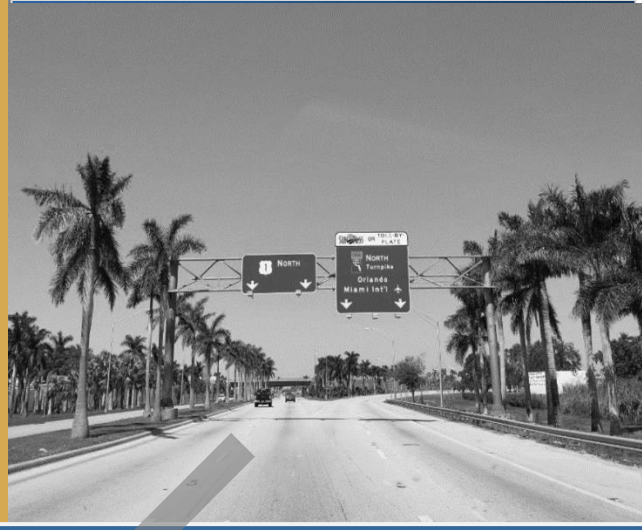
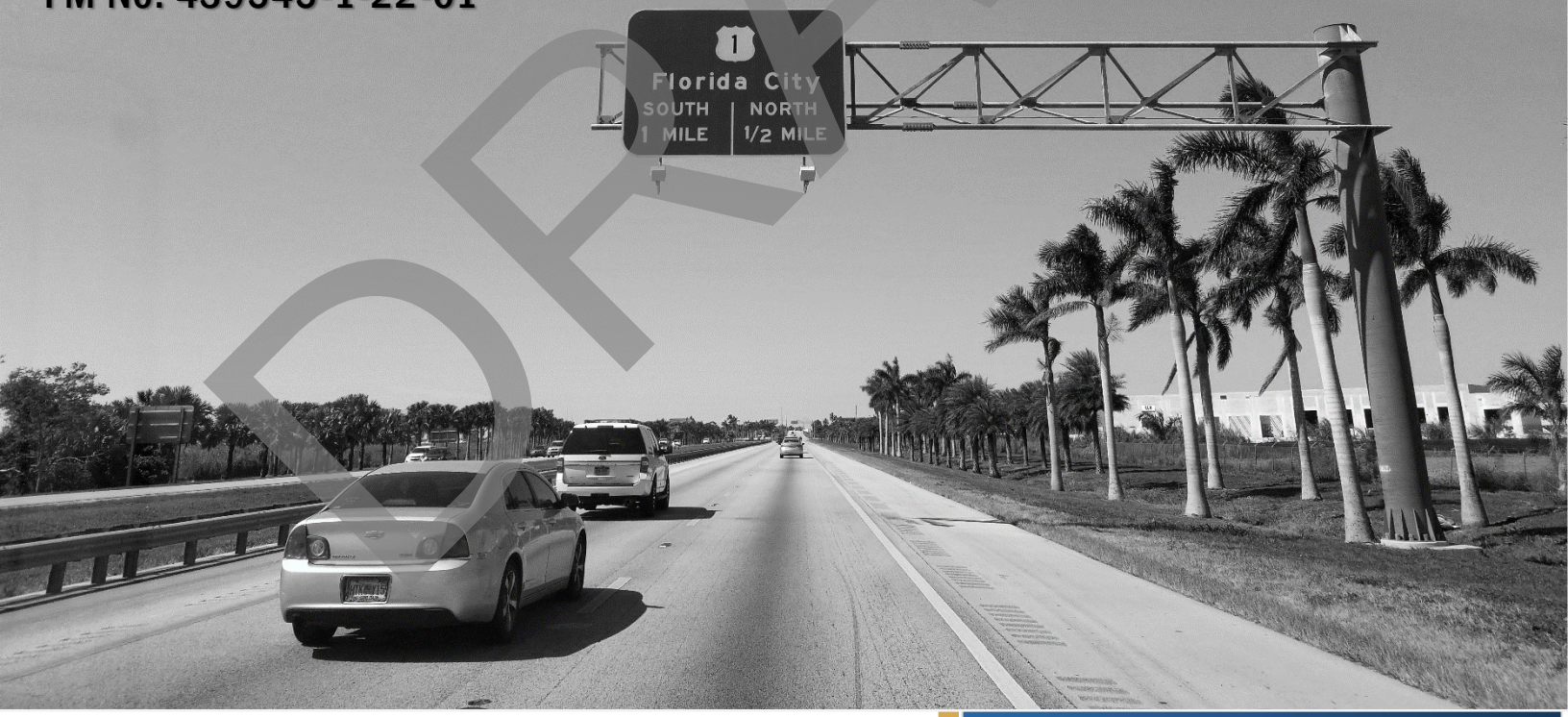


Natural Resource Evaluation Report

Turnpike Extension (SR 821) Widening
Project Development and Environment (PD&E) Study
from US 1 (South of Palm Drive) to Campbell Drive | Miami Dade County, Florida

FM No. 439545-1-22-01



Florida Department of Transportation
Florida's Turnpike Enterprise
P.O. Box 613069 | Ocoee, FL 34761

December 2020

Natural Resource Evaluation Report

Miami-Dade County, Florida
FM No: 439545-1-22-01| ETDM No: 14322

Prepared for
Florida's Turnpike Enterprise
Florida's Turnpike Mile Post 263
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December 2020

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Executive Summary

The Florida Turnpike Enterprise (FTE) is conducting a Project Development and Environment (PD&E) Study for the proposed Turnpike Extension (SR 821) Widening from US 1, south of Palm Drive, to Campbell Drive in Miami-Dade County, Florida. The majority of the study area is composed of both commercial and residential land use.

The study consists of the development, evaluation, and documentation of detailed engineering and environmental studies, which involves data collection, corridor analyses, conceptual design analyses, environmental analyses, public involvement, and project documentation.

This Natural Resources Evaluation (NRE) Report contains detailed information pertaining to any threatened, endangered, or otherwise protected species within the project study limits. Avoidance and minimization measures for any potential impacts are also included in this report. A Protected Species and Habitat evaluation was conducted to document potential project involvement with threatened, endangered, and/or protected species that may result from the proposed roadway and interchange enhancements along the project corridor. This assessment was conducted in accordance with Section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.) and Part 2 Chapter 16 of the Florida Department of Transportation (FDOT) PD&E Manual. Based on this evaluation, a total of two (2) federally and state listed mammals, three (3) federally listed birds, nine (9) state listed birds, three (3) federally and state listed reptiles, one (1) federally and state listed insect and no federally and state listed plants were identified occurring within the limits of both Build alternatives. **Table ES-1-1** provides a summary of the federally and state listed fauna and flora with potential to occur within the limits of the Build alternatives, along with the corresponding effect determinations.

Table ES-1-1 Federal and State-Listed Endangered Species with the Potential to Occur within the Project Corridor and Effects Determination

Common Name	Scientific Name	Federal Status	State Status	Occurrence Potential	Observed	Federal Effects Determination	State Effects Determination
MAMMALS							
Florida Bonneted Bat	*Eumops floridanus*	E	FE	Low	No	May Affect Not Likely to Adversely Affect – P if BMPs used and survey reports are submitted. Programmatic concurrence.	No Adverse Effect Anticipated
West Indian manatee	*Trichechus manatus*	T	FT[1]	Low	No	May Affect Not Likely to Adversely Affect	No Adverse Effect Anticipated
BIRDS							
Everglade Snail Kite	*Rostrhamus sociabilis plumbeus*	E	FE	Low	No	No effect	No Effect Anticipated
Florida Grasshopper Sparrow	*Ammodramus savannarum floridanus*	E	FE	Low	No	No effect	No Effect Anticipated
Wood Stork	*Mycteria americana*	T	FT	Moderate	No	Not Likely to Adversely Affect	No Adverse Effect Anticipated
Least Tern	*Sterna antillarum*	NL	ST	Low	No	NA	No Effect Anticipated
Little Blue Heron	*Egretta caerulea*	NL	ST	Moderate	No	NA	No Adverse Effect Anticipated
Tricolored Heron	*Egretta tricolor*	NL	ST	Moderate	No	NA	No Adverse Effect Anticipated
Reddish Egret	*Egretta rufescens*	NL	ST	Low	No	NA	No Effect Anticipated
Black Skimmer	*Rynchops niger*	NL	ST	Low	No	NA	No Effect Anticipated
Burrowing Owl	*Athene cunicularia*	NL	ST	Low	No	NA	No Effect Anticipated
REPTILES							
American Crocodile	*Crocodylus acutus*	T	FT	Low	No	No effect	No Effect Anticipated
American Alligator	*Alligator mississippiensis*	SA (T)	FT (S/A)	Low	No	No effect	No Effect Anticipated
Eastern Indigo Snake	*Drymarchon corais couperi*	T	FT	Low	No	Not Likely to Adversely Affect	No Adverse Effect Anticipated

Common Name	Scientific Name	Federal Status	State Status	Occurrence Potential	Observed	Federal Effects Determination	State Effects Determination
Gopher Tortoise	*Gopherus polyphemus*	NL	ST	Low	No	NA	No Effect Anticipated
INSECTS							
Miami Tiger Beetle	*Cicindelidia floridana*	E	FE	Low	No	No effect	No Effect Anticipated

LEGEND

E = Endangered
FE – Federally designated Endangered
NL = Not Listed
SA = Similar Appearance
T = Threatened
FT – Federally designated Threatened
ST = State Threatened
FT (S/A) – Federally designated Threatened due to Similarity of Appearance

No direct impacts to any of these listed species are anticipated as result of this project. The project is within the core foraging area (CFA) of one known wood stork colony (Grossman Ridge West). The project study area was also evaluated for the presence of federally designated Critical Habitat as defined by the U.S. Congress in 50 Code of Federal Regulations (CFR) 17. Based on this evaluation, it was determined that no federally designated Critical Habitat is present within the proposed Build Alternative. In addition, the project study area is located within the U.S. Fish and Wildlife Service (USFWS) Consultation Area for the following species:

- American Crocodile (*Crocodylus acutus*)
- Everglade Snail Kite (*Rostrhamus sociabilis plumbeus*)
- Florida Bonneted Bat (*Eumops floridanus*)
- Wood Stork (*Mycteria americana*)

In accordance with Presidential Executive Order 11990, "*Protection of Wetlands*", US Department of Transportation Order 5660.1A, "*Preservation of the Nation's Wetlands*" and Part 2, Chapter 9 of the PD&E Manual, the Build alternative was evaluated for the presence of wetlands that may be impacted by the proposed improvements. The evaluation identifies and describes existing jurisdictional wetlands and other surface waters within the project limits, assesses potential impacts to these resources, and evaluates avoidance, minimization, and potential mitigation options. The Wetland and Surface Water evaluation performed for this project identified three natural wetland areas: Forested Wetlands 1 and 2 (FW-1 and FW-2); and an Emergent Wetland (EW-1) located at the southern project limits, east of South Dixie Highway. In addition, there are 11 stormwater swales (SW) containing hydrophytic vegetation and 13 other surface waters (OSW) along the project study corridor. Natural wetlands, stormwater swale wetlands and other surface water are shown in **Table 4-1** (includes the features' identification number, size (acres), FLUCCS code/description, and USFWS code/description). The locations of these features are depicted on aerial maps in **Figure 4-1** and representative photographs are included in **Appendix B**). The potential impacts are to the 11 stormwater swales (due to re-grading) and fill in one other surface water (OSW-7) at the Lucy Street ramp. The total impacts to the swales are approximately 9.78

acres while impacts to OSW-7 are 0.32 acres. Per our meeting with the South Florida Water Management (SFWMD) and US Army Corps of Engineers (USACE) on January 16, 2020 mitigation will not be required for the impacts to SW-1 through SW-11 and OSW-7.

There is no involvement with, or adverse effect on Essential Fish Habitat (EFH) as the project area does not contain areas that support EFH or National Oceanic and Atmospheric Administration (NOAA) trust fishery resources; therefore, no EFH assessment or further consultation with National Marine Fisheries Service (NMFS) will be required. An EFH Assessment is not required and is not included in this report.

Section 1

Project Overview

1.1 Project Description

The Turnpike Extension (SR 821) is a Strategic Intermodal System (SIS) limited access toll highway connecting the Florida Keys, the City of Florida City, and the City of Homestead with the greater Miami-Dade County region. The Turnpike Extension is the primary evacuation route connecting with the Florida Turnpike (SR 91) near the Miami-Dade/Broward County line.

This Project Development and Environment (PD&E) Study evaluates the southern three (3) miles of the Turnpike Extension within Miami-Dade County and the two local municipalities which are the City of Florida City and the City of Homestead. The PD&E study limits are from US 1 (south of Palm Drive) to Campbell Drive/SW 312nd Street. Turnpike milepost (MP) 0.00 is located at US 1 and MP 3.0 is located at the Campbell Drive interchange. (See **Figure 1-1**).

The proposed improvements include widening the existing four-lane expressway and bridges to six (6) lanes between US 1 and Campbell Drive; improving the US 1 interchange with a new ramp over Palm Drive, adding a partial interchange at Lucy Street, and converting the taper ramps to parallel ramps at the Campbell Drive interchange. Bridge widening and/or minor improvements are proposed at Lucy Street, SW 162nd Avenue, C-103 Canal and Campbell Drive. Two new bridges are proposed over the US 1 northbound lanes and over Palm Drive. This project does anticipate acquisition of new right of way along the east side US 1 south of Palm Drive and at the Lucy Street interchange.

Figure 1-1 Project Location Map

1.2 Project Purpose and Need

The primary purpose of the project is to enhance traffic operations and safety. The secondary purpose of this project is to accommodate the existing and future traffic demand, enhance regional mobility and improve evacuation/emergency response.

The primary purpose of the new Turnpike Extension interchange at Lucy Street is to improve mobility, support economic development, and provide new access to/from the Turnpike between the two existing interchanges which are approximately three (3) miles apart. The secondary purpose of the interchange is to reduce congestion at the two adjacent interchanges and improve mobility in the City of Homestead and the City of Florida City. Lucy Street crosses beneath the Turnpike

Extension at MP 1.37, which is 0.83 miles north of the US 1 interchange, and 1.74 miles south of the Campbell Drive interchange.

The needs for the PD&E study are as follows:

- Enhance operations and safety
- Accommodate future travel demands
- Enhance evacuation and emergency response

The Miami-Dade Transportation Planning Organization (MDTPO) MDTPO 2045 Long Range Transportation Plan (2045 LRTP) Appendix F, Table AF-1 Purpose and Need is listed as:

> *Widen facility and improve interchange to address capacity and safety deficiencies. The project widens a segment of the Turnpike Extension / SR 821 between south of Palm Drive and Campbell Drive. The widening will increase the number of travel lanes from four to six. The project will also improve the interchange/intersections at Palm Drive/US 1.*

The existing four-lane tollway experiences congestion in the typical am/pm peak hour and during the heavy inbound peak periods when traffic is heading south to the Florida Keys. Traffic volumes are projected to increase beyond the capacity of the roadway. Existing Annual Average Daily Traffic (AADT) volumes on Florida's Turnpike Extension north of the US 1 interchange for year 2016 is 39,800. AADT for the Build Year of 2045 is expected to increase to 75,300 vehicles. Without improvement, traffic congestion and crashes are anticipated to increase with a corresponding drop in the Level of Service (LOS) to LOS F by year 2045. A summary of the 2045 No Build LOS results are depicted in **Tables 1-1, 1-2** and **1-3**.

Table 1-1 2045 Freeway Segment LOS for No Build Alternative

Location	Direction	No-Build Scenario		
		Typical		Heavy
		AM	PM	Inbound
North of Campbell Drive	Southbound	**F**	**F**	**F**
	Northbound	**F**	**F**	**F**
North of US 1 to Campbell Drive	Southbound	**F**	D	**F**
	Northbound	D	**F**	**F**

Table 1-2 2045 Merge/Diverge LOS for No Build Alternative

Interchange	Ramp	No-Build Scenario		
		Typical		Heavy
		AM	PM	Inbound
Campbell Drive	Southbound off-ramp	**F**	**F**	**F**
	Northbound on-ramp	**F**	**F**	**F**
	Southbound on-ramp	**F**	C	**F**
	Northbound off-ramp	D	**F**	**F**
US 1	Southbound off-ramp to north	**F**	C	**F**
	Northbound on-ramp from north	C	**F**	**F**

Table 1-3 2045 Intersection LOS for No Build Alternative

Intersection	No-Build Scenario					
	Typical				Heavy Inbound	
	AM		PM			
	LOS	Delay	LOS	Delay	LOS	Delay
US 1 / NE 7th Street (West Davis Parkway)	**F**	107	**F**	83	**F**	82
US 1 / Palm Drive	**F**	345	**F**	384	F	223
Krome Avenue / NE 7th Street (West Davis Parkway)	C	25	C	27	B	17
Krome Avenue / Palm Drive	D	45	E	58	D	48

Crash data was collected for the five-year period from 2011 to 2015 and crash analyses were conducted to identify crash patterns and contributing causes within the study limits. A total of 508 crashes were reported during the referenced five-year period within the study area. Crash analyses identified that the number of crashes is increasing each year and the majority type of collision reported were rear-end crashes (30% of all the crashes) within the study area. The increase of crashes and rear-end collisions could be mitigated with increased capacity and improved roadway geometric design.

The Turnpike Extension has been classified as an emergency evacuation route by the Florida Division of Emergency Management. Therefore, widening of the Turnpike will decrease emergency response times and will expedite evacuation for residents and visitors in surrounding communities in Miami-Dade County and Monroe County (FL Keys).

The purpose and need statement, and project effects were reviewed through the Efficient Transportation Decision Making (ETDM) process and documented in the ETDM Programming Screen Report (14322). The results of the Environmental Technical Advisory Team (ETAT) Programming screen review of the project is shown in in **Figure 1-2.** The degree of effect assigned for many project issues is minimal, enhanced or none. A moderate degree of effect was assigned to social impacts, wetlands and surface waters, wildlife and habitat and special designations. A substantial degree of effect was assigned to water quality and quantity.

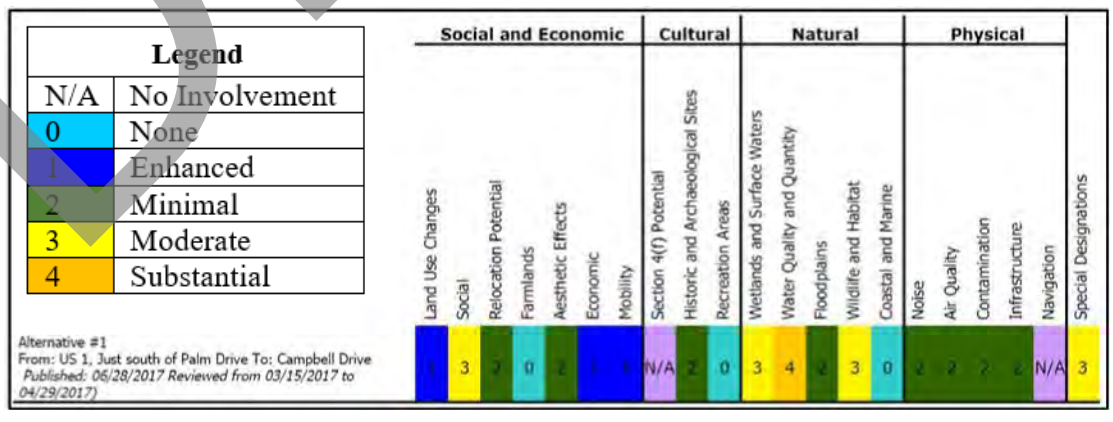


Figure 1-2 ETDM Summary Report

1.3 Proposed Improvements

- The proposed improvements for the project are the following: **Turnpike Widening:** The Turnpike tollway section, from milepost 0.54 to milepost 2.60, will be widened with one additional lane in each direction to provide a six-lane divided highway. The additional lanes will be constructed in the median and all six lanes are general toll lanes.
- **US 1 Interchange:** The US 1 interchange is modified to include a new tolled ramp over Palm Drive with one lane northbound and one lane southbound. A new southbound US 1 right turn lane to Palm Drive that is located west of the southbound off-ramp between the limited access right of way line is proposed. The existing on- and off-ramps at US 1 will remain available to local traffic with minor improvements. The Davis Parkway southbound off-ramp will be converted from a one-lane taper ramp to a two-lane parallel off-ramp configuration.
- **Lucy Street Interchange:** A new partial interchange that provides local access to/from Lucy Street via a single lane northbound on-ramp and a single lane southbound off-ramp.
- **Campbell Drive Interchange:** The Campbell Drive northbound off-ramp, northbound loop on-ramp, southbound off-ramp and southbound on-ramp will be converted from a taper ramp to a parallel ramp configuration, and a southbound auxiliary lane will be provided from the Campbell Drive on-ramp to the Lucy Street off-ramp.

Section 2

Existing Conditions

2.1 Land Use Classifications

The existing land uses within the project area were identified through the review and interpretation of the most recent version (updated 9-14-2011) of the South Florida Water Management District's (SFWMD) Land Cover Land Use 2008 GIS layer. Land uses were categorized using the Florida Land Use, Cover, and Forms Classification (FLUCCS) codes.

The Florida's Turnpike corridor is designated as transportation land use. The area to the east of the Turnpike is primarily residential land use with some commercial uses along the major arterials. The area west of the Turnpike is primarily commercial, agricultural with some residential land uses. Existing land use along the project corridor is depicted in **Figure 2-1**, upland habitats and land uses, FLUCCS, are described in Section 2.1.1 below, existing soils are depicted in **Figure 2-2** and described in Section 2.2 and jurisdictional wetland habitats are depicted in **Figure 4-1** 1 and described further in Section 4.2.

2.1.1 Upland Habitats and Land Uses

Due to the developed and urbanized nature of the project, there were very few natural habitat types within the proposed corridor. The existing upland land uses are identified and briefly described below:

FLUCCS Code /Description

1210 – Fixed Single Family, Medium Density. This category includes fixed single-family homes with two – five dwelling units per acre.

1290 – Residential, Medium Density under Construction. This category includes fixed single-family homes with two – five dwelling units per acre.

1310 – Residential, High Density. This category includes fixed single-family homes with six or more dwelling units per acre.

1330 – Multiple Dwelling Units, Low Rise. This category includes two stories or less.

1400 – Commercial and Services. This category includes buildings that support a mixture of commercial and retail services.
1410 – Retail Sales and Services.
1550 – Other Light Industrial. This category includes small fabrication and manufacturing facilities.
1700 – Institutional. This category includes all schools, churches, and hospitals.
1710 – Educational Facilities. This category includes all schools and other educational facilities.
1900 – Open Land
2140 – Row Crops
2230 – Other Groves
2410 – Tree Nurseries
2430 – Ornamentals
3100 – Herbaceous (Dry Prairie)
4200 – Upland Hardwood Forests
3200 – Shrub and Brushland
5300 – Reservoirs
8140 – Roads and Highways. This category includes all existing roads, highways, and the associated ROW for these features.

