in Chapter 6 of the Florida Land Development Manual; A Guide to Sound Land and Water Management (Department of Environmental Regulation, 1988), incorporated by reference in Rule 40E-4.091, F.A.C. unless a project-specific erosion and sediment control plan is approved as part of the permit. Thereafter the permittee shall be responsible for the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.

4. The permittee shall notify the District of the anticipated construction start date within 30 days of the date that this permit is issued. At least 48 hours prior to commencement of activity authorized by this permit, the permittee shall submit to the District an Environmental Resource Permit Construction Commencement Notice Form Number 0960 indicating the actual start date and the expected construction completion date.

5. When the duration of construction will exceed one year, the permittee shall submit construction status reports to the District on an annual basis utilizing an annual status report form. Status report forms shall be submitted the following June of each year.

6. Within 30 days after completion of construction of the permitted activity, the permitee shall submit a written statement of completion and certification by a professional engineer or other individual authorized by law, utilizing the supplied Environmental Resource/Surface Water Management Permit Construction Completion/Certification Form Number 0881A, or Environmental Resource/Surface Water Management Permit Construction Completion Certification - For Projects Permitted prior to October 3, 1995 Form No. 0881B, incorporated by reference in Rule 40E-1.659, F.A.C. The statement of completion and certification shall be based on onsite observation of construction or review of as-built drawings for the purpose of determining if the work was completed in compliance with permitted plans and specifications. This submittal shall serve to notify the District that the system is ready for inspection. Additionally, if deviation from the approved drawings are discovered during the certification process, the certification must be accompanied by a copy of the approved permit drawings with deviations noted. Both the original and revised specifications must be clearly shown. The plans must be clearly labeled as "as-built" or "record" drawings. All surveyed dimensions and elevations shall be certified by a registered surveyor.

7. The operation phase of this permit shall not become effective: until the permittee has complied with the requirements of condition (6) above, and submitted a request

for conversion of Environmental Resource Permit from Construction Phase to Operation Phase, Form No. 0920; the District determines the system to be in compliance with the permitted plans and specifications; and the entity approved by the District in accordance with Sections 9.0 and 10.0 of the Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District, accepts responsibility for operation and maintenance of the system. The permit shall not be transferred to such approved operation and maintenance entity until the operation phase of the permit becomes effective. Following inspection and approval of the permitted system by the District, the permittee shall initiate transfer of the permit to the approved responsible operating entity if different from the permittee. Until the permit is transferred pursuant to Section 40E-1.6107, F.A.C., the permittee shall be liable for compliance with the terms of the permit.

8. Each phase or independent portion of the permitted system must be completed in accordance with the permitted plans and permit conditions prior to the initiation of the permitted use of site infrastructure located within the area served by that portion or phase of the system. Each phase or independent portion of the system must be completed in accordance with the permitted plans and permit conditions prior to transfer of responsibility for operation and maintenance of the phase or portion of the system to a local government or other responsible entity.

9. For those systems that will be operated or maintained by an entity that will require an easement or deed restriction in order to enable that entity to operate or maintain the system in conformance with this permit, such easement or deed restriction must be recorded in the public records and submitted to the District along with any other final operation and maintenance documents required by Sections 9.0 and 10.0 of the Basis of Review for Environmental Resource Permit applications within the South Florida Water Management District, prior to lot or units sales or prior to the completion of the system, whichever comes first. Other documents concerning the establishment and authority of the operating entity must be filed with the Secretary of State, county or municipal entities. Final operation and maintenance documents must be received by the District when maintenance and operation of the system is accepted by the local government entity. Failure to submit the appropriate final documents will result in the permittee remaining liable for carrying out maintenance and operation of the permitted system and any other permit conditions.

10. Should any other regulatory agency require changes to the permitted system, the permittee shall notify the District in writing of the changes prior to implementation so that a determination can be made whether a permit modification is required.

11. This permit does not eliminate the necessity to obtain any required federal, state, local and special district authorizations prior to the start of any activity approved by this permit. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40E-4 or Chapter 40E-40, F.A.C..

12. The permittee is hereby advised that Section 253.77, F.S. states that a person may not commence any excavation, construction, or other activity involving the use of sovereign or other lands of the State, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund without obtaining the required lease, license, easement, or other form of consent authorizing the proposed use. Therefore, the permittee is responsible for obtaining any necessary authorizations from the Board of Trustees prior to commencing activity on sovereignty lands or other state-owned lands.