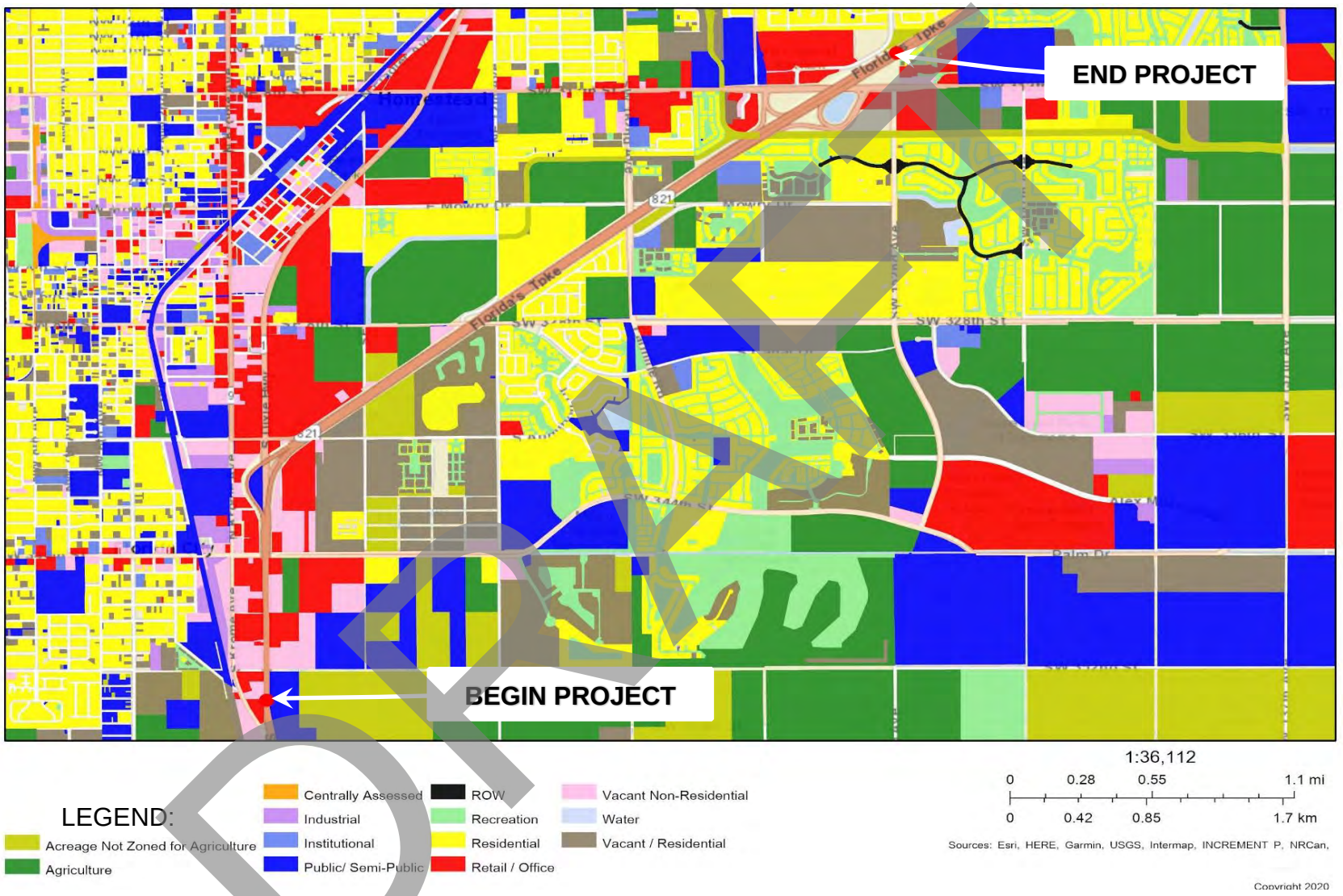


Figure 2-1 Land Use Map

2.1.2 Pine Rocklands

A small remnant of a pine rocklands (FLUCCS 4200) habitat was identified in the southwestern infield at Campbell Drive and along the ramp, southeast of the interchange. This upland habitat is part of the landscape of wetland and upland habitats in the Everglades ecosystem. Pine rocklands are classified as "globally imperiled" by the Florida Natural Areas Inventory and are unique to the South Florida ecosystem. It is a fire-dependent plant community and transitions into a hardwood hammock if not allowed to burn.

Protected plant species known to be present in the pine rockland remnants within the Florida's Turnpike right-of-way include the following state-threatened species: man-in-the-ground (*Ipomoea microdactyla*), Krug's holly (*Ilex krugiana*), pineland allamanda (*Angadenia berteroi*), silver palm (*Coccothrinax argentata*), quailberry (*Crossopetalum illicifolium*), pineland jacquemontia (*Jacquemontia curtissii*), long stalked stopper (*Psidium longipes*), and tetrazygia (*Tetrazygia bicolor*). Other common species found in the pine rockland habitat include slash pine (*Pinus elliottii*), wild coffee (*Psychotria nervosa*), coontie (*Zamia pumila*), rough velvet seed (*Guettarda scabra*), and wild sage (*Lantana involucrata*).

2.2 Soil Classifications

The soils within the project study area were identified using maps and definitions determined by the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) and utilizing the most recent version (updated 10-26-2016) of the Soil Survey Geographic (SSURGO) Database for Florida - November 2015 GIS layer.

The Florida's Turnpike (SR 821) from US 1 south of Palm Drive to Campbell Drive contain primarily urban land complex and Udorthents, Shaped soil types, which account for over 80% of the study area within the 500-foot buffer. These soil types indicate highly disturbed (mechanically altered and shaped) soils, which would be expected as the majority of this study area. These soils have been altered and transformed into roadways and other urban developments. Four hydric soil types were identified within the study area [Biscayne gravelly marl, drained (2), Pennsuco marl (4), Perrine marl, drained (6) and Biscayne marl, drained (16)]. However, per the aerial interpretations and the field reviews, these areas with documented hydric soils also appear to have been disturbed and developed and do not exist in their natural, unadulterated condition. The NRCS Soils are further described in **Table 2-1** and are depicted over a projected aerial in **Figure 2-2**.

Table 2-1 NRCS Soils within 500 feet of the Project Corridor

Mapping Unit	Mapping Unit Name	Hydric Rating	Drainage
2	Biscayne gravelly marl, drained	Yes	Poorly drained
4	Pennsuco marl	Yes	Poorly drained
6	Perrine marl, drained	Yes	Poorly drained
7	Krome very gravelly loam	No	Moderately well drained
11	Udorthents, marl substratum-Urban land complex	No	Somewhat poorly drained
16	Biscayne marl, drained	Yes	Poorly Drained

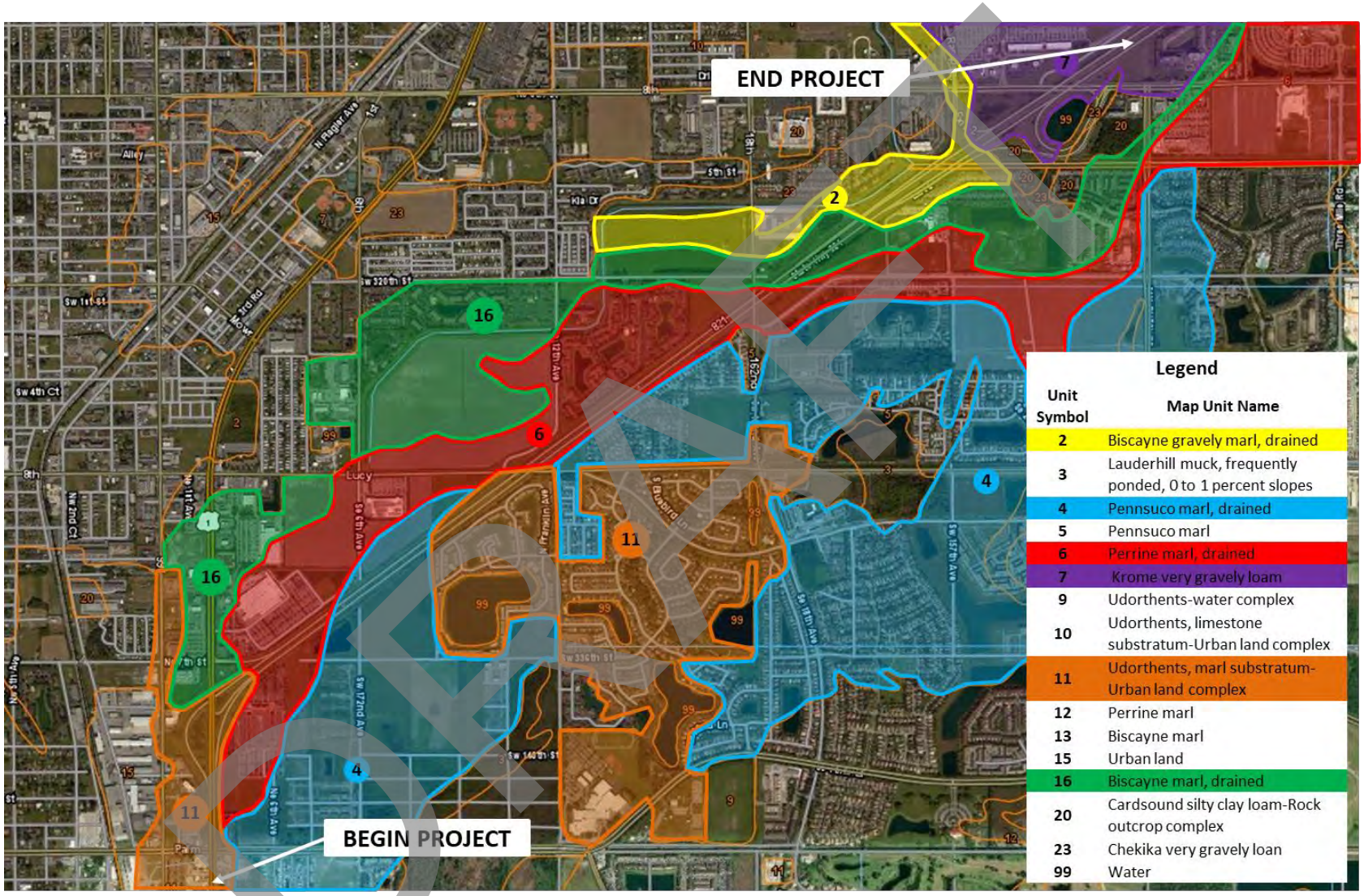


Figure 2-2 NRCS Soils Map

Section 3

Protected Species and Habitat Evaluation

3.1 Methodology

In accordance with Section 7 of the ESA of 1973, as amended, the FDOT PD&E Manual Part 2 Chapter 16 (Protected Species and Habitat) and Chapter 68 of the Florida Administrative Code (FAC), the project study area was evaluated for the potential occurrence of federal and state listed protected plant and animal species and their habitats. In addition, literature reviews, agency database searches, and habitat field reviews (June 20, 2018; December 26, 2018 and February 5, 2020) were conducted to identify protected species and critical habitat that could be potentially present within the study area. Literature reviews and database searches included the following:

- FDOT PD&E Manual Part 2 Chapter 16 Protected Species and Habitat (2019)
- US Fish and Wildlife Service (USFWS's) Information for Planning and Consultation (IPaC) Tool (2018)
- Florida Fish and Wildlife Conservation Commission (FWC) Florida's Endangered and Threatened Species (2018)
- FWC Eagle Nest Locator Database (2017)
- Florida Natural Areas Inventory (FNAI) (Florida Biodiversity Matrix – Data Viewer)
- Google Earth, Aerial Photographs

Aerial photography was interpreted to determine habitat types occurring within the project study area, and the potential for presence of any listed plant or animal species. The USFWS IPaC Tool was used to generate a federal species list (2018) from USFWS (Appendix A), FWC's Endangered and Threaten Species was used to generate state species list, FNAI's Florida Biodiversity Matrix - Data Viewer was reviewed for documented, likely, and potential occurrences of rare species and natural communities, and FWC'S Eagle Nest Locator Database was used to identify new and documented bald eagles in the study area. The results are as follows:

FWC Eagle Nest Locator Database:
No documented Bald Eagle Nests were identified within the study project area.

FNAI:
No documented occurrences or natural communities were identified within the study project area.

USFWS:
The project corridor is located within the Core Foraging Area (CFA) of one active wood stork nesting colony (Grossman Ridge West). The CFA in south Florida is defined as 18.6 miles from an active nesting colony.

The project is not within any USFWS designated critical habitat.

The project study area is located within the USFWS Consultation Area for the following species:

- American Crocodile (*Crocodylus acutus*)
- Everglade Snail Kite (*Rostrhamus sociabilis plumbeus*)
- Florida Bonneted Bat (*Eumops floridanus*)
- Wood Stork (*Mycteria americana*)

Several species were included in the IPaC Species List because USFWS includes historic data and the list is not project specific. However, when comparing current conditions for the study area as well as the review of existing databases, it was determined that many of these species would not occur in the study area (e.g. Florida Panther, Puma, Bachman's Warbler, Cape Sable Seaside Sparrow, Florida Scrub-jay, Ivory-billed Woodpecker, Kirtland's Warbler, Piping Plover, Red Knot, Red-cockaded Woodpecker, Hawksbill Sea Turtle, Leatherback Sea Turtle, Loggerhead Sea Turtle, Atlantic Sturgeon, Stock Island Tree Snail, Batram's Hairstreak Butterfly, Florida Leafwing Butterfly, Miami Blue Butterfly, , Beach Jacquemontia, Blodgett's Silverbush, Cape Sable Thoroughwort, Carter's Mustard, Carter's Small-flowered Flax, Crenulate Lead-plant, Deltoid Spurge, Everglades Bully, Florida Brickell-bush, Florida Pineland Crabgrass, Florida Prairie-clover, Florida Semaphore Cactus, Garber's Spurge, Okeechobee Gourd, Pineland Sandmat, Sand Flax, Small's Milkpea, Tiny Polygala, and Florida Bristle Fern). Therefore, these species are not discussed further in the document. Additionally, although the American alligator remains threatened due to similarity of appearance, the status means that the alligator is not biologically threatened or endangered but supports a need for continued Federal controls on taking and commerce of the species to ensure against excessive taking and to continue necessary protections to the endangered American crocodile in the U.S. and foreign countries and other endangered crocodilians in foreign countries. As such, the Service does not consult on this species pursuant to the Endangered Species Act, when reviewing an action proposed by the FDOT. Thus, the American alligator is not discussed further in this assessment.

3.2 Potentially Occurring Listed Species

Based on the potential availability of suitable habitat and known species ranges, **Table 3-1** lists the federal and state-listed wildlife species with the potential to occur within the project study area along with the effects determination. The likelihood of species occurrences considered for the

study area was determined based on several factors including whether the species were positively identified by project biologists during field surveys, suitable habitat was observed or is known to occur, species life history, and local knowledge. Each species is given a rating of low, moderate, or high likelihood of occurring within the project corridor as defined below:

- High – Preferred habitat exists within project limits and species have been observed or reported within the project area
- Moderate – Some preferred habitat exists within the project limits, but species have not been observed in the project area
- Low – Preferred habitat is limited or lacking within the project limits and species have not been observed in the project area

Table 3-1 Federal and State-Listed with the Potential to Occur within the Project Corridor and Federal Effects Determination

Common Name	Scientific Name	Federal Status	State Status	Occurrence Potential	Observed	Federal Effects Determination
Florida Bonneted Bat	*Eumops floridanus*	E	FE	Low	No	May Affect Not Likely to Adversely Affect – P if BMPs used and survey reports are submitted. Programmatic concurrence.
West Indian manatee	*Trichechus manatus*	T	FT	Low	No	May Affect Not Likely to Adversely Affect
Everglade Snail Kite	*Rostrhamus sociabilis plumbeus*	E	FE	Low	No	No effect
Florida Grasshopper Sparrow	*Ammodramus savannarum floridanus*	E	FE	Low	No	No effect
Wood Stork	*Mycteria americana*	T	FT	Moderate	No	Not Likely to Adversely Affect
Least Tern	*Sterna antillarum*	NL	ST	Low	No	NA
Little Blue Heron	*Egretta caerulea*	NL	ST	Moderate	No	NA
Tricolored Heron	*Egretta tricolor*	NL	ST	Moderate	No	NA
Reddish Egret	*Egretta rufescens*	NL	ST	Low	No	NA

Common Name	Scientific Name	Federal Status	State Status	Occurrence Potential	Observed	Federal Effects Determination
Black Skimmer	*Rynchops niger*	NL	ST	Low	No	NA
Burrowing Owl	*Athene cunicularia*	NL	ST	Low	No	NA
American Crocodile	*Crocodylus acutus*	T	FT	Low	No	No effect
American Alligator	*Alligator mississippiensis*	SA (T)	FT (S/A)	Low	No	No effect
Eastern Indigo Snake	*Drymarchon corais couperi*	T	FT	Low	No	Not Likely to Adversely Affect
Gopher Tortoise	*Gopherus polyphemus*	NL	ST	Low	No	NA
Miami Tiger Beetle	*Cicindelidia floridana*	E	FE	Low	No	No effect

3.2.1 Mammals

Florida Bonneted Bat (*Rostrhamus sociabilis plumbeus*)

The Florida Bonneted Bat is federally, and state listed as endangered. The bonneted bat is a large bat approximately 5 to 6.5 inches. Adult fur color varies from dark gray to brown on the dorsal side of the bat, with lighter, grayish fur underneath. The bases of the ears are joined at the midline of the head and are large and broad and slant forward over the eyes. Little is known about habitat associations and natural roost site preferences of the bonneted bats, but this species has been documented in urban, rural, and native landscapes with roost sites found in tree cavities, buildings, rock outcroppings, and bat houses. Florida bonneted bats have only been found in four counties in Florida: Lee, Collier, Charlotte, and Miami-Dade.

The study area falls within the Consultation Area for the bonneted bat: The Florida Bonneted Bat Consultation Key, dated October 22, 2019, was used to evaluate potential effects to the FBB from the proposed project. Based on the Consultation Key, the federal determination of "**May Adversely Not Likely to Adversely Affect – P if BMPs used and survey reports are submitted. Programmatic concurrence**." has been made for the bonneted bat. A limited roost survey will be conducted during design and prior to construction. See **Appendix A**– Florida Bonneted Bat Consultation Key.

West Indian manatee (*Trichechus manatus*)

The West Indian manatee is federally, and state listed as threatened throughout its range. The manatee is a large, aquatic, herbivorous mammal. These animals are generally slow swimmers and have no known natural predators. They are known to reach lengths of ten (10) feet and can weigh in excess of 1,000 pounds. During warm water periods the manatee is typically found in coastal or estuarine waters, bays, rivers, and lakes from Texas to North Carolina. Manatees migrate south to the warm brackish waters of Biscayne and Florida Bay as well as the

Intracoastal Waterway. The primary cause for the decline of manatees is anthropogenic in nature, including collisions with watercraft, poaching, vandalism, and loss of safe and undisturbed habitat due to expanding development.

Bridge widening and/or minor improvements are proposed at the C-103 Canal. The C-103 Canal crosses under SR 821 just south of Campbell Drive which goes east and ultimately to Biscayne National Park. The canal is accessible by the Manatee (USFWS & SFWMD Central and Southern Florida Project Manatee Accessibility Map, September 2006). However, no manatees were observed during the wildlife surveys for this study, along the canal. The probability of their occurrence along the canal is low. The Corps of Engineers, Jacksonville District, and the State of Florida Effect Determination Key for the Manatee in Florida, dated April 2013, was used to evaluate potential effects to the manatee from the proposed project. Based on the determination key, the federal determination of **"May Affect Not Likely to Adversely Affect (MANLA)"** has been made for the West Indian Manatee and no further consultation with the Service is necessary. See **Appendix A**– Manatee Effect Determination Key. Standard Manatee Conditions for in-water-work will be implemented during construction.

3.2.2 Birds

Everglade Snail Kite (*Vermivora bachmanii*)

The Everglade Snail Kite is federally, and state listed as endangered throughout its range. The everglade snail kite is a medium-sized raptor that is dark slate gray to black with a white tail and a long, hooked bill. Snail kites inhabit large, open, freshwater marshes and lakes from the St. Johns River headwaters south. They prefer relatively shallow water (less than 4 feet) and a low density of emergent vegetation. Their primary food source is the apple snail which they catch at the water's surface. Snail kites usually nest over the water in a low tree or shrub. Dense, thick vegetation or sparse emergent vegetation is not optimal for foraging because either the apple snails cannot be readily seen in dense vegetation or do not survive or reproduce in sparse vegetation.

The study area falls within the USFWS Consultation Area for the snail kite, but it does not fall within the critical habitat for these species. Large, open water lakes exist adjacent to the study area; however, these lakes lack the emergent vegetation required by the snail kite for nesting. Additionally, these lakes will not be impacted by the proposed improvements. In addition, apple snail [(*Pomacea sp.*) (non-native species)] shells were not observed along the canal edges and no snail kites were observed within the study area. The potential for this species to occur within the study area is "**Low**". Therefore, the federal determination of "**No Effect**" has been made for the Everglade Snail Kite.

Florida Grasshopper Sparrow (*Ammodramaus savannarun floridanus)*

The Florida grasshopper sparrow is federally, and state listed as endangered. It is a subspecies of the grasshopper sparrow which is a native to the dry prairies of south-central Florida. The sparrow is small with short tail and rounded head, averaging 5.12 inches in length when fully grown. The Florida grasshopper sparrow is non-migratory, and its distribution is limited to the

prairie region. Their habitat consists of large tracts of poorly drained grasslands with a frequent history of fire and a limited number of trees (less than one tree per acre). Common plant species found in this habitat include bluestem and wiregrass, with occasional saw palmettos as well. As grasshopper sparrows are largely a ground-dwelling species, some bare ground is necessary as well to provide areas for movement and foraging purposes. Florida grasshopper sparrows are omnivores, with most of their diet consisting of insects, such as grasshoppers, crickets, beetles, and moths. Most of the vegetation in the sparrow's diet is made up of sedge seeds and star grass seeds. Florida grasshopper sparrows forage near the ground, and thus, frequent fires are essential to maintain areas of bare ground for foraging.

There is no habitat within the study are that meets the requirements of the Florida grasshopper sparrows. In addition, there were no individuals, nests, or signs of this species observed during the field inspections. The potential for this species to occur is 'Low'. The federal determination of "**No Effect**" has been made for this species.

Wood Stork (*Mycteria americana*)

The Wood Stork is federally, and state listed as threatened throughout its range. Wood storks are typically found in marshes, cypress swamps, and mangrove swamps, but their presence in artificial ponds, seasonally flooded roadside or agricultural ditches, and managed impoundments has become common. Wood stork breeding areas extend from South Florida through Georgia and along the coastal areas of South Carolina. Large, colonial nesting areas are typically established in swamps or islands surrounded by broad, open water areas. The same colony site may be used over many years, provided the site remains undisturbed and sufficient foraging habitat is available. Wood storks are known to nest with other wading bird species, including white ibis, tricolored herons, snowy egrets, and great blue herons. Foraging habitat consists of nearly any calm, shallow water area (between ten (10) and 25 centimeters) wetland depression that concentrates fish and is not overgrown with dense, aquatic vegetation. Some examples of foraging sites include freshwater marshes, stocked ponds, shallow ditches, narrow tidal creeks, shallow tidal pools, and depressional areas of cypress heads and swamp sloughs provide foraging habitat.

No wood storks were observed during the field surveys; however, the project corridor is located within one documented active CFA, the Grossman Ridge West CFA. The shallow surface waters within the study area are man-made swales, ponds, and stormwater detention areas (SW 1-11) provides some opportunistic foraging habitat. No loss of foraging areas is anticipated as a result of the Build Alternative. The creation of in-kind drainage features for this project will be sufficient to off-set lost foraging habitat. The potential for this species to occur within the study area is "**Moderate"**. The Wood Stork Determination Key, South Florida, dated May 18, 2010, was used to evaluate potential effects to the Wood Stork from the proposed project. See **Appendix A**– Wood Stork Determination Key, South Florida. The federal determination of "**Not Likely to Adversely Affect**" has been made for the wood stork.

Least Tern (*Sterna antillarum*)

The Least Tern is state listed as threatened and is not federally listed. The least tern is a migratory bird, found throughout almost all coastal Florida, including the Keys from March

through October, and it is listed as Threatened by the FWC. It should be noted that the internal United States breeding population (Texas to North Dakota/Montana and Mississippi River Valley) is federally listed as Endangered by the USFWS, but the Florida population is not federally protected. The least tern is the smallest member of the tern and gull family (Laridae), which can be identified by its superior agility in the air and its ability to plunge headlong into the water while hunting small fish. Breeding adults can be identified by the light gray above, black cap and nape, white forehead, and a black line running from the crown through the eye to the base of the bill. This species has become accustomed to adoption of artificial nesting sites, particularly gravel rooftops, which has led to an increased use of inland locations and increase in populations (FNAI, 2011). This species has been observed foraging in canals and stormwater ponds similar to those within this project corridor. However, preferred nesting habitat is limited within the project corridor. As such, the potential for this species to occur is '**Low'**.

Little Blue Heron (*Egretta caerulea*)

The Little Blue Heron is state listed as a threatened and is not federally listed. The little blue heron is a medium-sized bird with a purple to maroon-brown head and neck, small white patch on the throat and upper neck and a slate blue body. Suitable foraging habitat exists within the project study area (i.e. surface water features such as swales, ditches and retention areas) associated with the existing roadway network. No net loss of functions and values to surface waters that may provide suitable habitat for these species will occur as unavoidable impacts to these features are anticipated to be compensated through the construction of the new stormwater management system. The potential for this species to occur is '**Moderate'**.

Tricolored Heron (*Egretta tricolor*)

The Tricolored Heron is state listed as threatened and is not federally listed. The tricolored heron is a medium-sized heron with a long slender neck, two-toned body coloration on the head, neck, and body along with a white underside. Nesting occurs mostly on mangrove islands or in freshwater willow thickets on islands or over standing water. This heron prefers coastal environments. Suitable foraging habitat exists within the project study area (i.e. surface water features such as swales, ditches and retention areas) associated with the existing roadway network. No net loss of functions and values to surface waters that may provide suitable habitat for these species will occur as unavoidable impacts to these features are anticipated to be compensated through the construction of the new stormwater management system. The potential for this species to occur is '**Moderate**'.

Reddish Egret (*Egretta rufescens*)

The Reddish Egret is state listed as threatened and is not federally listed. The reddish egret has a gray body and chestnut-colored plumes on its head, neck and upper body. Their preferred habitat is almost exclusively in coastal areas with nesting occurring on coastal mangrove islands or in Brazilian pepper located on dredge spoil islands. Foraging habitats include shallow water areas (typically less than six inches deep) of variable salinity. They also utilize broad, open marine tidal flats and shorelines with little vegetation. Potential foraging habitat is not present within the hydrophytic swales in the project corridor. There were no individuals, nests,

or signs of this species observed during the field inspections. The potential for this species to occur is '**Low**'.

Black Skimmer (*Rynchops niger*)

The black skimmer is state listed as threatened and is not federally listed. This species is typically relegated to coastal waters, including beaches, bays, estuaries, sandbars, tidal creeks (foraging), and it's also inland waters such as large lakes, phosphate pits, and flooded agricultural fields. They nest primarily on sandy beaches, small coastal islands, and dredge spoil islands, but also on gravel rooftops. This species is most recognizable by its large bill with extended lower mandible which it uses to skim for food (mostly small fish) from the surface of water bodies while. Black skimmers have been observed in canals similar to those found within the project corridor, but none were observed on site. As such, the potential for this species to occur is '**Low**'.

Florida Burrowing Owl (*Athene cunicularia floridana*)

The burrowing owl is state listed as threatened and is not federally listed. It is a small, diurnal ground-dwelling owl. The adults are spotted and barred with brown and white stripes. They have long legs, a round head and, a stubby tail. Human activities such as clearing of land for pasture and residential developments have increased its range in Florida but have exposed the owl to additional threats. Intensive cultivation and development of grasslands pose a major threat to this species. The largest concentration of owls now resides in grasslands and lawns of residential and industrial areas. Nesting typically occurs in burrows dug in the ground in areas sparsely vegetated, sandy soils, including dry prairies and sandhills along with ruderal sites such as airports, ball fields, parks, road ROW, and vacant lands. The highly disturbed conditions, compacted fill and routine maintenance within the ROW would preclude these owls from nesting in the limited potential habitat that is present within the project area. No burrowing owls were observed within the vicinity of the proposed project. The potential for this species to occur within the project area is '**Low**'.

3.2.3 Reptiles

American Crocodile (*Crocodylus acutus*)

The American crocodile is federally listed as threatened and state listed as federally threatened throughout its range. The American crocodile is lizard-shaped with a long, muscular tail and four short legs that have five toes on the front feet and four on the back feet. Adults have grayish-green backs and tails and white to yellowish undersides. Their narrow snout is triangular in shape, and the fourth tooth on both sides of the lower jaw is visible when the mouth is closed. The eardrums are protected by moveable flaps of skin at the top of the head behind the eyes, and the nostrils are at the end of the elongated snout. Because of the location of the eyes, ears, and nostrils, a crocodile can be submerged with only the top of its head exposed and still be able to see, hear, and breathe. Male crocodiles are larger than females and can reach about 20 feet in length but rarely exceed 14 feet in the wild. Breeding females are about eight (8) to 12 feet in length. This species is commonly found in freshwater habitats such as lakes, rivers and, reservoirs, while some populations are found in brackish waters such as

swamps, estuaries, and coastal lagoons. These reptiles cannot survive in extremely cold weather. So, they build complex burrows that work as their backup shelter during cold weathers and when the water levels are too low for them to survive. There were no individuals, nests or signs of this species observed during the field inspections. The potential for this species to occur is '**Low**'. The federal determination of "**No Effect**" has been made for this species.

Eastern Indigo Snake (*Drymarchon corais couperi*)

The Eastern Indigo snake is federally listed as threatened and state listed as federally threatened throughout its range. The Eastern indigo snake is listed as threatened by both the USFWS and the FWC due to a decline in the population. This decline is attributed to the loss of habitat and collection by the pet trade. These snakes need relatively large areas of undeveloped land; as habitats become fragmented by roads, indigo snakes will be increasingly vulnerable to highway mortality as they traverse these large territories in search of food or mates. This snake is very widespread throughout the state, but relatively uncommon partially due to its secluded nature. Evidence indicates that this species, prized by snake collectors, is perhaps more abundant than first believed. Federal protection has considerably eased collection pressure on this species. Formerly classified as a racer, this snake can attain a length of well over eight feet. It is one of the largest North American snakes and has an average length of about five feet. The entire body is lustrous black or blue-black except for the chin, throat, and upper lip plates which are reddish-brown. The preferred Florida habitat includes dry glade areas, tropical hammocks, muckland fields, and some flatwoods areas. It will readily utilize disturbed areas and mangrove swamps as well as upland and even urban habitats. Roadside berms and swales may be potential habitat. This species also commonly inhabits gopher tortoise burrows. Per the USFWS's 2017 update of the Eastern indigo snake programmatic effect determination key (Key), revised August 1, 2017, the project is not located in open water or salt marsh, any and all required permits for this project will be conditioned for use of the USFWS's most current guidance for Standard Protection Measures for the Eastern Indigo Snake during site preparation and project construction (included in USACE permit No. SAJ-2014-01584), the project will impact less than 25 acres of the snake's habitat, and finally, no gopher tortoises or their burrows (neither active nor inactive) were observed within the project area. Therefore, the potential for this species to occur is '**Low**'. The Consultation Key for the Eastern Indigo Snake was used to evaluate potential effects to this species from the proposed project. See **Appendix A**- Consultation Key for the Eastern Indigo snake. The federal determination of "**Not Likely to Adversely Affect (NLAA)**" has been made for the Eastern Indigo snake.

Gopher Tortoise (*Gopherus polyphemus*)

The gopher tortoise is state listed as threatened species and not federally listed. The species has been classified as threatened due to the increased pressures of development and expansion into its remaining dry habitat. This species occurs throughout Florida but prefers sandy, well-drained upland areas. Gopher tortoises inhabit extensive subterranean burrows in dry upland habitats. Vegetation communities where gopher tortoises are found include longleaf pine sandhills, xeric oak hammocks, scrub, pine flatwoods, dry prairies, and coastal dunes. Gopher tortoises can also live-in man-made environments, such as pastures, old fields, railroad beds, and grassy roadsides. To be suitable for gopher tortoises, the habitat must have well-drained

sandy soils to allow digging burrows, herbaceous forage plants, and open sunny areas for nesting and basking. Tortoises are considered a keystone species with their burrows affording refuge to more than 360 commensal species, including other state-listed species such as the Eastern indigo snake, Florida pine snake, burrowing owl and the Florida mouse. Habitat alteration and land development pose the most serious threat to the continued survival of the gopher tortoise.

There were no gopher tortoise burrows observed within 25 ft. of the edge of pavement of the roadway during the field reviews. Their potential presence within the project corridor is considered low due to lack of available habitat and limited access due to existing interstate and local roadways. The occurrence potential for this species is considered being '**Low**'.

3.2.4 Insects

Miami Tiger Beetle (*Cicindelidia floridana*)

The Miami tiger beetle is both federally and state listed as endangered. The beetle oval shape, bulging eyes and is one of the smallest tiger beetles in the United States, measuring 0.26–0.35 inches long. The underside of the abdomen is orange to orange brown in color. It is uniquely identified by the shiny dark green dorsal surface. The Miami tiger beetle is found exclusively in pine rocklands. The species is currently found outside the boundaries of Everglades National Park on the pine rocklands of the Miami Rock Ridge in Miami-Dade County, Florida. Based on available information from survey data, it appears that the species occurs in a very limited range. Potential habitat exists within the remnant pine rocklands by the Campbell Drive Interchange; however, no work is proposed in the pine rocklands. A 25-ft buffer will be in place between the pine rocklands and construction activities. The pine rockland area is currently fenced. The potential for this species to occur in the remnant pine rockland is considered being "**Low**". A federal determination of "**No effect**" has been made for this species.

3.3 Agency Coordination

The FTE conducted a Microsoft Teams meeting with John Wrublik with U.S. Fish and Wildlife Service (USFWS) on June 25, 2020 to discuss the Effects Determination of potential federally listed species within the project study area. Species discussed included: the Florida Bonneted Bat, West Indian Manatee, Everglade Snail Kite, Florida Grasshopper Sparrow, Wood Stork, American Crocodile, American Alligator, Eastern Indigo Snake, and the Miami Tiger Beetle. See **Appendix D** – Correspondence for Meeting Minutes. The following discussion provides a summary of the effects determination for each of the species:

1. Florida Bonneted Bat - FTE indicated that project area is within the urban consultation area for the FBB. Landscape areas with 30-40' tall palm trees exist along the corridor which could provide habitat for the FBB. Visual surveys of under-bridge areas did not note any presence of the FBB. Acoustic surveys are not planned at this time, but limited surveys were suggested as sufficient since there are less than 5 acres of suitable habitat. If impacts were to change during the design phase, a formal determination and additional coordination with USFWS may be performed at that time. The resulting "may affect / not likely to adversely affect" determination was presented. USFWS agreed with this determination.

2. West Indian Manatee - FTE indicated that manatees could access the project area through the C-103 as documented in SFWMD on-line information. Since there have been no manatee siting's, the resulting "may affect / not likely to adversely affect" determination was suggested. USFWS agreed with this determination.

3. Everglade Snail Kite - FTE indicated that the lakes that provide Snail Kite habitat will not be impacted; therefore, the "no affect anticipated" determination was suggested.

4. Florida Grasshopper Sparrow- FTE indicated that no suitable habitat for the Sparrow exists in the project area; therefore, a "no affect anticipated" determination was suggested. USFWS agreed with this determination.

5. Wood Stork - FTE indicated that less than 0.5 acres of suitable foraging habitat for the Wood Stork exists in the project area, but the project is within the CFA for one nesting colony. It was stated that some swales may approach the threshold depth for foraging habitat and will be reevaluated as the design progresses on an as-needed basis. Roadside swales and ditches will be replaced as required. Based on the determination key utilized, a "not likely to adversely affect" determination was presented. USFW agreed with this determination.

6. American Crocodile - FTE indicated that potential habitat for the Crocodile exists in the project area but consists of steep, well maintained canal banks. Any occurrence of the Crocodile would be expected to be transient in nature. No observations have been noted, therefore, a "no affect anticipated" determination was suggested. USFW agreed with this determination.

7. American Alligator - FTE indicated that the Alligator was included on the list due to similarity to the American Crocodile, but no occurrences of the species have been noted and a "no affect" determination recommended. USFW agreed with this determination, USFWS stated that consultation is not normally performed for this species and a formal determination is not needed. USFWS suggested that this species could be removed from the list for this project.

8. Eastern Indigo Snake - FTE indicated that potential habitat for the Indigo snake exists in the project area, specifically in the pine rocklands and neighboring farm fields. No observations of the species have been noted and standard provisions will be included in the plans. Based on the determination key utilized a "not likely to adversely affect" determination is recommended. USFWS agreed with this determination.

9. Miami Tiger Beetle - Turnpike indicated that potential habitat for the Tiger Beetle exists in the project area, specifically in the fenced pine rocklands near Campbell Drive interchange. No formal surveys have been performed and casual walk-around surveys have not resulted in observance of the beetle. Currently, there is no work planned for the fenced area, but standard protection measures are anticipated to be included in the plans. A "no affect" determination is recommended. USFWS agreed that this is a reasonable determination at this time.

Section 4

Wetlands and Surface Waters

4.1 Introduction

In accordance with Executive Order 11990, *Protection of Wetlands*, and U.S. Department of Transportation Order 5660.1A, *Preservation of the Nation's Wetlands*, and Part 2, Chapter 9 of the FDOT PD&E Manual, the project study area was reviewed to identify the extent and types of wetlands in located within the proposed project boundaries.

4.2 Methodology

A desktop review of existing information, including aerial photographs, and GIS databases was performed prior to the field survey to determine jurisdiction wetlands. The field surveys were conducted on June 20, 2018, December 26, 2018, and February 5, 2020. The delineation methods described in the US Army Corps of Engineers (USACE) Federal Manual for Identification and Delineation of Wetlands (USACE 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0) (November 2010), and in accordance with Chapter 62-340, of Florida Administrative Code (FAC), Delineation of the Landward Extent of Wetlands and Surface Waters were used. Wetland classifications occurring within the project area were determined based on the Florida Land Use, Cover and Forms Classification System (FLUCFCS), as well as the US Fish and Wildlife Service (USFWS) publication Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979). These methods consider prevalence of wetland vegetation, hydric soil indicators, and wetland hydrology.

The study area for the NRE includes the existing Florida's Turnpike, i.e. a 200-foot buffer from the centerline of Florida's Turnpike for wetlands and surface waters and a 600-foot buffer from the centerline of SR 821 for soils, and the proposed right-of-way for the Lucy Street Interchange. During the field assessment, existing wetlands, stormwater swales containing hydrophytic vegetation and surface waters identified and assessed. Stormwater swales that contained obligate and facultative wet vegetation (i.e. hydrophytic) were considered jurisdictional pursuant to Chapter

62-340 of the FAC. During the field investigation, plant species were identified, and the vegetative composition was characterized for each wetland, stormwater swale containing hydrophytic vegetation, and surface water community. Wildlife observations or signs of wildlife utilization were also recorded with special attention paid to listed species (as described in the Protected Species and Habitat Evaluation Section).

4.3 Wetland and Surface Waters

Baseline information characterizing the surface waters located within the study area including contiguity, vegetative structural diversity, edge relationships, wildlife habitat value, hydrologic functions, public use, and integrity is found in **Table 4.1**. There are natural wetlands (one emergent and 2 forested) within the 200-foot project study area located on the east side of South Dixie Highway, just south and to the east of Exxon (505 SE 1st Avenue). There are 11 stormwater swales (SW) containing hydrophytic vegetation and 12 other surface waters (OSW) along the project study corridor. **Table 4-1** shows the identification number, size (acres), FLUCCS code/description, USFWS Code and USFWS description. The wetlands and surface waters locations are depicted in **Figure 4-1**. Photographs of the natural wetlands, stormwater swales and other surface waters within the study area are depicted in **Appendix B**. A more detailed layout of the wetlands and surface waters locations are depicted the exhibits located in **Appendix C**

Table 4-1 Stormwater Management/Drainage Features and Surface Waters

ID No.	Size (ac)	FLUCCS Code	FLUCCS Description	USFWS Code	USFWS Description
NATURAL WETLANDS					
EW-1	123.52	641 643	Freshwater Marsh Wet Prairie	PEM1Ad	Palustrine, Emergent Persistent, Temporarily Flooded, Partially Drained/Ditched
FW-1	20.14	630	Mixed Wetland Hardwoods	PFO1Ad	Palustrine, Forested, Broad-Leaved Deciduous, Temporary Flooded, Partially Drained/Ditched
FW-2	122.58	630	Mixed Wetland Hardwoods	PFO1Ad	Palustrine, Forested, Broad-Leaved Deciduous, Temporary Flooded, Partially Drained/Ditched
STORMWATER SWALES HAVING HYDROPHYTIC VEGETATION					
SW-1	1.79*	510	Streams and Waterways	PEM1A	Palustrine, Emergent Persistent, Temporarily Flooded
SW-2	0.57*	510	Streams and Waterways	PEM1A	Palustrine, Emergent Persistent, Temporarily Flooded
SW-3	0.34*	510	Streams and Waterways	PEM1A	Palustrine, Emergent Persistent, Temporarily Flooded
SW-4	0.87*	510	Streams and Waterways	PEM1A	Palustrine, Emergent Persistent, Temporarily Flooded
SW-5	0.51*	510	Streams and Waterways	PEM1A	Palustrine, Emergent Persistent, Temporarily Flooded
SW-6	0.22*	510	Streams and Waterways	PEM1A	Palustrine, Emergent Persistent, Temporarily Flooded
SW-7	1.50*	510	Streams and Waterways	PEM1A	Palustrine, Emergent Persistent, Temporarily Flooded
SW-8	1.60*	510	Streams and Waterways	PEM1A	Palustrine, Emergent Persistent, Temporarily Flooded

ID No.	Size (ac)	FLUCCS Code	FLUCCS Description	USFWS Code	USFWS Description
SW-9	0.45*	510	Streams and Waterways	PEM1A	Palustrine, Emergent Persistent, Temporarily Flooded
SW-10	0.48*	510	Streams and Waterways	PEM1A	Palustrine, Emergent Persistent, Temporarily Flooded
SW-11	1.45*	510	Streams and Waterways	PEM1A	Palustrine, Emergent Persistent, Temporarily Flooded
OTHER SURFACE WATERS					
OSW-1	5.04	534	Reservoirs less than ten (10) acres	PUBHx	Palustrine, Unconsolidated Bottom, Permanently Flooded, Excavated
OSW-2	2.00*	510	Streams and Waterways	R2UBHx	Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded, Excavated
OSW-3	1.57	510	Streams and Waterways	R2UBHx	Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded, Excavated
OSW-4	1.77	534	Reservoirs less than ten (10) acres	PUBHx	Palustrine, Unconsolidated Bottom, Permanently Flooded, Excavated
OSW-5	1.34	534	Reservoirs less than ten (10) acres	PUBHx	Palustrine, Unconsolidated Bottom, Permanently Flooded, Excavated
OSW-6	1.74	534	Reservoirs less than ten (10) acres	PUBHx	Palustrine, Unconsolidated Bottom, Permanently Flooded, Excavated
OSW-7	0.32*	510	Streams and Waterways	R5UBFx	Riverine, Unknown Perennial, Unconsolidated Bottom, Semi-permanently Flooded, Excavated
0SW-8	4.31	510	Streams and Waterways	R2UBHx	Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded, Excavated
OSW-9	2.28	534	Reservoirs less than ten (10) acres	PUBHx	Palustrine, Unconsolidated Bottom, Permanently Flooded, Excavated
OSW-10	2.76	534	Reservoirs less than ten (10) acres	PUBHx	Palustrine, Unconsolidated Bottom, Permanently Flooded, Excavated
OSW-11	2.92	534	Reservoirs less than ten (10) acres	PUBHx	Palustrine, Unconsolidated Bottom, Permanently Flooded, Excavated
0SW-12	2.01	534	Reservoirs less than ten (10) acres	PUBHx	Palustrine, Unconsolidated Bottom, Permanently Flooded, Excavated