13. The permittee must obtain a Water Use permit prior to construction dewatering, unless the work qualifies for a general permit pursuant to Subsection 40E-20.302(3), F.A.C., also known as the "No Notice" Rule.

14. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any system authorized by the

permit.

15. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding, unless a specific condition of this permit or a formal determination under Section 373.421(2), F.S., provides otherwise.

16. The permittee shall notify the District in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of a permitted system or the real property on which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of Rules 40E-1.6105 and 40E-1.6107, F.A.C.. The permittee transferring the permit shall remain liable for corrective actions that may be required as a result of any violations prior to the sale, conveyance or other transfer of the system.

17. Upon reasonable notice to the permittee, District authorized staff with proper identification shall have permission to enter, inspect, sample and test the system to insure conformity with the plans and specifications approved by the permit.

18. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the appropriate District service center.

19. The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.

40E-4.321 Duration of Permits

(1) Unless revoked or otherwise modified the duration of an environmental resource permit issued under this chapter or Chapter 40E-40, F.A.C. is as follows:

(a) For a conceptual approval, two years from the date of issuance or the date specified as a condition of the permit, unless within that period an application for an individual or standard general permit is filed for any portion of the project. If an application for an environmental resource permit is filed, then the conceptual approval remains valid until final action is taken on the environmental resource permit application. If the application is granted, then the conceptual approval is valid for an additional two years from the date of issuance of the permit. Conceptual approvals which have no individual or standard general environmental resource permit applications filed for a period of two years shall expire automatically at the end of the two year period.

(b) For a conceptual approval filed concurrently with a development of regional impact (DRI) application for development approval (ADA) and a local government comprehensive plan amendment, the duration of the conceptual approval shall be two years from whichever one of the following occurs at the latest date:

1. the effective date of the local government's comprehensive plan amendment.
2. the effective date of the local government development order.
3. the date on which the District issues the conceptual approval, or
4. the latest date of the resolution of any Chapter 120.57, F.A.C., administrative proceeding or other legal appeals.

(c) For an individual or standard general environmental resource permit, five years from the date of issuance or such amount of time as made a condition of the permit.

(d) For a noticed general permit issued pursuant to chapter 40-E-400, F.A.C., five years from the date the notice of intent to use the permit is provided to the District.

(2)(a) Unless prescribed by special permit condition, permits expire automatically according to the timeframes indicated in this rule. If application for extension is made in writing pursuant to subsection (3), the permit shall remain in full force and effect until:

1. the Governing Board takes action on an application for extension of an individual permit, or
2. staff takes action on an application for extension of a standard general permit.

(b) Installation of the project outfall structure shall not constitute a vesting of the permit.

(3) The permit extension shall be issued provided that a permittee files a written request with the District showing good cause prior to the expiration of the permit. For the purpose of this rule, good cause shall mean a set of extenuating circumstances outside of the control of the permittee. Requests for extensions, which shall include documentation of the extenuating circumstances and how they have delayed this project, will not be accepted more than 180 days prior to the expiration date.

(4) Substantial modifications to Conceptual Approvals will extend the duration of the Conceptual Approval for two years from the date of issuance of the modification. For the purposes of this section, the term "substantial modification" shall mean a modification which is reasonably expected to lead to substantially different water resource or environmental impacts which require a detailed review.

(5) Substantial modifications to individual or standard general environmental resource permits issued pursuant to a permit application extend the duration of the permit for three years from the date of issuance of the modification. Individual or standard general environmental resource permit modifications do not extend the duration of a conceptual approval.

(6) Permit modifications issued pursuant to subsection 40E-4.331(2)(b), F.A.C. (letter modifications) do not extend the duration of a permit.

(7) Failure to complete construction or alteration of the surface water management system and obtain operation phase approval from the District within the permit duration shall require a new permit authorization in order to continue construction unless a permit extension is granted.

Specific authority 373.044, 373.113 F.S. Law Implemented 373.413, 373.416, 373.419, 373.426 F.S. History—New 9-3-81, Amended 1-31-82, 12-1-82, Formerly 16K-4.07(4), Amended 7-1-86, 4/20/94, Amended 7-1-86, 4/20/94, 10-3-95