*Indicates impacted acreage

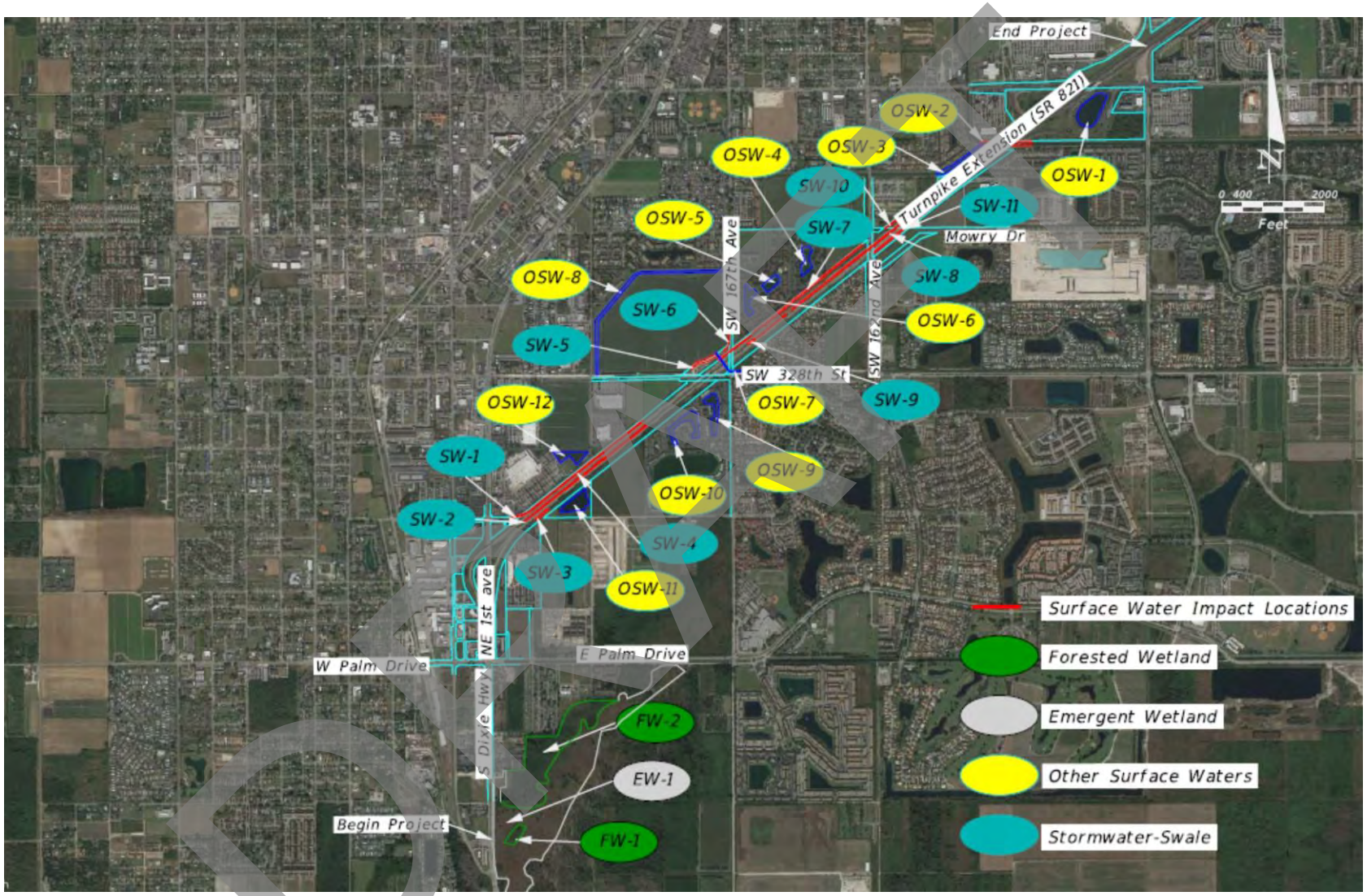


Figure 4-1 Wetlands and Surface Water locations

4.3.1 Natural Wetlands

The emergent wetland (EW-1) is a Palustrine, Emergent Persistent, Temporarily Flooded, Partially Drained/Ditched (PEM1Ad), FLUCCS codes 641 (Freshwater Marsh) and 643 (Wet Prairie). Typical vegetation found within these wetlands includes rushes (*Juncus spp*.), pickerelweed (*Ponederia cordata*), wild water pepper (*Polygonum hydropiperoides*), Carolina willow (S*alix caroliniana*), and sedges (*Carex spp. and Cyperus spp*.). The emergent wetlands are not maintained and nuisance/exotic species such as phragmites (*Phrafmites australis),* Earleaf Acacia (*Acacia auriculiformis*) and Primrose Willow (*Ludwigia sp.)* have been identified. The water levels within these wetlands vary from permanently inundated to semi-permanently saturated. Wading birds, amphibians and many other wildlife species are expected to utilize these wetlands.

The forested wetlands (FW-1 and FW-2) are Palustrine, Forested, Broad-Leaved Deciduous, Temporary Flooded, Partially Drained/Ditched (PFO1Ad), FLUCCS code 617 (Mixed Wetland Hardwoods). This category consists of wetland hardwood communities which are composed of a large variety of hardwood species that are tolerant of hydric conditions. Mixed wetland hardwood areas are located adjacent to or near the project right-of-way. This habitat type typically consists of laurel oak (*Quercus laurifolia*), dahoon holly (*Ilex cassine*), swamp bay (*Persea palustris*), sweet bay (*Magnolia virginiana*), cabbage palm (*Sabal palmetto*), red maple (*Acer rubrum*) and water oak (*Quercus nigra*), among others. In addition, this habitat may have an understory of ferns, rushes, sedges, and other species. The forested wetlands are not maintained and nuisance/exotic species such as Brazilian Pepper (*Shinus terebinthifolius*), and Australian Pine (*Casuarina sp.*) have been identified.

4.3.2 Stormwater Swales

Eleven stormwater swales (SW-1 to SW-11) are present within the project area that is small, shallow, linear roadside drainage features that are located in the existing right-of-way. The wetlands in the swales are classified as Palustrine, Emergent Persistent, Temporarily Flooded (PEM1A), FLUCCS code 510 (Streams and Waterways). The swales contain similar herbaceous vegetative composition and serve the purpose of stormwater drainage and retention. Due to the similarity of function and vegetation, these 11 swales have been characterized together. The swales are predominately maintained (i.e., vegetation is mowed, trimmed, and/or treated with herbicide) by the FDOT. Species typically found in the swales are nuisance or exotic herbaceous hydrophytic vegetation that is adapted to frequent disturbance, i.e. cattail, torpedograss (*Panicum repens*), primrose willow (*Ludwigia peruviana*), pickerelweed (*Pontederia cordata*), smartweed (*Polygonum punctatum*), and several species of flatsedges (*Cyperus spp*.) water

4.3.3 Other Surface Waters

Twelve other surface waters (OSW-1 to OSW-12) are present within the project corridor. Eight of the OSW (OSW-1, OSW-4, OSW-5, OSW-6, OSW-9, OSW-10, OSW-11, and OSW-12) are classified as Palustrine, Unconsolidated Bottom, Permanently Flooded, Excavated (PUBHx), FLUCCS Code 534 (Reservoirs less than ten (10) acres). The rest (OSW-2, OSW-3, OSW-7, and OSW-8) are classified as Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded, Excavated (R5UBFx), FLUCCS Code 510 (Streams and Waterways). These features typically contain no hydrophytic vegetation and have grassed side slopes used for the construction of the ditches/swales.

4.4 Stormwater Swales and Other Surface Water Impacts

Direct / Indirect Impacts

The proposed improvements based on the proposed concept plans, both Build Alternatives A and B would result in direct impacts to SW-1 to SW-11 and OSW-7. The impacts consist of approximately 9.78 acres impacts of re-grading in the SW-1 to SW-11, minor impacts to OSW-2 (C-103 / Mowery Canal) and OSW-7 as a result of minor improvements at Lucy Street and bridge widening proposed over the C-103 Canal / Mowery Canal. Impacts will be determined during design and permitting phases. Indirect impacts to hydrological and water quality are not anticipated as result of the project because the proposed improvements are to an existing facility. Furthermore, stormwater management standards have increased since the roadway facility was constructed. The project will result in overall water quality improvements in the project corridor to meet the new standards.

There will be no direct impacts to the natural wetlands (emergent and forested wetlands).

Cumulative Impacts

Cumulative impacts are defined as the direct and indirect effects of the proposed project under consideration. There are no jurisdictional wetlands that will be impacted within the study area. The stormwater swales will be replaced, and the other surface waters will not be cumulatively impacted. Therefore, no cumulative impacts are associated with this project.

4.5 Avoidance and Minimization

The project involves widening the roadway largely within the existing right-of-way, which is devoid of wetlands with the exception of SW-1 to SW-11, stormwater swales with hydrophytic vegetation. SW-1 to SW-11, OSW-2, and OSW-7 are man-made and are not natural wetland systems. SW-1 to SW-11 within the right-of-way and at OSW-7 will be replaced by the stormwater treatment and/or conveyance in the proposed design alternatives. Other surface water impacts to OSW-2 is anticipated to be minor. In addition, the project will be designed to address and mitigate impacts from stormwater runoff through compliance with stormwater management plans and applicable regulatory requirements. Opportunities to minimize impacts to surface and other surface waters will continue to be evaluated during the project design phase.

Mitigation

In a meeting with SFWMD and USACE on January 16, 2020, both confirmed that mitigation will not be required for impacts to SW-1 to SW-11 and OSW-7. In addition, the stormwater swales will be replaced in-kind. It is anticipated that a Nationwide (NW) permit will be obtained for OSW-2. The NW permit will require no mitigation. See **Appendix D**– Interagency Coordination Meeting.

4.6 Permitting

All necessary permits will be acquired prior to the construction of the proposed roadway improvements. Coordination and/or permitting will be conducted with the following agencies during the design phase of this project:

- U.S. Army Corps of Engineers (SUACE) – Section 408 Approval

- South Florida Water Management District (SFWMD) – ERP Permit
- SFWMD Right of Way Occupancy Permit
- Florida Department of Environmental Protection (FDEP) – NPDES

4.7 Conclusions, Commitments, and Implementation

Natural wetlands, stormwater swale wetlands, and other surface waters were assessed along the project corridor. SW-1 to SW-11, OSW-2 and OSW-7 will be impacted by the proposed improvements. The impacts consist of approximately 9.78 acres of re-grading in the SW-1 to SW-11 and minor impacts to OSW-2 and OSW-7. These impacts are located within the existing Turnpike Extension right-of-way and are man-made features used to convey stormwater runoff.

The FDOT is committed to the following measures to address wetland impacts for this project:

- Minimization of wetland and surface water impacts will be evaluated further during the design phase of the project to the extent possible, i.e. changes in the typical section to avoid and minimize wetland impacts and use of BMPS to avoid and minimize impacts to water quality.
- Coordination with the appropriate regulatory agencies will be conducted throughout the design phase for permitting; FDOT's Standard Specifications for Road and Bridge Construction will be adhered to during the construction phase of the project. This includes the proper use of BMP's to control turbidity, erosion, and sedimentation; and
- A Stormwater Management Plan will be developed to provide conveyance and treatment for stormwater runoff from impervious surfaces.

In addition to the above, the following will be implemented during the design and construction phases:

- Conduct a limited roost survey for the Florida Bonneted Bat during design.
- Standard Manatee Conditions for In-water to be implemented during construction.
- Standard Protection Measures to be implemented for the Eastern Indigo snake during construction
- A 25-ft buffer between the pine rocklands and construction activities should be noted in the plans for the Miami Tiger Beetle.

Section 5

Essential Fish Habitat

5.1 Essential Fish Habitat Involvement

There is no involvement with, or adverse effect on Essential Fish Habitat (EFH) as the project area does not contain areas that support EFH or National Oceanic and Atmospheric Administration (NOAA) trust fishery resources; therefore, no EFH assessment or further consultation with National Marine Fisheries Service (NMFS) will be required. An EFH Assessment is not required and is not included in this report.

Appendix A

USFWS IPaC Species List
Florida Bonneted Bat Consultation Key
Manatee Effect Determination Key
Wood Stork Determination Key
Eastern Indigo Snake Consultation Key

United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Florida Ecological Services Field Office
1339 20th Street
Vero Beach, FL 32960-3559
Phone: (772) 562-3909 Fax: (772) 562-4288
http://fws.gov/verobeach

In Reply Refer To: September 13, 2018
Consultation Code: 04EF2000-2018-SLI-1102
Event Code: 04EF2000-2018-E-03410
Project Name: Florida's Turnpike (SR 821) Widening from US 1 South of Palm Drive to Campbell Drive PD&E Study

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

South Florida Ecological Services Field Office
1339 20th Street
Vero Beach, FL 32960-3559
(772) 562-3909

Project Summary

Consultation Code: 04EF2000-2018-SLI-1102

Event Code: 04EF2000-2018-E-03410

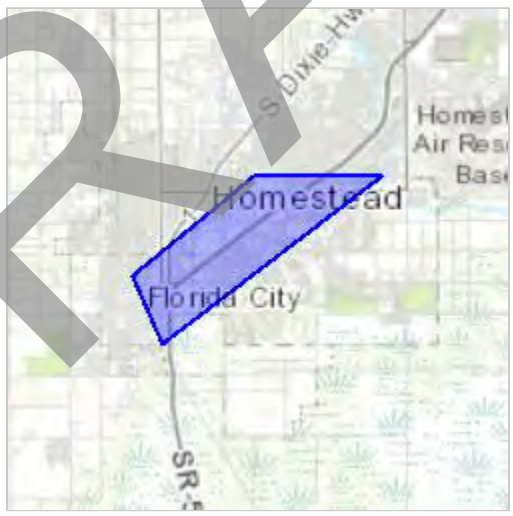
Project Name: Florida's Turnpike (SR 821) Widening from US 1 South of Palm Drive to Campbell Drive PD&E Study

Project Type: TRANSPORTATION

Project Description: Florida's Turnpike (SR 821) Widening from US 1 South of Palm Drive to Campbell Drive, 3 miles long. The project consists of widening Florida's Turnpike within the project limits by adding general toll lanes or express lanes in each direction. The mainline bridges over SW 162nd Avenue and Lucy Street, and the bridges over Canal-103 will be widened to accommodate the additional lanes. The PD&E study should be completed by August 23, 2019.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/25.461136753819446N80.46356580624908W



Counties: Miami-Dade, FL

Endangered Species Act Species

There is a total of 46 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Florida Bonneted Bat *Eumops floridanus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8630	Endangered
Florida Panther *Puma (=Felis) concolor coryi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1763 Habitat assessment guidelines: https://ecos.fws.gov/ipac/guideline/assessment/population/8/office/41420.pdf	Endangered
Puma (=mountain Lion) *Puma (=Felis) concolor (all subsp. except coryi)* Population: FL No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6049	Similarity of Appearance (Threatened)
West Indian Manatee *Trichechus manatus* There is **final** critical habitat for this species. Your location is outside the critical habitat. ***This species is also protected by the Marine Mammal Protection Act, and may have additional consultation requirements.*** Species profile: https://ecos.fws.gov/ecp/species/4469	Threatened

Birds

NAME	STATUS
Bachman's Warbler (=wood) *Vermivora bachmanii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3232	Endangered
Cape Sable Seaside Sparrow *Ammodramus maritimus mirabilis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6584	Endangered
Everglade Snail Kite *Rostrhamus sociabilis plumbeus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7713 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/1221/office/41420.pdf	Endangered
Florida Grasshopper Sparrow *Ammodramus savannarum floridanus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/32	Endangered
Florida Scrub-jay *Aphelocoma coerulescens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6174	Threatened
Ivory-billed Woodpecker *Campephilus principalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8230	Endangered
Kirtland's Warbler *Setophaga kirtlandii (= Dendroica kirtlandii)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8078	Endangered
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot *Calidris canutus rufa* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Red-cockaded Woodpecker *Picoides borealis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7614	Endangered
Wood Stork *Mycteria americana* Population: AL, FL, GA, MS, NC, SC	Threatened

NAME	STATUS
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8477 Habitat assessment guidelines: https://ecos.fws.gov/ipac/guideline/assessment/population/124/office/41420.pdf	

Reptiles

NAME	STATUS
American Alligator *Alligator mississippiensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/776	Similarity of Appearance (Threatened)
American Crocodile *Crocodylus acutus* Population: U.S.A. (FL) There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6604	Threatened
Eastern Indigo Snake *Drymarchon corais couperi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/646	Threatened
Hawksbill Sea Turtle *Eretmochelys imbricata* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3656	Endangered
Leatherback Sea Turtle *Dermochelys coriacea* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1493	Endangered
Loggerhead Sea Turtle *Caretta caretta* Population: Northwest Atlantic Ocean DPS There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1110	Threatened

Fishes

NAME	STATUS
Atlantic Sturgeon (gulf Subspecies) *Acipenser oxyrinchus (=oxyrhynchus) desotoi* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/651	Threatened

Snails

NAME	STATUS
Stock Island Tree Snail *Orthalicus reses (not incl. nesodryas)*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/466

Insects

NAME	STATUS
Bartram's Hairstreak Butterfly *Strymon acis bartrami*	Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/4837

Florida Leafwing Butterfly *Anaea troglodyta floridalis*	Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/6652

Miami Blue Butterfly *Cyclargus (=Hemiargus) thomasi bethunebakeri*	Endangered

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/3797

Schaus Swallowtail Butterfly *Heraclides aristodemus ponceanus*	Endangered

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/1951

Flowering Plants

NAME	STATUS
Beach Jacquemontia *Jacquemontia reclinata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1277	Endangered
Blodgett's Silverbush *Argythamnia blodgettii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6823	Threatened
Cape Sable Thoroughwort *Chromolaena frustrata* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4733	Endangered
Carter's Mustard *Warea carteri* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5583	Endangered
Carter's Small-flowered Flax *Linum carteri carteri* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7208	Endangered
Crenulate Lead-plant *Amorpha crenulata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6470	Endangered
Deltoid Spurge *Chamaesyce deltoidea ssp. deltoidea* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/199	Endangered
Everglades Bully *Sideroxylon reclinatum ssp. austrofloridense* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4735	Threatened
Florida Brickell-bush *Brickellia mosieri* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/956	Endangered
Florida Pineland Crabgrass *Digitaria pauciflora* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3728	Threatened
Florida Prairie-clover *Dalea carthagenensis floridana* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2300	Endangered
Florida Semaphore Cactus *Consolea corallicola* There is **final** critical habitat for this species. The location of the critical habitat is not available.	Endangered

NAME	STATUS
Species profile: https://ecos.fws.gov/ecp/species/4356	
Garber's Spurge *Chamaesyce garberi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8229	Threatened
Okeechobee Gourd *Cucurbita okeechobeensis ssp. okeechobeensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5999	Endangered
Pineland Sandmat *Chamaesyce deltoidea pinetorum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1914	Threatened
Sand Flax *Linum arenicola* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4313	Endangered
Small's Milkpea *Galactia smallii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3360	Endangered
Tiny Polygala *Polygala smallii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/996	Endangered

Ferns and Allies

NAME	STATUS
Florida Bristle Fern *Trichomanes punctatum ssp. floridanum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8739	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Florida Bonneted Bat Consultation Key#

Use the following key to evaluate potential effects to the Florida bonneted bat (FBB) from the proposed project. Refer to the Glossary as needed.

1a. Proposed project or land use change is partially or wholly within the Consultation Area (Figure 1)..... **Go to 2**
1b. Proposed project or land use change is wholly outside of the Consultation Area (Figure 1)..... **No Effect**

2a. Potential FBB roosting habitat exists within the project area..... **Go to 3**
2b. No potential FBB roosting habitat exists within the project area..... **Go to 13**

3a. Project size/footprint* ≤ 5 acres (2 hectares)..... **Conduct Limited Roost Survey (Appendix C)** then Go to 4 **NOTE: LIMITED ROOST SURVEY HAS NOT BEEN CONDUCTED**
3b. Project size/footprint* > 5 acres (2 hectares)..... **Conduct Full Acoustic/Roost Surveys (Appendix B)** then **Go to 6**

4a. Results show FBB roosting is likely ..... **Go to 5**
4b. Results do not show FBB roosting is likely..... **MANLAA-P if BMPs (Appendix D) used and survey reports are submitted. Programmatic concurrence.**

5a. Project will affect roosting habitat..... **LAA+ Further consultation with the Service required.**
5b. Project will not affect roosting habitat..... **MANLAA-C with required BMPs (Appendix D). Further consultation with the Service required.**

6a. Results show some FBB activity..... **Go to 7**
6b. Results show no FBB activity..... **No Effect**

7a. Results show FBB roosting is likely..... **Go to 8**
7b. Results do not show FBB roosting is likely..... **Go to 10**

8a. Project will not affect roosting habitat..... **Go to 9**
8b. Project will affect roosting habitat..... **LAA+ Further consultation with the Service required.**

9a. Project will affect* > 50 acres (20 hectares) (wetlands and uplands) of foraging habitat..... **LAA+ Further consultation with the Service required.**
9b. Project will affect* ≤ 50 acres (20 hectares) (wetlands and uplands) of foraging habitat..... **MANLAA-C with required BMPs (Appendix D). Further consultation with the Service required.**

10a. Results show high FBB activity/use..... **Go to 11**
10b. Results do not show high FBB activity/use..... **Go to 12**

11a. Project will affect* > 50 acres (20 hectares) (wetlands and uplands) of FBB habitat (roosting and/or foraging)..... **LAA+ Further consultation with the Service required.**
11b. Project will affect* ≤ 50 acres (20 hectares) (wetlands and uplands) of FBB habitat (roosting and/or foraging)..... **MANLAA-C with required BMPs (Appendix D). Further consultation with the Service required.**

12a. Project will affect* > 50 acres (20 hectares) (wetlands and uplands) of FBB habitat..... **LAA+ Further consultation with the Service required.**
12b. Project will affect* ≤ 50 acres (20 hectares) (wetlands and uplands) of FBB habitat..... **MANLAA-P if BMPs (Appendix D) used and survey reports are submitted. Programmatic concurrence. 7**

13a. FBB foraging habitat exists within the project area and foraging habitat will be affect……..***Go to 14***

13b. FBB foraging habitat exists within the project area and foraging habitat will not be affected OR no FBB foraging habitat exists within the project area……..**No Effect**

14a. Project size* > 50 acres (20 hectares) (wetlands and uplands) ……..**Go to 15**

14b. Project size* ≤ 50 acres (20 hectares) (wetlands and uplands……. **MANLAA-P if BMPs (Appendix D) used. Programmatic concurrence.**

15a. Project is within 8 miles (12.9 kilometers) of high quality potential roosting areas^……**Conduct Full Acoustic Survey (Appendix B) and Go to 16**

15b. Project is not within 8 miles (12.9 kilometers) of high quality potential roosting area^……**MANLAA-P if BMPs (Appendix D) used. Programmatic concurrence.**

16a. Results show some FBB activity……..**Go to 17**

16b. Results show no FBB activity……..**No Effect**

17a. Results show high FBB activity/use……..**LAA+ Further consultation with the Service required.**

17b. Results do not show high FBB activity/use…….. **MANLAA-P if BMPs (Appendix D) used and survey reports submitted. Programmatic concurrence.**

If you are within the urban environment and you are renovating an existing artificial structure (with or without additional ground disturbing activities), these Guidelines do not apply. The Service is developing separate guidelines for consultation in these situations. Until the urban guidelines are complete, please contact the Service for additional guidance

*Includes wetlands and uplands that are going to be altered along with a 250- foot (76.2- meter) buffer around these areas if the parcel is larger than the altered area.

+Project modifications could change the LAA determinations in numbers 5, 8, 9, 11, 12, and 17 to MANLAA determinations.

^Determining if high quality potential roosting areas are within 8 mi (12.9 km) of a project is intended to be a desk-top exercise looking at most recent aerial imagery, not a field exercise.

THE CORPS OF ENGINEERS, JACKSONVILLE DISTRICT, AND THE STATE OF FLORIDA EFFECT DETERMINATION KEY FOR THE MANATEE IN FLORIDA
April 2013

Purpose and background of the key

The purpose of this document is to provide guidance to improve the review of permit applications by U.S. Army Corps of Engineers' (Corps) Project Managers in the Regulatory Division regarding the potential effects of proposed projects on the endangered West Indian manatee (*Trichechus manatus*) in Florida, and by the Florida Department of Environmental Protection or its authorized designee or Water Management District, for evaluating projects under the State Programmatic General Permit (SPGP) or any other Programmatic General Permits that the Corps may issue for administration by the above agencies. Such guidance is contained in the following dichotomous key. The key applies to permit applications for in-water activities such as, but not limited to: (1) dredging [new or maintenance dredging of not more than 50,000 cubic yards], placement of fill material for shoreline stabilization, and construction/placement of other in-water structures as well as (2) construction of docks, marinas, boat ramps and associated trailer parking spaces, boat slips, dry storage or any other watercraft access structures or facilities.

At a certain step in the key, the user is referred to graphics depicting important manatee areas or areas with inadequate protection. The maps can be downloaded from the Corps' web page at http://www.saj.usace.army.mil/Missions/Regulatory/SourceBook.aspx. We intend to utilize the most recent depiction of these areas, so should these areas be modified by statute, rule, ordinance and/or other legal mandate or authorization, we will modify the graphical depictions accordingly. These areas may be shaded or otherwise differentiated for identification on the maps.

Explanatory footnotes are provided in the key and must be closely followed whenever encountered.

Scope of the key

This key should only be used in the review of permit applications for effect determinations on manatees and should not be used for other listed species or for other aquatic resources such as Essential Fish Habitat (EFH). Corps Project Managers should ensure that consideration of the project's effects on any other listed species and/or on EFH is performed independently. This key may be used to evaluate applications for all types of State of Florida (State Programmatic General Permits, noticed general permits, standard general permits, submerged lands leases, conceptual and individual permits) and Department of the Army (standard permits, letters of permission, nationwide permits, and regional general permits) permits and authorizations. The final effect determination will be based on the project location and description; the potential effects to manatees, manatee habitat, and/or manatee critical habitat; and any measures (such as project components, standard construction precautions, or special conditions included in the authorization) to avoid or minimize effects to manatees or manatee critical habitat. Projects that key to a "may affect" determination equate to "likely to adversely affect" situations, and those projects should not be processed under the SPGP or any other programmatic general permit. For

all “may affect” determinations, Corps Project Managers shall refer to the Manatee Programmatic Biological Opinion, dated March 21, 2011, for guidance on eliminating or minimizing potential adverse effects resulting from the proposed project. If unable to resolve the adverse effects, the Corps may refer the applicant to the U.S. Fish and Wildlife Service (Service) for further assistance in attempting to revise the proposed project to a “may affect, not likely to adversely affect” level. The Service will coordinate with the Florida Fish and Wildlife Conservation Commission (FWC) and the counties, as appropriate. Projects that provide new access for watercraft and key to “may affect, not likely to adversely affect” may or may not need to be reviewed individually by the Service.

MANATEE KEY
Florida[1]
April 2013

The key is not designed to be used by the Corps' Regulatory Division for making their effect determinations for dredging projects greater than 50,000 cubic yards, the Corps' Planning Division in making their effect determinations for civil works projects or by the Corps' Regulatory Division for making their effect determinations for projects of the same relative scope as civil works projects. These types of activities must be evaluated by the Corps independently of the key.

A. Project is not located in waters accessible to manatees and does not directly or indirectly affect manatees (see Glossary).....*No effect*

Project is located in waters accessible to manatees **or** directly or indirectly affects manatees .....B

B. Project consists of one or more of the following activities, all of which are *May affect*:

1. blasting or other detonation activity for channel deepening and/or widening, geotechnical surveys or exploration, bridge removal, movies, military shows, special events, etc.;

2. installation of structures which could restrict or act as a barrier to manatees;

3. new or changes to existing warm or fresh water discharges from industrial sites, power plants, or natural springs or artesian wells (but only if the new or proposed change in discharge requires a Corps permit to accomplish the work);

4. installation of new culverts and/or maintenance or modification of existing culverts (where the culverts are 8 inches to 8 feet in diameter, ungrated and in waters accessible, or potentially accessible, to manatees)[2];

5. mechanical dredging from a floating platform, barge or structure[3] that restricts manatee access to less than half the width of the waterway;

6. creation of new slips or change in use of existing slips, even those located in a county with a State-approved Manatee Protection Plan (MPP) in place and the number of slips is less than the MPP threshold, to accommodate docking for repeat use vessels, (*e.g.*, water taxis, tour boats, gambling boats, etc; or slips or structures that are not civil works projects, but are frequently used to moor large vessels (>100') for shipping and/or freight purposes; does not include slips used for docking at boat sales or repair facilities or loading/unloading at dry stack storage facilities and boat ramps); [Note: For projects within Bay, Dixie, Escambia, Franklin, Gilchrist, Gulf, Hernando, Jefferson, Lafayette, Monroe (south of Craig Key), Nassau, Okaloosa, Okeechobee, Santa Rosa, Suwannee, Taylor, Wakulla or Walton County, the reviewer should proceed to Couplet C.]

7. any type of in-water activity in a Warm Water Aggregation Area (WWAA) or No Entry Area (see Glossary and accompanying Maps[4]); [Note: For residential docking facilities in a Warm Water Aggregation Area that is not a Federal manatee sanctuary or No Entry Area, the reviewer should proceed to couplet C.]

8. creation or expansion of canals, basins or other artificial shoreline and/or the connection of such features to navigable waters of the U.S.; [Note: For projects proposing a single residential dock, the reviewer should proceed to couplet C; otherwise, project is a *May Affect*.]

9. installation of temporary structures (docks, buoys, etc.) utilized for special events such as boat races, boat shows, military shows, etc., but only when consultation with the U.S. Coast Guard and FWS has not occurred; [Note: See programmatic consultation with the U.S. Coast Guard on manatees dated May 10, 2010.].

Project is other than the activities listed above C

C. Project is located in an Important Manatee Area (IMA) (see Glossary and accompanying Maps[4]) ..... D

Project is not located in an Important Manatee Area (IMA) (see Glossary and accompanying Maps[4]) ..... G

D. Project includes dredging of less than 50,000 cubic yards ..... E

Project does not include dredging ..... G

E. Project is for dredging a residential dock facility or is a land-based dredging operation ..... N

Project not as above ..... F

F. Project proponent **does not elect** to follow all dredging protocols described on the maps for the respective IMA in which the project is proposed ..... *May affect*

Project proponent **elects** to follow all dredging protocols described on the maps for the respective IMA in which the project is proposed ..... G

G. Project provides new[5] access for watercraft, *e.g.*, docks or piers, marinas, boat ramps and associated trailer parking spaces, new dredging, boat lifts, pilings, floats, floating docks, floating vessel platforms, boat slips, dry storage, mooring buoys, or other watercraft access (residential boat lifts, pilings, floating docks, and floating vessel platforms installed in existing slips are not considered new access) or improvements allowing increased watercraft usage ..... H

Project does not provide new[5] access for watercraft, *e.g.*, bulkheads, seawalls, riprap, maintenance dredging, boardwalks and/or the maintenance (repair or rehabilitation) of currently serviceable watercraft access structures provided all of the following are met: (1) the number of slips is not increased; (2) the number of existing slips is not in question; and (3) the improvements do not allow increased watercraft usage ..... N

H. Project is located in the Braden River Area of Inadequate Protection (Manatee County) (see Glossary and accompanying AIP Map[4]) ..... *May affect*

Project is not located in the Braden River Area of Inadequate Protection (Manatee County) (see Glossary and accompanying AIP Map[4]) I

I. Project is for a multi-slip facility (see Glossary) ..... J

Project is for a residential dock facility or is for dredging (see Glossary) ..... N

J. Project is located in a county that currently has a State-approved MPP in place (BREVARD, BROWARD, CITRUS, CLAY, COLLIER, DUVAL, INDIAN RIVER, LEE, MARTIN, MIAMI-DADE, PALM BEACH, ST. LUCIE, SARASOTA, VOLUSIA) or shares contiguous waters with a county having a State-approved MPP in place (LAKE, MARION, SEMINOLE)[6] ..... K

Project is located in a county not required to have a State-approved MPP L

K. Project has been developed or modified to be consistent with the county's State-approved MPP **and** has been verified by a FWC review (or FWS review if project is exempt from State permitting) **or** the number of slips is below the MPP threshold ..... N

Project has not been reviewed by the FWC or FWS **or** has been reviewed by the FWC or FWS **and** determined that the project is not consistent with the county's State-approved MPP ..... *May affect*

L. Project is located in one of the following counties: CHARLOTTE, DESOTO[7], FLAGLER, GLADES, HENDRY, HILLSBOROUGH, LEVY, MANATEE, MONROE[7], PASCO[7], PINELLAS ..... M

Project is located in one of the following counties: BAY, DIXIE, ESCAMBIA, FRANKLIN, GILCHRIST, GULF, HERNANDO, JEFFERSON, LAFAYETTE, MONROE (south of Craig Key), NASSAU, OKALOOSA, OKEECHOBEE, PUTNAM, SANTA ROSA, ST. JOHNS, SUWANNEE, TAYLOR, WAKULLA, WALTON ..... N

M. The number of slips does not exceed the residential dock density threshold (see Glossary) ..... N

The number of slips exceeds the residential dock density threshold (see Glossary) ..... *May affect*

N. Project impacts to submerged aquatic vegetation[8], emergent vegetation or mangrove will have beneficial, insignificant, discountable[9] or no effects on the manatee[10] ..... O

Project impacts to submerged aquatic vegetation[8], emergent vegetation or mangrove may adversely affect the manatee[10] ..... *May affect*

O. Project proponent **elects** to follow standard manatee conditions for in-water work[11] and requirements, as appropriate for the proposed activity, prescribed on the maps[4] ..... P

Project proponent **does not elect** to follow standard manatee conditions for in-water work[11] and appropriate requirements prescribed on the maps[4] ..... *May affect*

P. If project is for a new or expanding[5] multi-slip facility and is located in a county with a State-approved MPP in place **or** in Bay, Dixie, Escambia, Franklin, Gilchrist, Gulf, Hernando, Jefferson, Lafayette, Monroe (south of Craig Key), Nassau, Okaloosa, Okeechobee, Putnam, St. Johns, Santa Rosa, Suwannee, Taylor, Wakulla or Walton County, the determination of "*May affect, not likely to adversely affect*" is appropriate[12] and no further consultation with the Service is necessary.

If project is for a new or expanding[5] multi-slip facility and is located in Charlotte, Desoto, Flagler, Glades, Hendry, Hillsborough, Levy, Manatee, Monroe (north of Craig Key), Pasco, or Pinellas County, further consultation with the Service is necessary for "*May affect, not likely to adversely affect*" determinations.

If project is for repair or rehabilitation of a multi-slip facility and is located in an Important Manatee Area, further consultation with the Service is necessary for "*May affect, not likely to adversely affect*" determinations. If project is for repair or rehabilitation of a multi-slip facility and: (1) is not located in an Important Manatee Area; (2) the number of slips is not increased; (3) the number of existing slips is not in question; and (4) the improvements to the existing watercraft access structures do not allow increased watercraft usage, the determination of "*May affect, not likely to adversely affect*" is appropriate[12] and no further consultation with the Service is necessary.

If project is a residential dock facility, shoreline stabilization, or dredging, the determination of "*May affect, not likely to adversely affect*" is appropriate[12] and no further consultation with the Service is necessary. Note: For residential dock facilities located in a Warm Water Aggregation Area or in a No Entry area, seasonal restrictions may apply. See footnote 4 below for maps showing restrictions.

If project is other than repair or rehabilitation of a multi-slip facility, a new[5] multi-slip facility, residential dock facility, shoreline stabilization, or dredging, and does not provide new[5] access for watercraft or

improve an existing access to allow increased watercraft usage, the determination of "*May affect, not likely to adversely affect*" is appropriate[12] and no further consultation with the Service is necessary.

[1] On the St. Mary's River, this key is only applicable to those areas that are within the geographical limits of the State of Florida.

[2] All culverts 8 inches to 8 feet in diameter must be grated to prevent manatee entrapment. To effectively prevent manatee access, grates must be permanently fixed, spaced a maximum of 8 inches apart (may be less for culverts smaller than 16 inches in diameter) and may be installed diagonally, horizontally or vertically. For new culverts, grates must be attached prior to installation of the culverts. Culverts less than 8 inches or greater than 8 feet in diameter are exempt from this requirement. If new culverts and/or the maintenance or modification of existing culverts are grated as described above, the determination of "*May affect, not likely to adversely affect*" is appropriate[11] and no further consultation with the Service is necessary.

[3] If the project proponent agrees to follow the standard manatee conditions for in-water work as well as any special conditions appropriate for the proposed activity, further consultation with the Service is necessary for "*May affect, not likely to adversely affect*" determinations. These special conditions may include, but are not limited to, the use of dedicated observers (see Glossary for definition of dedicated observers), dredging during specific months (warm weather months vs cold weather months), dredging during daylight hours only, adjusting the number of dredging days, does not preclude or discourage manatee egress/ingress with turbidity curtains or other barriers that span the width of the waterway, etc.

[4] Areas of Inadequate Protection (AIPs), Important Manatee Areas (IMAs), Warm Water Aggregation Areas (WWAAs) and No Entry Areas are identified on these maps and defined in the Glossary for the purposes of this key. These maps can be viewed on the Corps' web page. If projects are located in a No Entry Area, special permits may be required from FWC in order to access these areas (please refer to Chapter 68C-22 F.A.C. for boundaries; maps are also available at FWC's web page).

[5] New access for watercraft is the addition or improvement of structures such as, but not limited to, docks or piers, marinas, boat ramps and associated trailer parking spaces, boat lifts, pilings, floats, floating docks, floating vessel platforms, (maintenance dredging, residential boat lifts, pilings, floating docks, and floating vessel platforms installed in existing slips are not considered new access), boat slips, dry storage, mooring buoys, new dredging, etc., that facilitates the addition of watercraft to, and/or increases watercraft usage in, waters accessible to manatees. The repair or rehabilitation of any type of currently serviceable watercraft access structure is not considered new access provided all of the following are met: (1) the number of slips is not increased; (2) the number of existing slips is not in question; and (3) the improvements to the existing watercraft access structures do not result in increased watercraft usage.

[6] Projects proposed within the St. Johns River portion of Lake, Marion, and Seminole counties and contiguous with Volusia County shall be evaluated using the Volusia County MPP.

[7] For projects proposed within the following areas: the Peace River in DeSoto County; all areas north of Craig Key in Monroe County, and the Anclote and Pithlachascotee Rivers in Pasco County, proceed to Couplet M. For all other locations in DeSoto, Monroe (south of Craig Key) and Pasco Counties, proceed to couplet N.

[8] Where the presence of the referenced vegetation is confirmed within the area affected by docks and other piling-supported minor structures and the reviewer has concluded that the impacts to SAV, marsh or mangroves would not adversely affect the manatee or its critical habitat, proceed to couplet O.

Where the presence of the referenced vegetation is confirmed within the area affected by docks and other piling-supported minor structures and the reviewer has concluded that the impacts to SAV, marsh or mangroves would adversely affect the manatee or its critical habitat, the applicant can elect to avoid/minimize impacts to that vegetation. In that instance, where impacts are unavoidable and the applicant elects to abide by or employ construction techniques that exceed the criteria in the following documents, the reviewer should conclude that the impacts to SAV, marsh or mangroves would not adversely affect the manatee or its critical habitat and proceed to couplet O.

- "Construction Guidelines in Florida for Minor Piling-Supported Structures Constructed in or over Submerged Aquatic Vegetation (SAV), Marsh or Mangrove Habitat," prepared jointly by the U.S. Army Corps of Engineers and the National Marine Fisheries Service (August 2001) [refer to the Corps' web page], and

- "Key for Construction Conditions for Docks or Other Minor Structures Constructed in or over Johnson's seagrass (*Halophila johnsonii*)," prepared jointly by the National Marine Fisheries Service and U.S. Army Corps of Engineers (October 2002), for those projects within the known range of Johnson's seagrass occurrence (Sebastian Inlet to central Biscayne Bay in the lagoon systems on the east coast of Florida) [refer to the Corps' web page],

Where the presence of the referenced vegetation is confirmed within the area affected by docks and other piling-supported minor structures and the reviewer has concluded that the impacts to SAV, marsh or mangroves would adversely affect the manatee or its critical habitat, and the applicant does not elect to follow the above Guidelines, the Corps will need to request formal consultation on the manatee with the Service as *May affect*.

For activities other than docks and other piling-supported minor structures proposed in SAV, marsh, or mangroves (*e.g.*, new dredging, placement of riprap, bulkheads, etc.), if the reviewer determines the impacts to the SAV, marsh or mangroves will not adversely affect the manatee or its critical habitat, proceed to couplet O, otherwise the Corps will need to request formal consultation on the manatee with the Service as *May affect*.

[9] See Glossary, under "is not likely to adversely affect."

[10] Federal reviewers, when making your effects determination, consider effects to manatee designated critical habitat pursuant to section 7(a)(2) of the Endangered Species Act. State reviewers, when making your effects determination, consider effects to manatee habitat within the entire State of Florida, pursuant to Chapter 370.12(2)(b) Florida Statutes.

[11] See the Corps' web page for manatee construction conditions. At this time, manatee construction precautions c and f are not required in the following Florida counties: Bay, Escambia, Franklin, Gilchrist, Gulf, Jefferson, Lafayette, Okaloosa, Santa Rosa, Suwannee, and Walton.

[12] By letter dated April 25, 2013, the Corps received the Service's concurrence with "*May affect, not likely to adversely affect*" determinations made pursuant to this key for the following activities: (1) selected non-watercraft access projects; (2) watercraft-access projects that are residential dock facilities, excluding those located in the Braden River AIP; (3) launching facilities solely for kayaks and canoes, and (4) new or expanding multi-slip facilities located in Bay, Dixie, Escambia, Franklin, Gilchrist, Gulf, Hernando, Jefferson, Lafayette, Monroe (south of Craig Key), Nassau, Okaloosa, Okeechobee, Santa Rosa, Suwannee, Taylor, Wakulla or Walton County.

Additionally, in the same letter dated April 25, 2013, the Corps received the Service's concurrence for "*May affect, not likely to adversely affect*" determinations specifically made pursuant to Couplet G of the key for the repair or rehabilitation of currently serviceable multi-slip watercraft access structures provided all of the following are met: (1) the project is not located in an IMA, (2) the number of slips is not increased; (3) the number of existing slips is not in question; and (4) the improvements to the existing watercraft access structures do not allow increased watercraft usage. Upon receipt of such a programmatic concurrence, no further consultation with the Service for these projects is required.

GLOSSARY

Areas of inadequate protection (AIP) – Areas within counties as shown on the maps where the Service has determined that measures intended to protect manatees from the reasonable certainty of watercraft-related take are inadequate. Inadequate protection may be the result of the absence of manatee or other watercraft speed zones, insufficiency of existing speed zones, deficient speed zone signage, or the absence or insufficiency of speed zone enforcement.

Boat slip – A space on land or in or over the water, other than on residential land, that is intended and/or actively used to hold a stationary watercraft or its trailer, and for which intention and/or use is confirmed by legal authorization or other documentary evidence. Examples of boat slips include, but are not limited to, docks or piers, marinas, boat ramps and associated trailer parking spaces, boat lifts, floats, floating docks, pilings, boat davits, dry storage, etc.

Critical habitat – For listed species, this consists of: (1) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of the Endangered Species Act (ESA), on which are found those physical or biological features (constituent elements) (a) essential to the conservation of the species and (b) which may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the ESA, upon a determination by the Secretary that such areas are essential for the conservation of the species. Designated critical habitats are described in 50 CFR 17 and 50 CFR 226.

Currently serviceable – Currently, serviceable means usable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects – The direct or immediate effects of the project on the species or its habitat.

Dredging – For the purposes of this key, the term dredging refers to all in-water work associated with dredging operations, including mobilization and demobilization activities that occur in water or require vessels.

Emergent vegetation – Rooted emergent vascular macrophytes such as, but not limited to, cordgrass (*Spartina alterniflora and S. patens*), needle rush (J*uncus roemerianus*), swamp sawgrass (*Cladium mariscoides*), saltwort (*Batis maritima*), saltgrass (*Distichlis spicata*), and glasswort (*Salicornia virginica*) found in coastal salt marsh-related habitats (tidal marsh, salt marsh, brackish marsh, coastal marsh, coastal wetlands, tidal wetlands).

Formal consultation – A process between the Services and a Federal agency or applicant that: (1) determines whether a proposed Federal action is likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat; (2) begins with a Federal agency's written request and submittal of a complete initiation package; and (3) concludes with the issuance of a biological opinion and incidental take statement by either of the Services. If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required (except when the Services concur, in writing, that a proposed

action "is not likely to adversely affect" listed species or designated critical habitat). [50 CFR 402.02, 50 CFR 402.14]

Important manatee areas (IMA) – Areas within certain counties where increased densities of manatees occur due to the proximity of warm water discharges, freshwater discharges, natural springs and other habitat features that are attractive to manatees. These areas are heavily utilized for feeding, transiting, mating, calving, nursing or resting as indicated by aerial survey data, mortality data and telemetry data. Some of these areas may be federally-designated sanctuaries or state-designated "seasonal no entry" zones. Maps depicting important manatee areas and any accompanying text may contain a reference to these areas and their special requirements. Projects proposed within these areas must address their special requirements.

Indirect effects – Those effects that are caused by or will result from the proposed action and are later in time, but are still reasonably certain to occur. Examples of indirect effects include, but are not limited to, changes in water flow, water temperature, water quality (*e.g.*, salinity, pH, turbidity, nutrients, chemistry), prop dredging of seagrasses, and manatee watercraft injury and mortality. Indirect effects also include watercraft access developments in waters not currently accessible to manatees, but watercraft access can, is, or may be planned to waters accessible to manatees by the addition of a boat lift or the removal of a dike or plug.

Informal consultation – A process that includes all discussions and correspondence between the Services and a Federal agency or designated non-Federal representative, prior to formal consultation, to determine whether a proposed Federal action may affect listed species or critical habitat. This process allows the Federal agency to utilize the Services' expertise to evaluate the agency's assessment of potential effects or to suggest possible modifications to the proposed action which could avoid potentially adverse effects. If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required (except when the Services concur, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat). [50 CFR 402.02, 50 CFR 402.13]

In-water activity – Any type of activity used to construct/repair/replace any type of in-water structure or fill; the act of dredging.

In-water structures – watercraft access structures – Docks or piers, marinas, boat ramps, boat slips, boat lifts, floats, floating docks, pilings (depending on use), boat davits, etc.

In-water structures – other than watercraft access structures – Bulkheads, seawalls, riprap, groins, boardwalks, pilings (depending on use), etc.

Is likely to adversely affect – The appropriate finding in a biological assessment (or conclusion during informal consultation) if any adverse effect to listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions and the effect is not: discountable, insignificant, or beneficial (see definition of "is not likely to adversely affect"). An "is likely to adversely affect" determination requires the initiation of formal consultation under section 7 of the ESA.

Is not likely to adversely affect – The appropriate conclusion when effects on listed species are expected to be discountable, insignificant, or completely beneficial. **Discountable effects** are those extremely unlikely to occur. **Insignificant effects** relate to the size of the impact and should never reach the scale where take occurs. **Beneficial effects** are contemporaneous positive effects without any adverse effects to the species. Based on best judgment, a person would not (1) be able to meaningfully measure, detect, or evaluate insignificant effects or (2) expect discountable effects to occur.

Manatee Protection Plan (MPP) – A manatee protection plan (MPP) is a comprehensive planning document that addresses the long-term protection of the Florida manatee through law enforcement, education, boat facility siting, and habitat protection initiatives. Although MPPs are primarily developed by the counties, the plans are the product of extensive coordination and cooperation between the local governments, the FWC, the Service, and other interested parties.

Manatee Protection Plan thresholds – The smallest size of a multi-slip facility addressed under the purview of a Manatee Protection Plan (MPP). For most MPPs, this threshold is five slips or more. For Brevard, Clay, Citrus, and Volusia County MPPs, this threshold is three slips or more.

Mangroves – Rooted emergent trees along a shoreline that, for the purposes of this key, include red mangrove (*Rhizophora mangle*), black mangrove (*Avicennia germinans*) and white mangrove (*Laguncularia racemosa*).

May affect – The appropriate conclusion when a proposed action may pose <u>any</u> effects on listed species or designated critical habitat. When the Federal agency proposing the action determines that a "may affect" situation exists, then they must either request the Services to initiate formal consultation or seek written concurrence from the Services that the action "is not likely to adversely affect" listed species. For the purpose of this key, all "may affect" determinations equate to "likely to adversely affect" and Corps Project Managers should request the Service to initiate formal consultation on the manatee or designated critical habitat. **No effect** – the appropriate conclusion when the action agency determines its proposed action will not affect a listed species or designated critical habitat.

Multi-slip facility – Multi-slip facilities include commercial marinas, private multi-family docks, boat ramps and associated trailer parking spaces, dry storage facilities and any other similar structures or activities that provide access to the water for multiple (five slips or more, except in Brevard, Clay, Citrus, and Volusia counties where it is three slips or more) watercraft. In some instances, the Corps and the Service may elect to review multiple residential dock facilities as a multi-slip facility.

New access for watercraft – New dredging and the addition, expansion or improvement of structures such as, but not limited to, docks or piers, marinas, boat ramps and associated trailer parking spaces, boat lifts, pilings, floats, floating docks, floating vessel platforms, (residential boat lifts, pilings, floats, and floating vessel platforms installed in existing slips are not considered new access), boat slips, dry storage, mooring buoys, etc., that facilitates the addition of watercraft to, and/or increases watercraft usage in, waters accessible to manatees.

Observers – During dredging and other in-water operations within manatee accessible waters, the standard manatee construction conditions require all on-site project personnel to watch for manatees to ensure that those standard manatee construction conditions are met. Within important manatee areas (IMA) and under special circumstances, heightened observation is needed. **Dedicated Observers** are those having some prior experience in manatee observation, are dedicated only for this task, and must be someone other than the dredge and equipment operators/mechanics. **Approved Observers** are dedicated observers who also must be approved by the Service (if Federal permits are involved) and the FWC (if state permits are involved), prior to work commencement. Approved observers typically have significant and often project-specific observational experience. Documentation on prior experience must be submitted to these agencies for approval and must be submitted a minimum of 30 days prior to work commencement. When dedicated or approved observers are required, observers must be on site during all in-water activities, and be equipped with polarized sunglasses to aid in manatee observation. For prolonged in-water operations, multiple observers may be needed to perform observation in shifts to reduce fatigue (recommended shift length is no longer than six hours). Additional information concerning observer approval can be found at FWC's web page.

Residential boat lift – A boat lift installed on a residential dock facility.

Residential dock density ratio threshold – The residential dock density ratio threshold is used in the evaluation of multi-slip projects in some counties without a State-approved Manatee Protection Plan and is consistent with 1 boat slip per 100 linear feet of shoreline (1:100) owned by the applicant.

Residential dock facility – A residential dock facility means a private residential dock which is used for private, recreational or leisure purposes for single-family or multi-family residences designed to moor no more than four vessels (except in Brevard, Clay, Citrus, and Volusia counties which allow only two vessels). This also includes normal appurtenances such as residential boat lifts, boat shelters with open sides, stairways, walkways, mooring pilings, dolphins, etc. In some instances, the Corps and the Service may elect to review multiple residential dock facilities as a multi-slip facility.

Submerged aquatic vegetation (SAV) – Rooted, submerged, aquatic plants such as, but not limited to, shoal grass (*Halodule wrightii*), paddle grass (*Halophila decipiens*), star grass (*Halophila engelmanni*), Johnson's seagrass (*Halophila johnsonii*), sago pondweed (*Potamogeton pectinatus*), clasping-leaved pondweed (*Potamogeton perfoliatus*), widgeon grass (*Ruppia maritima*), manatee grass (*Syringodium filiforme*), turtle grass (*Thalassia testudinum*), tapegrass (*Vallisneria americana*), and horned pondweed (*Zannichellia palustris*).

Warm Water Aggregation Areas (WWAAs) and **No Entry Areas** – Areas within certain counties where increased densities of manatees occur due to the proximity of artificial or natural warm water discharges or springs and are considered necessary for survival. Some of these areas may be federally-designated manatee sanctuaries or state-designated seasonal "no entry" manatee protection zones. Projects proposed within these areas may require consultation in order to offset expected adverse impacts. In addition, special permits may be required from the FWC in order to access these areas.

Watercraft access structures – Docks or piers, marinas, boat ramps and associated trailer parking spaces, boat slips, boat lifts, floats, floating docks, pilings, boat davits, dry storage, etc.

Waters accessible to manatees – Although most waters of the State of Florida are accessible to the manatee, there are some areas such as landlocked lakes that are not. There are also some weirs, salinity control structures and locks that may preclude manatees from accessing water bodies. If there is any question about accessibility, contact the Service or the FWC.

WOOD STORK DETERMINATION KEY

South Florida (05/18/2010)

A. Project within 0.76 km (0.47 mile)[2] of an active colony site[3] "*may affect*[4]"

Project impacts Suitable Foraging Habitat (SFH) ~ at a location greater than 0.76 km (0.47 mile) from a colony site go to B"

NOTE: ACTIVITE COLONY IS APPROXIMATELY 18.6 MILES AWAY

Project does not affect SFH……."no effect1".

B. Project impact to SFH is less than 0.20 hectare (one-half acre)[6]……NLAA[1]"

Project impact to SFH is greater in scope than 0.20 hectare (one-half acre) ……go to C

C. Project impacts to SFH not within the CFA (29.9 km, 18.6 miles) of a colony site ……go to D

Project impacts to SFH within the CFA of a colony site ……. go to E

D. Project impacts to SFH have been avoided and minimized to the extent practicable; compensation (Service approved mitigation bank or as provided in accordance with Mitigation Rule 33 CFR Part 332) for unavoidable impacts is proposed in accordance with the CWA section 404(b)(1) guidelines; and habitat compensation replaces the foraging value matching the hydroperiod[7] of the wetlands affected and provides foraging value similar to, or higher than, that of impacted wetlands. See Enclosure 3 for a detailed discussion of the hydroperiod foraging values, an example, and further guidance[8]…….. NLAA[1]"

Project not as above…….. "*may affect*[4]"

E. Project provides SFH compensation in accordance with the CWA section 404(b)(1) guidelines and is not contrary to the HMG; habitat compensation is within the appropriate CFA or within the service area of a Service-approved mitigation bank; and habitat compensation replaces foraging value, consisting of wetland enhancement or restoration matching the hydroperiod[7] of the wetlands affected, and provides foraging value similar to, or higher than, that of impacted wetlands. See Enclosure 3 for a detailed discussion of the hydroperiod foraging values, an example, and further guidance[8] …… "NLAA[1]"

Project does not satisfy these elements "may affect[4]"

---

[1] With an outcome of "no effect" or "NLAA" as outlined in this key, and the project has less than 20.2 hectares (50 acres) of wetland impacts, the requirements of section 7 of the Act are fulfilled for the wood stork and no further action is required. For projects with greater than 20.2 hectares (50 acres) of wetland impacts, written concurrence of NLAA from the Service is necessary.

[2] Within the secondary zone (the average distance from the border of a colony to the limits of the secondary zone is 0.76 km (2,500 feet, or 0.47 mi).

[3] An active colony is defined as a colony that is currently being used for nesting by wood storks or has historically over the last 10 years been used for nesting by wood storks.

[4] Consultation may be concluded informally or formally depending on project impacts.

[5] Suitable foraging habitat (SFH) includes wetlands that typically have shallow-open water areas that are relatively calm and have a permanent or seasonal water depth between 5 to 38cm (2 to 15 inches) deep. Other shallow non-wetland water bodies are also SFH. SFH supports and concentrates, or is capable of supporting and concentrating small fish, frogs, and other aquatic prey. Examples of SFH include, but are not limited to freshwater marshes, small ponds, shallow, seasonally flooded roadside or agricultural ditches, seasonally flooded pastures, narrow tidal creeks or shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs.

[6] On an individual basis, SFH impacts to wetlands less than 0.20 hectare (one-half acre) generally will not have a measurable effect on wood storks, although we request that the Corps require mitigation for these losses when appropriate. Wood storks are a wide-ranging species, and individually, habitat change from impacts to SFH less than one-half acre are not likely to adversely affect wood storks. However, collectively they may have an effect and therefore regular monitoring and reporting of these effects are important.

[7] Several researchers (Flemming et al. 1994; Ceilley and Bortone 2000) believe that the short hydroperiod wetlands provide a more important pre-nesting foraging food source and a greater early nestling survivor value for wood storks than the foraging base (grams of fish per square meter) than long hydroperiod wetlands provide. Although the short hydroperiod wetlands may provide less fish, these prey bases historically were more extensive and met the foraging needs of the pre-nesting storks and the early-age nestlings. Nest productivity may suffer as a result of the loss of short hydroperiod wetlands. We believe that most wetland fill and excavation impacts permitted in south Florida are in short hydroperiod wetlands. Therefore, we believe that it is especially important that impacts to these short hydroperiod wetlands within CFAs are avoided, minimized, and compensated for by enhancement/restoration of short hydroperiod wetlands.

[8] For this Key, the Service requires an analysis of foraging prey base losses and enhancements from the proposed action as shown in the examples in Enclosure 3 for projects with greater than 2.02 hectares (5 acres) of wetland impacts. For projects with less than 2.02 hectares (5 acres) of wetland impacts, an individual foraging prey base analysis is not necessary although type for type wetland compensation is still a requirement of the Key.

This Key does not apply to Comprehensive Everglades Restoration Plan projects, as they will require project-specific consultations with the Service.

Consultation Key for the Eastern Indigo Snake

Revised August 1, 2017

A. Project is not located in open water or salt marsh……go to B

Project is located solely in open water or salt marsh……**no effect**

B. Permit will be conditioned for use of the Service's most current guidance for Standard Protection Measures For The Eastern Indigo Snake (currently 2013) during site Preparation and project Construction……go to C

Permit will not be conditioned as above for the eastern indigo snake, or is not known Whether an applicant intends to use these measures and consultation with the Service is Requested…… **may effect**

C. The project will impact less than 25 acres of eastern indigo snake habitat (e.g. sandhill, scrub, pine flatwoods, pine rocklands, scrubby flatwoods, high pine, dry prairie, coastal prairie, mangrove swamps, tropical hardwood hammocks, hydric hammocks, edges of freshwater marshes, agricultural fields [including sugar cane fields and active, inactive, or abandoned citrus groves], and coastal dunes) …… go to D

The project will impact 25 acres or more of eastern indigo snake habitat (e.g. sandhill, scrub, pine flatwoods, pine rocklands, scrubby flatwoods, high pine, dry prairie, coastal prairie, mangrove swamps, tropical hardwood hammocks, hydric hammocks, edges of freshwater marshes, agricultural fields [including sugar cane fields and active, inactive, or abandoned citrus groves], and coastal dunes) …… **May affect**

D. The project has no known holes, cavities, active or inactive gopher tortoise burrows, or Other underground refugia where a snake could be buried, trapped and/or injured during Project activities…… **NLAA**

The project has known holes, cavities, active or inactive gopher tortoise burrows, or Other underground refugia where a snake could be buried, trapped and/or Injured……go to E

E. Any permit will be conditioned such that all gopher tortoise burrows, active or inactive, Will be excavated prior to site manipulation in the vicinity of the burrow[1]. If an eastern Indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity. Any permit will be conditioned such that holes, cavities, and snake refugia other than gopher tortoise burrows be inspected each morning before planned site manipulation of a particular area, and if occupied by an eastern indigo snake, no work will commence until the snake has vacated the vicinity of proposed work……**NLAA[2]**

Permit will not be conditioned as outlined above…… **may affect**

End Key

---

[1] If excavating potentially occupied burrows, active or inactive, individuals must first obtain authorization via a Florida Fish and Wildlife Conservation Authorized Gopher Tortoise Agent permit. The excavation method selected should also minimize the potential for injury of an indigo snake. Application should follow the excavation guidance provided with the most current Gopher Tortoise Permitting Guidance found at http:/myfwc.com/gophertortoise

[2] Please note: If the proposed project will impact less than 25 acres of vegetated eastern indigo snake habitat (not urban/human-altered) completely surrounded by an urban development, and an eastern indigo snake has been observed on site, NLAA is not the appropriate conclusion. The Service recommend formal consultation for this situation because the expected increased value of the vegetated habitat within the individual's home range.

Appendix B

Site Photos

EW-1 and FW-1

EW-1 and FW-1

FW-2

SW-1

SW-2

SW-3

SW-4

SW-5

SW-6

SW-7

SW-8

SW-9

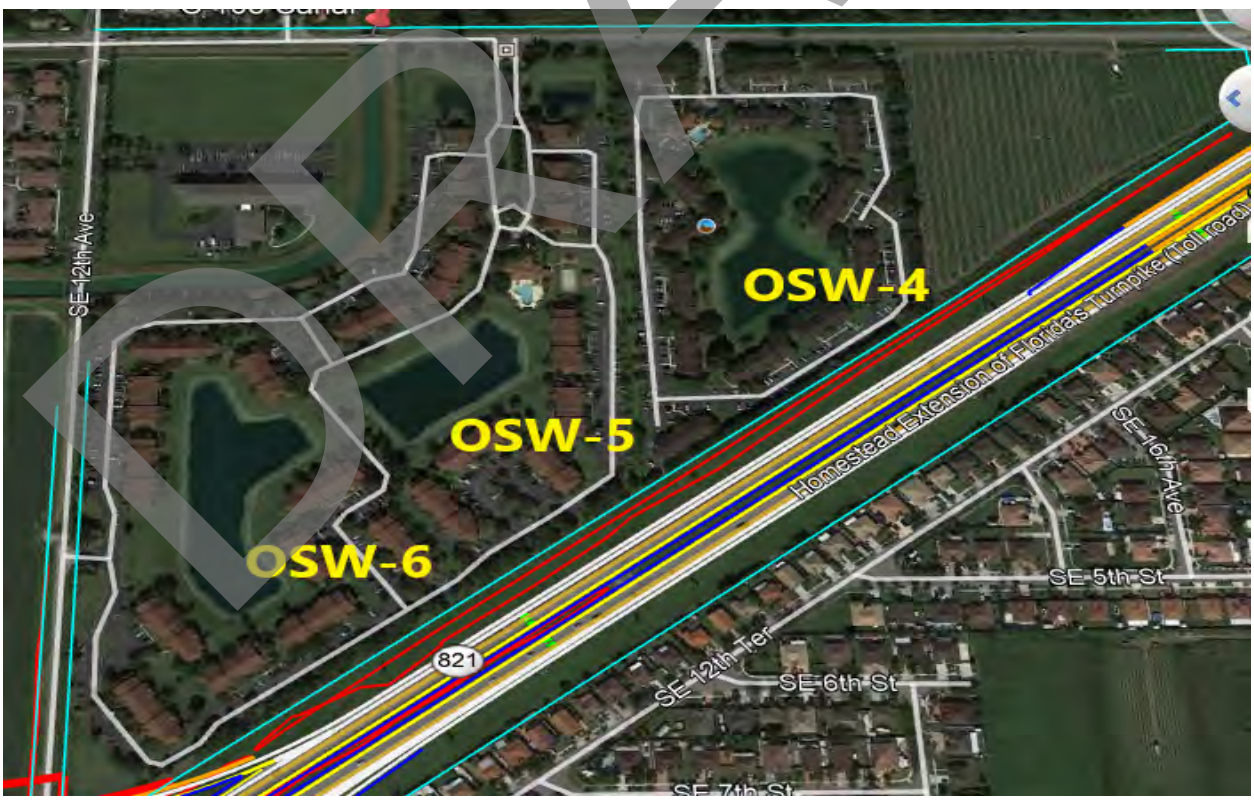
SW-10

SW-11

OWS-1

OSW-2

OSW-3



OSW-4, OSW-5, and OSW-6

OSW-7

OSW-8

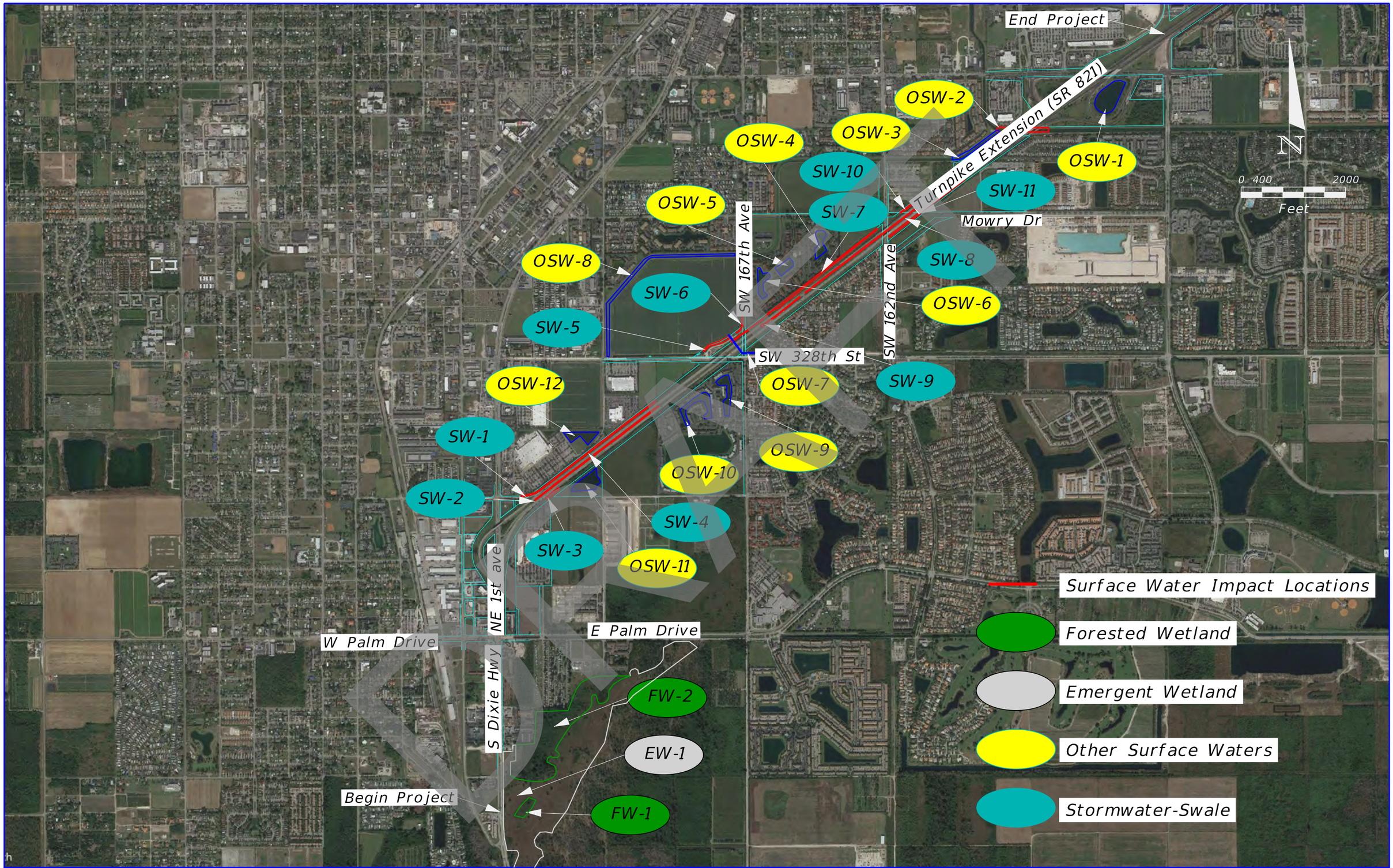
OSW-9 AND 0SW-10

OSW-11

Pine Rockland

Appendix C

Wetlands and Surface Waters Locations Exhibits



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FLORIDA'S TURNPIKE

NATURAL RESOURCES EVALUATION

TURNPIKE EXTENSION (SR821)

BMA CONSULTING ENGINEERING
18503 PINES BLVD, SUITE 210
PEMBROKE PINES, FL 33029

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 821	MIAMI DADE	439545-1-22-01

WETLANDS & SURFACE WATERS LOCATION

SHEET NO. 1 of 7

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FLORIDA'S TURNPIKE	NATURAL RESOURCES EVALUATION	TURNPIKE EXTENSION (SR821)	BMA CONSULTING ENGINEERING 18503 PINES BLVD, SUITE 210 PEMBROKE PINES, FL 33029	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO. / COUNTY / FINANCIAL PROJECT ID SR 821 / MIAMI DADE / 439545-1-22-01	WETLANDS & SURFACE WATERS LOCATION	SHEET NO. 2 of 7

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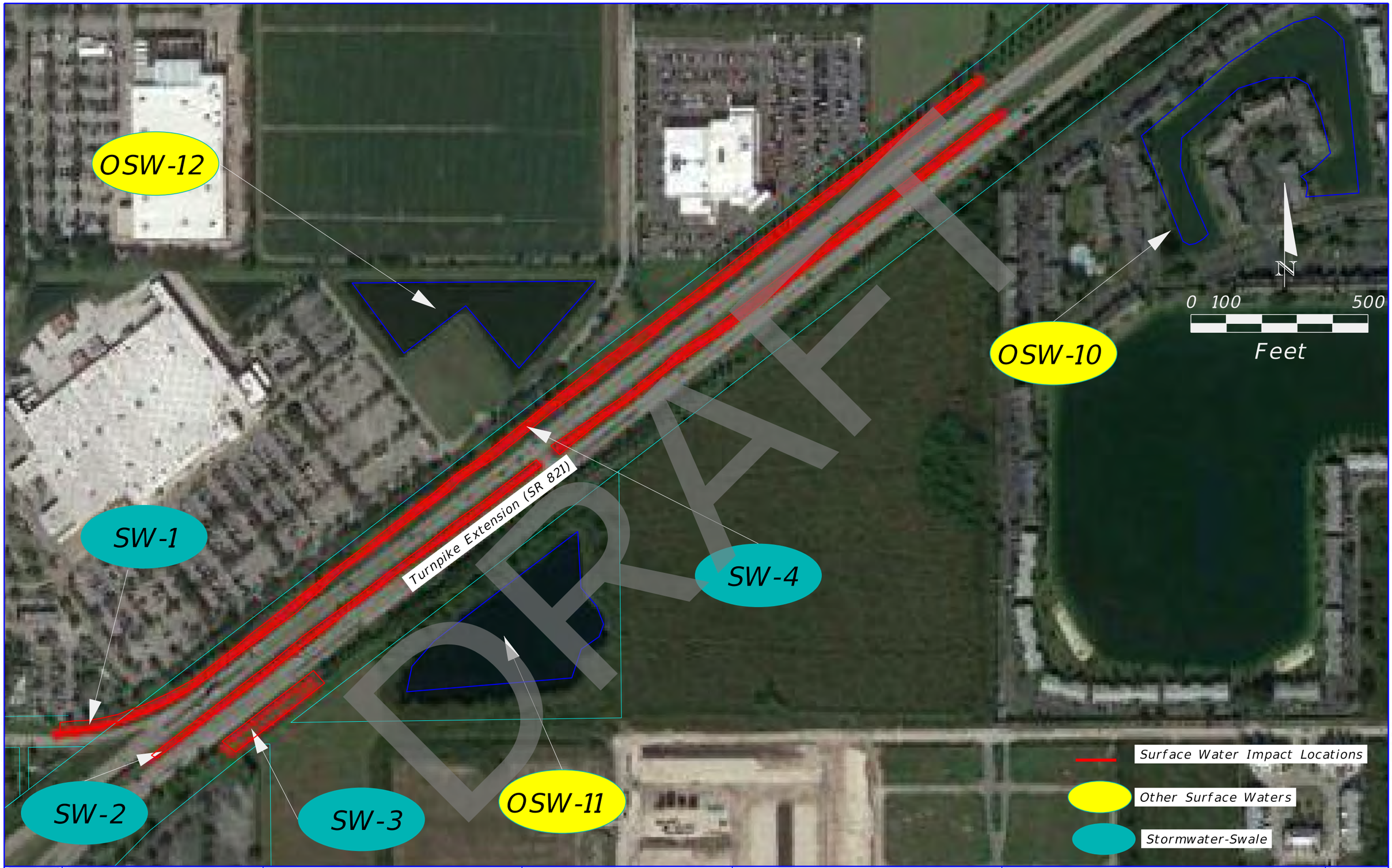
FLORIDA'S TURNPIKE	NATURAL RESOURCES EVALUATION	TURNPIKE EXTENSION (SR821)	BMA CONSULTING ENGINEERING 18503 PINES BLVD, SUITE 210 PEMBROKE PINES, FL 33029	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO. / COUNTY / FINANCIAL PROJECT ID SR 821 / MIAMI DADE / 439545-1-22-01	WETLANDS & SURFACE WATERS LOCATION	SHEET NO. 3 of 7



FLORIDA'S TURNPIKE	NATURAL RESOURCES EVALUATION	TURNPIKE EXTENSION (SR821)	BMA CONSULTING ENGINEERING 18503 PINES BLVD, SUITE 210 PEMBROKE PINES, FL 33029	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			WETLANDS & SURFACE WATERS LOCATION	SHEET NO.
				ROAD NO.	COUNTY	FINANCIAL PROJECT ID		4 of 7
				SR 821	MIAMI DADE	439545-1-22-01		

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FLORIDA'S TURNPIKE

NATURAL RESOURCES EVALUATION

TURNPIKE EXTENSION (SR821)

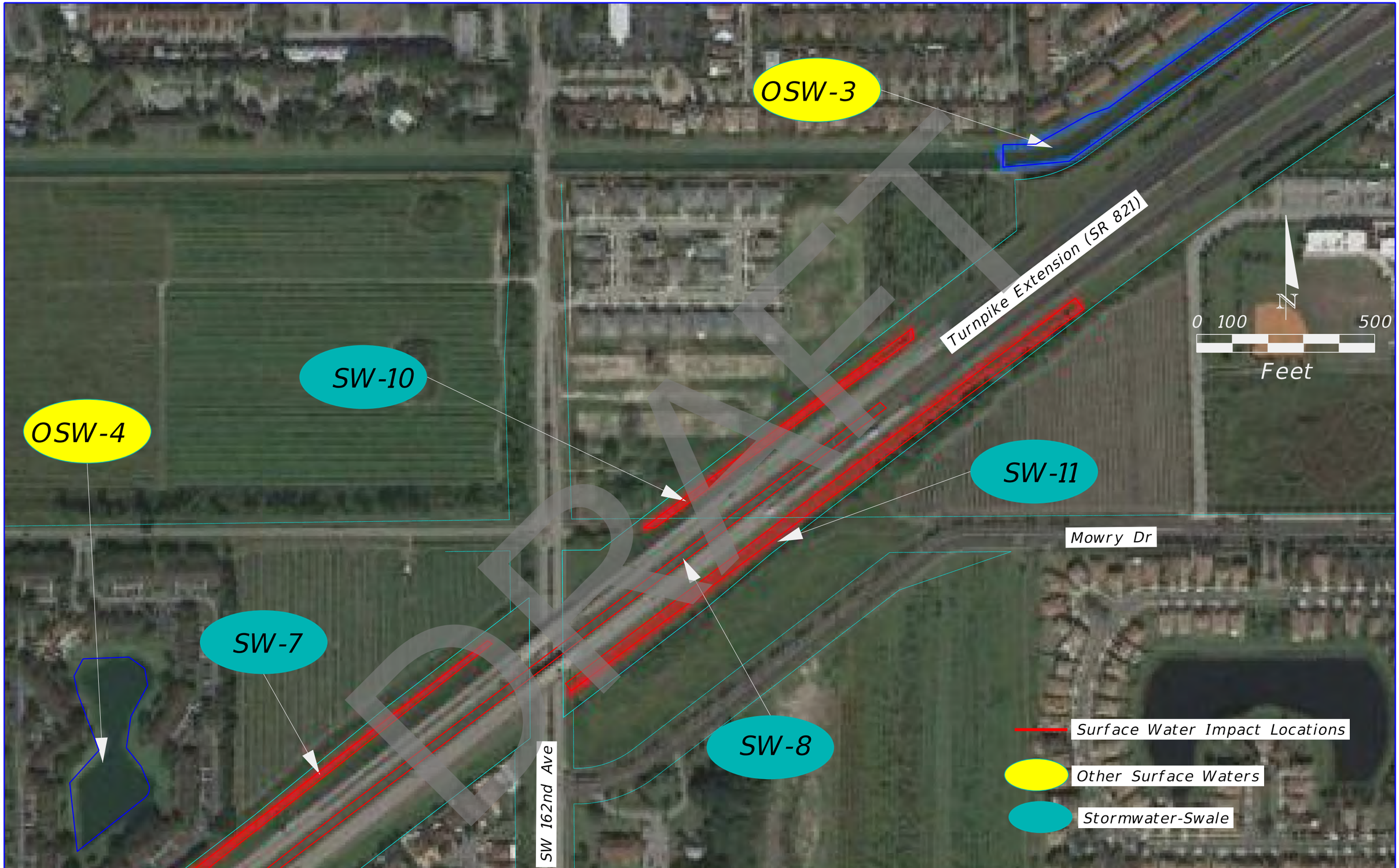
BMA CONSULTING ENGINEERING
18503 PINES BLVD, SUITE 210
PEMBROKE PINES, FL 33029

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 821	MIAMI DADE	439545-1-22-01

WETLANDS & SURFACE WATERS LOCATION

SHEET NO. 5 of 7



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FLORIDA'S TURNPIKE	NATURAL RESOURCES EVALUATION	TURNPIKE EXTENSION (SR821)	BMA CONSULTING ENGINEERING 18503 PINES BLVD, SUITE 210 PEMBROKE PINES, FL 33029	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO. / COUNTY / FINANCIAL PROJECT ID SR 821 / MIAMI DADE / 439545-1-22-01	WETLANDS & SURFACE WATERS LOCATION	SHEET NO. 6 of 7

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FLORIDA'S TURNPIKE	NATURAL RESOURCES EVALUATION	TURNPIKE EXTENSION (SR821)	BMA CONSULTING ENGINEERING 18503 PINES BLVD, SUITE 210 PEMBROKE PINES, FL 33029	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO. / COUNTY / FINANCIAL PROJECT ID SR 821 / MIAMI DADE / 439545-1-22-01	WETLANDS & SURFACE WATERS LOCATION	SHEET NO. 7 of 7

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Appendix D

Correspondence
Interagency Pre-Application Meeting Minutes
USFWS Tech Assistance Meeting Minutes

Stanley Consultants INC.

MEETING NOTES

No. 20200116

Date: January 16, 2020

Place: SFWMD 3301 Gun Club Road, West Palm Beach, FL

Project/Purpose: Interagency Meeting Minutes
Turnpike Extension Widening PD&E Study
(FPID # 439545-1-22-01)
From US 1 South of Palm Drive to Campbell Drive
Miami-Dade County

Attendees: See attached Attendee List

Notes By: Renaud Olivier, PE

The following meeting notes set forth our understanding of the discussions and decisions made at this meeting. If no objections, questions, additions, or comments are received within 5 working days from issuance of the meeting notes, we will assume that our understandings are correct. We are proceeding based on the contents of these meeting notes.

The meeting started at 10:30 with introductions. Attached to these minutes are the attendee list, meeting exhibits and meeting agenda.

ITEM	SUBJECT	DISCUSSION	ACTION
1	Project overview	The project team gave a project overview using the attached exhibits of the location map, proposed roadway typical section, drainage map, US 1 Interchange, Lucy Street Interchange and Campbell Drive Interchange plan aerials.	None
2	Drainage patterns	The project team explained the existing drainage patterns are from west to east and the project bisects or is adjacent to the Florida City Canal Basin, the North Canal Basin and the C-103 Basin.	None
3	Project outfall locations	The project team described the outfalls will be to the Florida City Canal, the C-103S Canal and the C-103 Canal. The existing outfall to the Florida City Canal will remain. The existing outfalls at the C-103S Canal and C-103 will remain. New connections to the C-103 or C-103S Canal are not anticipated.	None
4	Existing permits	The project team described the relevant existing SFWMD permits along the project including: 13-04562-P (US 1 South of Palm Drive) 13-06529-P (Palm Drive/ SW 344 – US 1 to SW 172) 13-05167-S (Lucy Street/ SW 328 Street) 13-01181-P (Campbell Drive Interchange)	None

ITEM	SUBJECT	DISCUSSION	ACTION
5	Work within SFWMD C-103 Right of Way	The project team explained work within the Right of Way will include widening the existing northbound bridge towards the median. The low member elevation will not be reduced. The team requested canal information including: The existing R/W Occupancy permit, the canal design cross section, canal stages, and low member design criteria.	Project team follow up for C-103 Canal information. Beverly Miller stated she would send info. to Fred Gaines.
6	Water Quality	The project team explained that the project will not discharge to any impaired water bodies or outstanding Florida waters. The project will provide water quality volume at 2.5" times the additional impervious area and replace any previously permitted water quality volume that is impacted by the project. SFWMD agreed with this approach.	None
7	Water Quantity	The project team described the project discharge to the Florida City Canal will meet historical pre-condition discharge rate as discussed with Miami-Dade County. The remaining project discharges to the C-103S, C-103 will meet the allowable discharge formula established for these canals. SFWMD agreed with this approach.	None
8	Permits anticipated (ERP)	An Environmental Resource Permit (ERP) is required. SFWMD requested a new ERP be submitted for the project.	None
9	Exfiltration Trench Design	Exfiltration trench will be designed to allow exfiltration throughout the storm event. A variable tailwater elevation boundary condition will be used. SFWMD agreed with this approach.	None
10	Permits anticipated Right of Way Occupancy (SFWMD, C-103)	A Right of Way occupancy permit modification is required for work in/over the C-103 Canal.	None
11	Permits anticipated (Section 408)	The C-103 is a C&SF canal. A USACE Section 408 review is required. At this point in time, SFWMD estimated the review time for this permit to be 2-4 months and we should expect a long review process. Cynthia Austin (USACE) requested to keep her informed with all coordination that occurs with John Rublic (FWS) and Teri Swartz (SFWMD).	Reminder. USACE Section 404 permit must be in for the Section 408 to be reviewed.
12	Permits anticipated (Section 404)	A USACE Section 404 permit is required for dredge and fill activities. Dredge and fill activities are anticipated in the C-103 and the other surface waters along the project.	None
13	Permits anticipated NPDES (SWPPP)	A Stormwater Pollution Prevention Plan will be developed for the project.	None

ITEM	SUBJECT	DISCUSSION	ACTION
14	Permits anticipated Dewatering (Miami-Dade County)	A Water Use permit will be determined during the design phase. If dewatering, a SFWMD Water Use permit is required. SFWMD stated if dewatering within 1/4 mile of a known contamination site, then a Class V permit from Miami-Dade County is also required and needed for the SFMWD WU permit. If dewatering beyond 1/4 mile of a known contamination site, then only a SFWMD WU permit is required. Dewatering < 1 year considered short term dewatering, otherwise it is considered long term dewatering.	None
15	Permits anticipated R/W Occupancy (Miami-Dade County)	A Class III permit from Miami-Dade County is anticipated if work occurs within canal right of way. SFWMD reminded the team for proposed work outside FTE/FDOT right of way, then proof of ownership is required or a permit (i.e. Class III permit SFWMD ERP is issued / before construction can commence.	Project team to confirm Miami Dade County right of way "extents" at the Palm Drive / US 1 intersection.
16	Environmental Wetlands	The only forested or emergent wetlands are located at the beginning of the project. Some stormwater swale wetland impacts are anticipated for the Turnpike mainline swales and median. No forested or emergent wetland impacts are anticipated. Mitigation is not anticipated for this project. SFWMD and USACE agreed.	None
17	Environmental Species	There is one (1) identified wood stork core forging area within 18.6 miles of the study area. There is also a Pine Rockland area identified on Campbell Drive which is home to the Miami Tiger Beetle. No involvement is anticipated for species. Millie spoke with Tim Joyner from Miami-Dade County Environmental Resources Management on October 10, 2018. The project shouldn't impact the pine Rockland and that an easement would be needed for maintenance.	None
18	Environmental Contamination	There are five (5) gas stations located on US 1 south of Palm Drive. If dewatering occurs within a ¼ mile of known contamination a DERM Class V permit will be needed with Miami-Dade County.	Project team to identify in design if dewatering is needed.
19	Environmental Look Around (ELA) Questions	The project team initiated the ELA with Agency staff requesting their review of the five questions listed on the attached agenda. SFWMD mentioned to consider the re-use of stormwater from any wet ponds for irrigation purposes.	Follow up with Agencies for responses, if any.

Distribution:

All Attendees

MEETING AGENDA

SFWMD Meeting

PROJECT:	**TPK EXT Widening PD&E Study (FPID#: 439545-1-22-01)** **From US 1 S. of Palm Drive to Campbell Drive** Miami-Dade County
MEETING DATE:	January 16, 2020
MEETING TIME:	10:30 am – 11:15 am
LOCATION:	SFWMD 3301 Gun Club Road West Palm Beach, Florida 33406 Location: B-1 Richard Rogers Conf Rm
CONFERENCE CALL NUMBER:	**(561) 682-6800** (WPB Local Number) **(855) 682-6800** (Toll Free Nationwide)
ACCESS CODE:	994 769 479
CONSULTANT	Stanley Consultants, Inc
SUB-CONSULTANTS	Arcadis-US, Inc.; BMA Consulting Engineering, Inc.; GCME, Inc.; Glass Land Acquisition Service Specialist, Inc.; I.F. Rooks & Associates, INC.; Janus Research; Quest Corporation for America; Wantman group, Inc.; Bentley Architects & Engineers, Inc.; Sims Wilkerson Cartier Engineer
EOR ROADWAY	Cyndy Kendrick, PE
PROJECT MANAGER	Bill Evans, PE, AICP / Arcadis-US, Inc

1. **Introductions**
2. **Project Overview**
    a. Turnpike widening from 4 lanes to 6 lanes, improve US 1 interchange, add Lucy Street interchange and minor ramp improvements at Campbell Drive.
    b. Design funded for 2021/2022
3. **Drainage Approach**
    a. Drainage basins, flow patterns and outfall locations (canals)
    b. Existing Permits

Permit Number	Location
13-04562-P	US 1 south of Palm Drive for auxiliary lanes
13-06529-P	Palm Drive/ SW 344th Street
13-05167-S	Lucy Street/SW 328th Street
1301181-P	Campbell Drive Interchange – modify for this project

    c. Proposed drainage concept
        - Water quality
        - Water quantity

d. Permits anticipated

- SFWMD Permit Modification to ERP No. 1301181-P
- SFWMD R/W Occupancy Modification for work over/in the C-103
- USACE Section 404 Dredge and Fill in C-103 (SAJ 92 Permit Nationwide 14)
- USACE Section 408 for work in C-103
- NPDES (SWPPP)
- Dewatering (confirmed in design phase)

4. <u>Environment</u>

a. Contamination
b. Existing Wetlands and Other Surface Water Locations
c. Species

2. <u>Environmental Look Around Questions:</u>

A. Do you know of any wetlands near the project that can benefit from treated stormwater runoff (rehydration)?
B. Do you know of any areas near the project site that need water? For instance, re-use water for irrigation purposes?
C. Do you know of any regional stormwater treatment areas that the project could benefit from?
D. Do you know if there are any SFWMD lands that could be used to obtain select fill material for the project?
E. Do you know of any adjacent projects that could benefit from joint use water management facilities?

FDOT Interagency Meeting – January 16, 2020

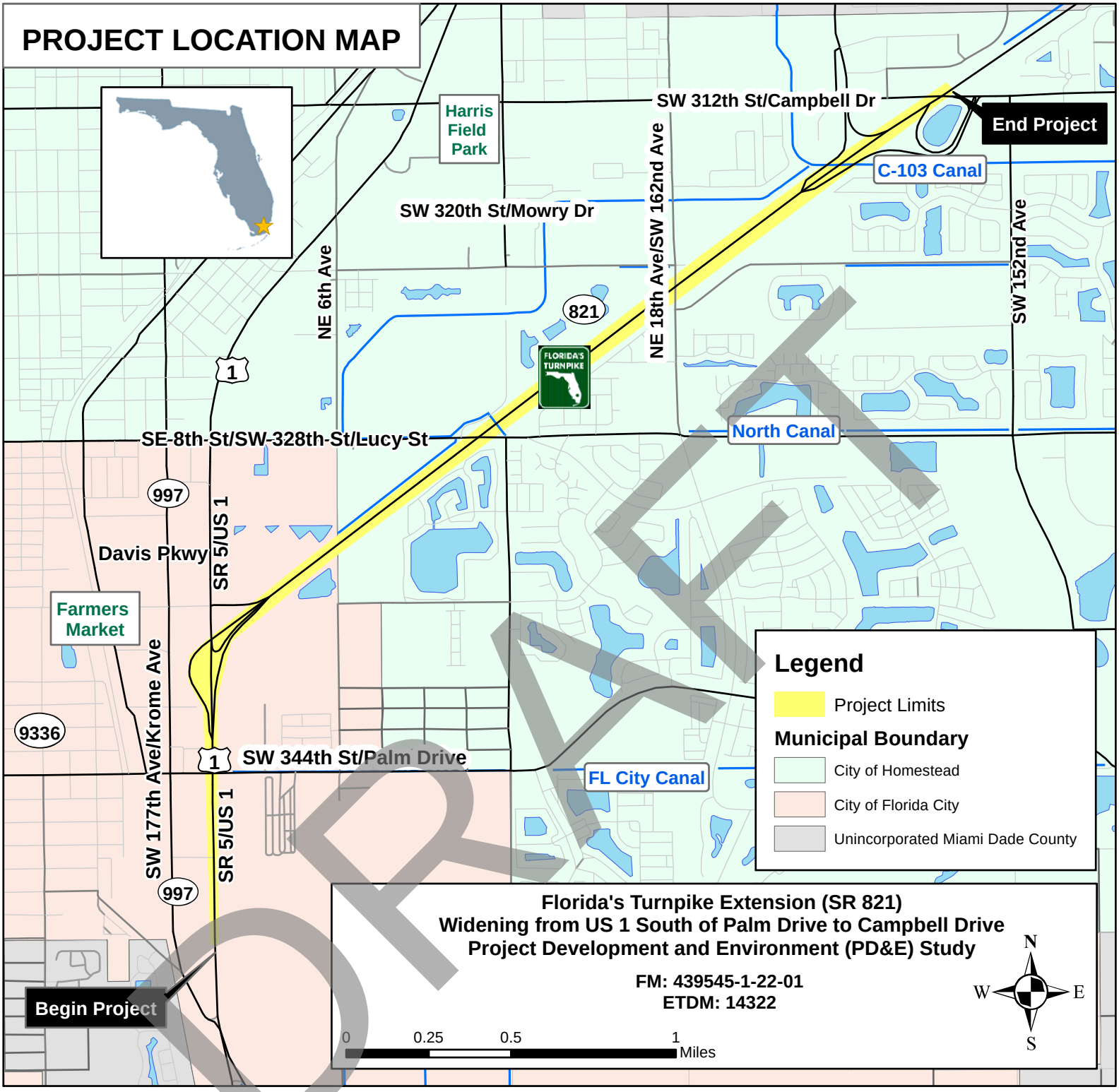
10:30 to 11:15 AM: 439545-1 PD&E Widen HEFT (SR821) from US 1 south of Palm Drive to Campbell Drive (MP 0 to MP 2), Miami-Dade County.

Dylan Larson	Miller Legg	954 434 7100	dlarson@millerlegg.com
Jesse Markle	SFWMD	(561) 682-6274	JMARKLE@sfwmd.gov
Beverly Miller	SFWMD	561-682-6979	BMILLER@SFWMD.GOV
Matt Bolton	SFWMD		MBolton@SFWMD.gov
Nicholas Vitani	SFWMD	561-682-2133	NVitani@SFWMD.gov
Teri Swartz	SFWMD	561-682-2505	tswartz@sfwmd.gov
Ann Marie Hammond	TURNPIKE	via phone	
Jaclyn Heywood	turnpike / atkins	via phone	
Mark Tamblyn	USACOE	via phone	
Cynthia Austin	USACOE	via phone	
Caroline Haines	SFWMD	561-682-6856	chaines@sfwmd.gov

FDOT Interagency Meeting – January 16, 2020

10:30 to 11:15 AM: 439545-1 PD&E Widen HEFT (SR821) from US 1 south of Palm Drive to Campbell Drive (MP 0 to MP 2), Miami-Dade County.

Linda Hess	Stanley Consultants	561 584-8744	HessLinda@StanleyGroup.com
Jesse Mackie	SFWMD	(561) 682-6274	JMACKIE@SFWMD.GOV
Renaud Olivier	Stanley Consultants	561 689-7444	olivierrenaud@stanleygroup.com
Millie Radziszewsky	BMA CE	954-744-4691	mradziszewsky@bma-ce.com
William T Evans	ARCADIS	561 352 5662	William.Evans@ARCADIS.com
Fred Gaines	Atkins (FTE)	407 264 3689	fred.gaines@dot.state.fl.us


PROJECT LOCATION MAP
Harris Field Park
SW 312th St/Campbell Dr
End Project
C-103 Canal
SW 320th St/Mowry Dr
NE 6th Ave
NE 18th Ave/SW 162nd Ave
SW 152nd Ave
821
FLORIDA'S TURNPIKE
1
SE-8th-St/SW-328th-St/Lucy-St
North Canal
997
Davis Pkwy
SR 5/US 1
Farmers Market
9336
SW 177th Ave/Krome Ave
SW 344th St/Palm Drive
FL City Canal
Begin Project
Legend
Project Limits
Municipal Boundary
City of Homestead
City of Florida City
Unincorporated Miami Dade County
Florida's Turnpike Extension (SR 821)
Widening from US 1 South of Palm Drive to Campbell Drive
Project Development and Environment (PD&E) Study
FM: 439545-1-22-01
ETDM: 14322
0 0.25 0.5 1 Miles
N
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E
S
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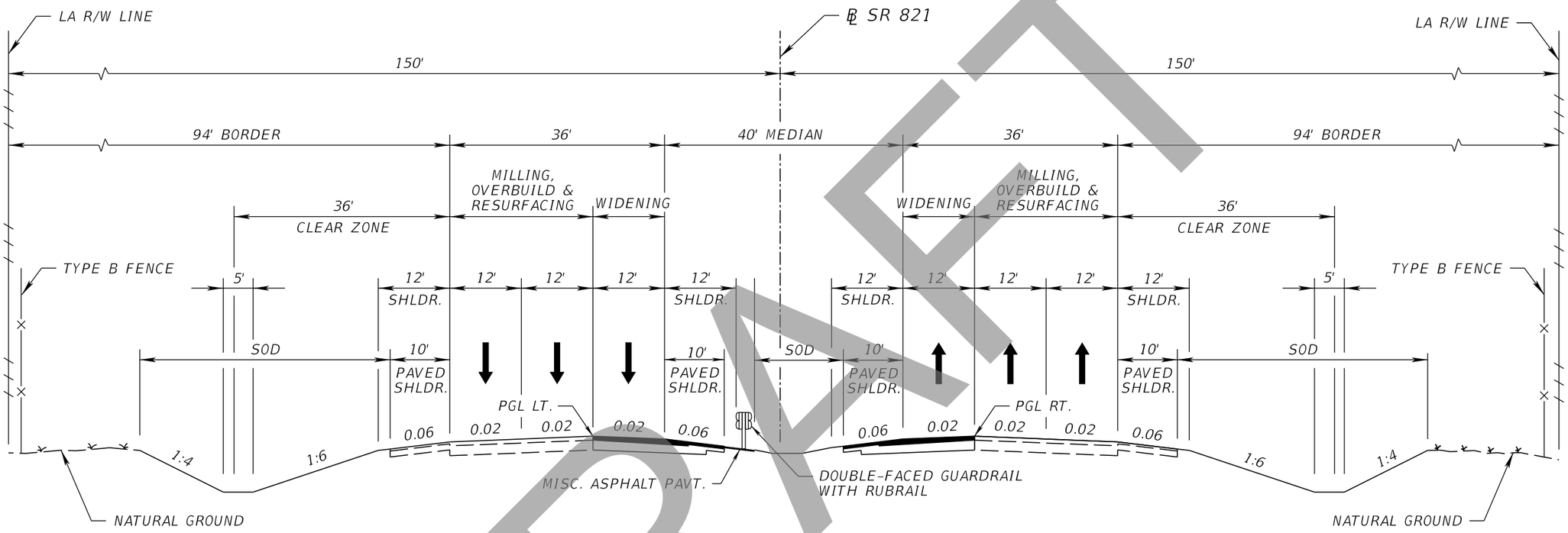

TYPICAL SECTION (6 GU LANES)

SR 821 – INSIDE WIDENING – 1 IN/2 OUT

MP 0.538 TO MP 3.055

TRAFFIC DATA

CURRENT YEAR = 2019 AADT = XX,XXX
ESTIMATED OPENING YEAR = 2025 AADT = XX,XXX
ESTIMATED DESIGN YEAR = 2045 AADT = XX,XXX
K = X.X% D = XX.X% T = X.X% (24 HOUR)
DESIGN HOUR T = X.X%
DESIGN SPEED = 65 MPH
POSTED SPEED = 65 MPH
NO DESIGN EXCEPTIONS/VARIATIONS NEEDED

DRAFT
2019-06-06

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Stanley Consultants, Inc.
1641 Worthington Road, Suite 400
West Palm Beach, FL 33409
Certificate of Authorization No. 1978
www.stanleygroup.com

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 821	MIAMI-DADE	439545-1-22-01

TYPICAL SECTION - ALT 3

SHEET NO. 3

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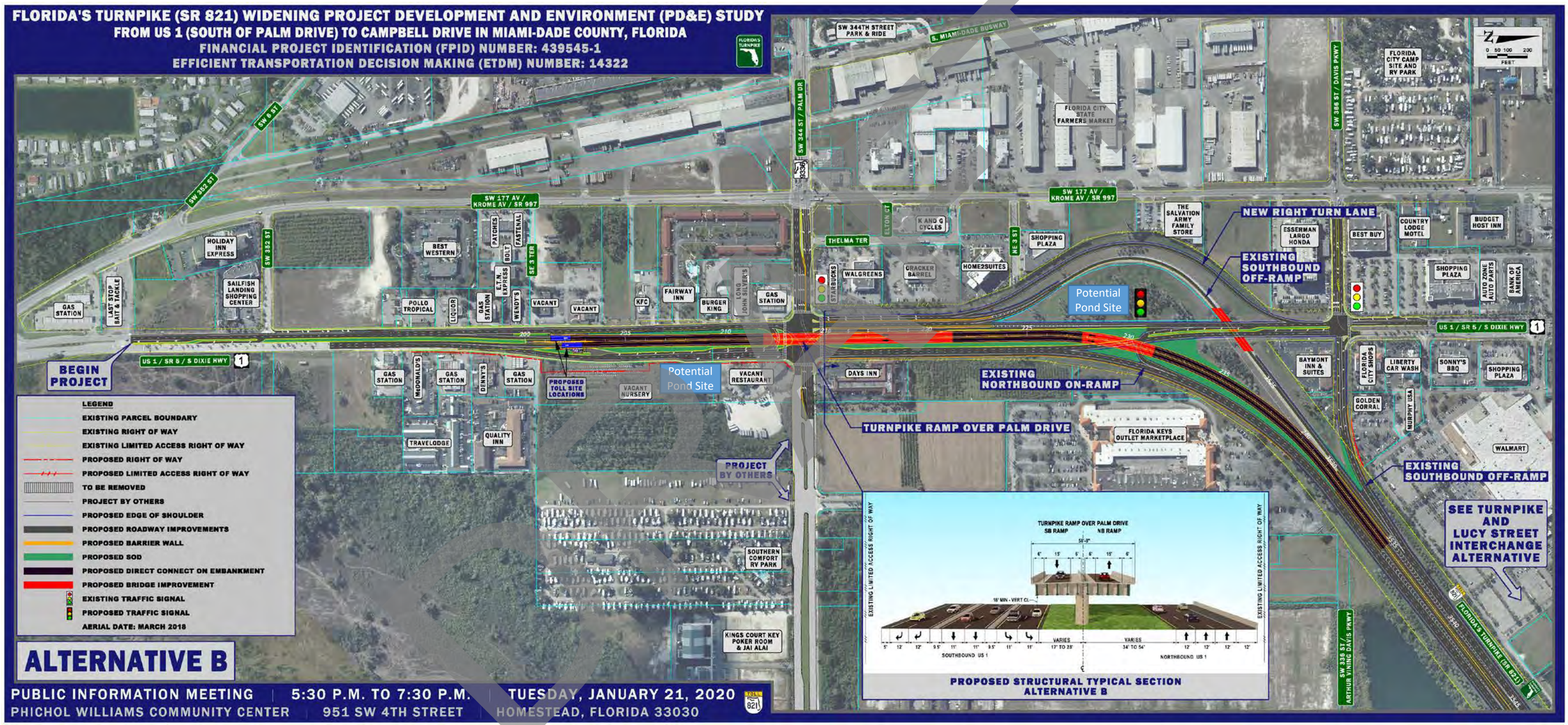
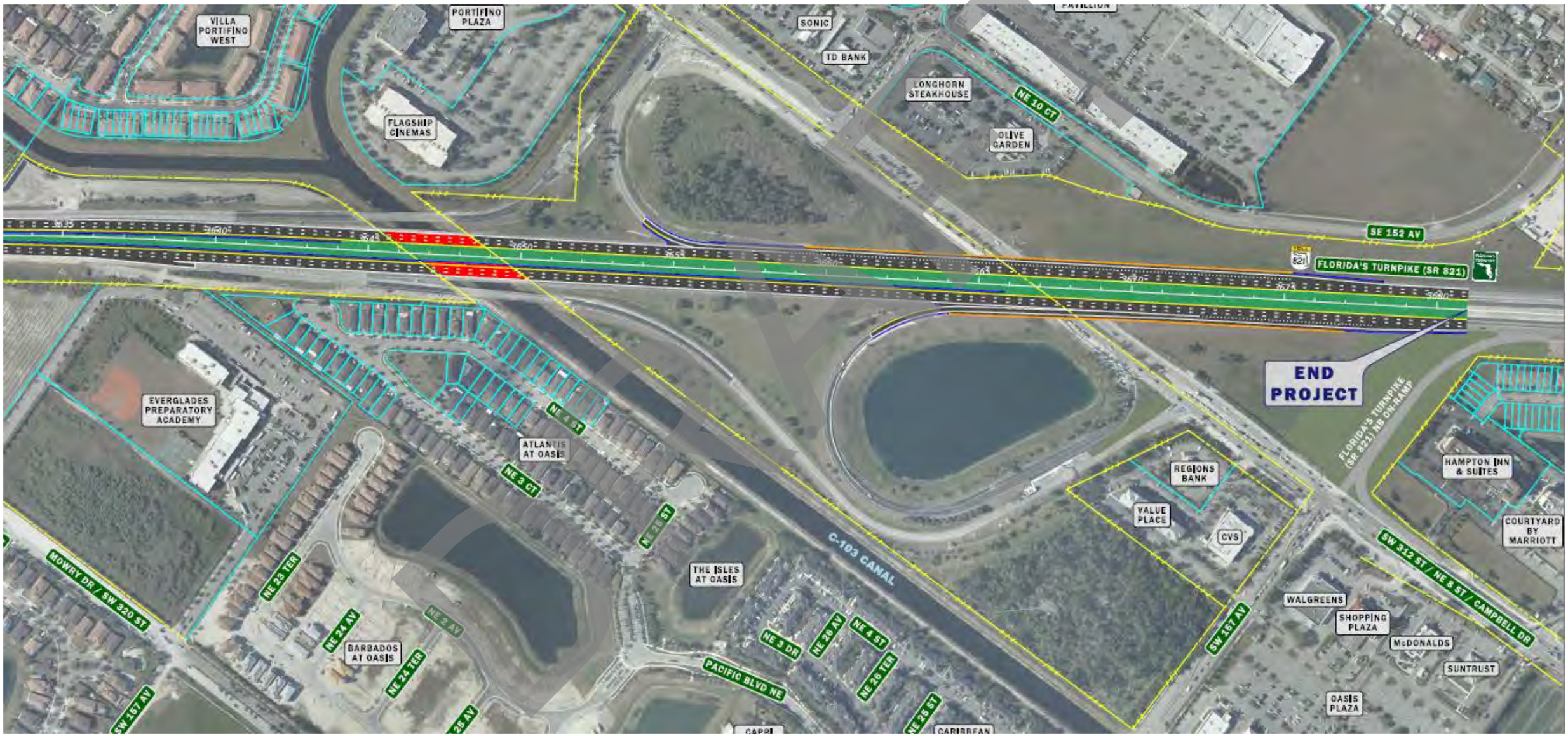
US 1 Interchange

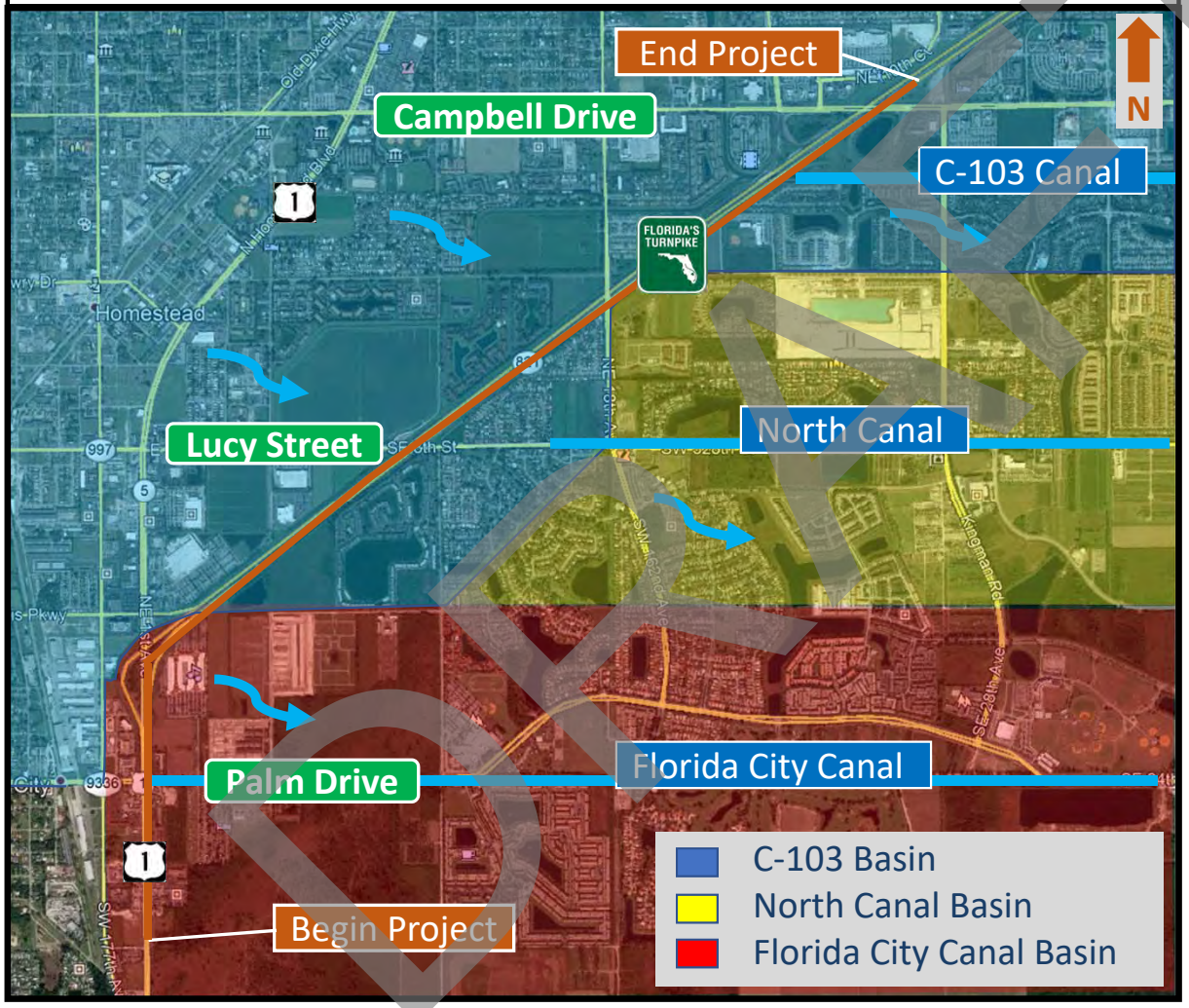


Lucy Street Interchange

Campbell Drive Interchange



Florida's Turnpike Extension (from South of Palm Drive to Campbell Drive)
FPID 439545-1-22-01
Drawing Map



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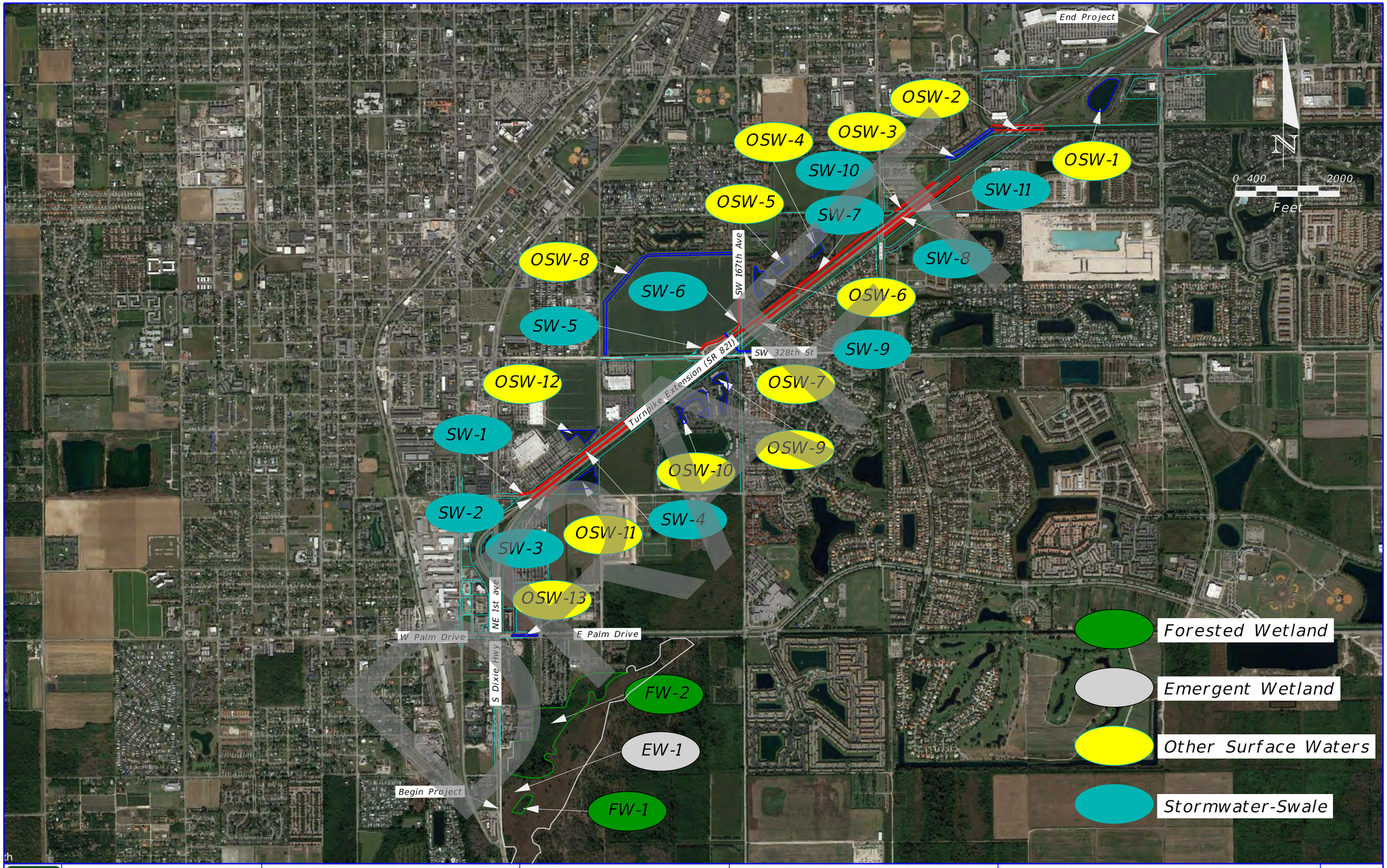

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FLORIDA'S TURNPIKE

NATURAL RESOURCES EVALUATION

TURNPIKE EXTENSION (SR821)

BMA CONSULTING ENGINEERING
18503 PINES BLVD, SUITE 210
PEMBROKE PINES, FL 33029

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 821	MIAMI DADE	439545-1-22-01

WETLANDS & SURFACE WATERS LOCATION

SHEET NO. 1 of 7

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FLORIDA'S TURNPIKE	NATURAL RESOURCES EVALUATION	TURNPIKE EXTENSION (SR821)	BMA CONSULTING ENGINEERING 18503 PINES BLVD, SUITE 210 PEMBROKE PINES, FL 33029	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO. / COUNTY / FINANCIAL PROJECT ID SR 821 / MIAMI DADE / 439545-1-22-01	WETLANDS & SURFACE WATERS LOCATION	SHEET NO. 2 of 7

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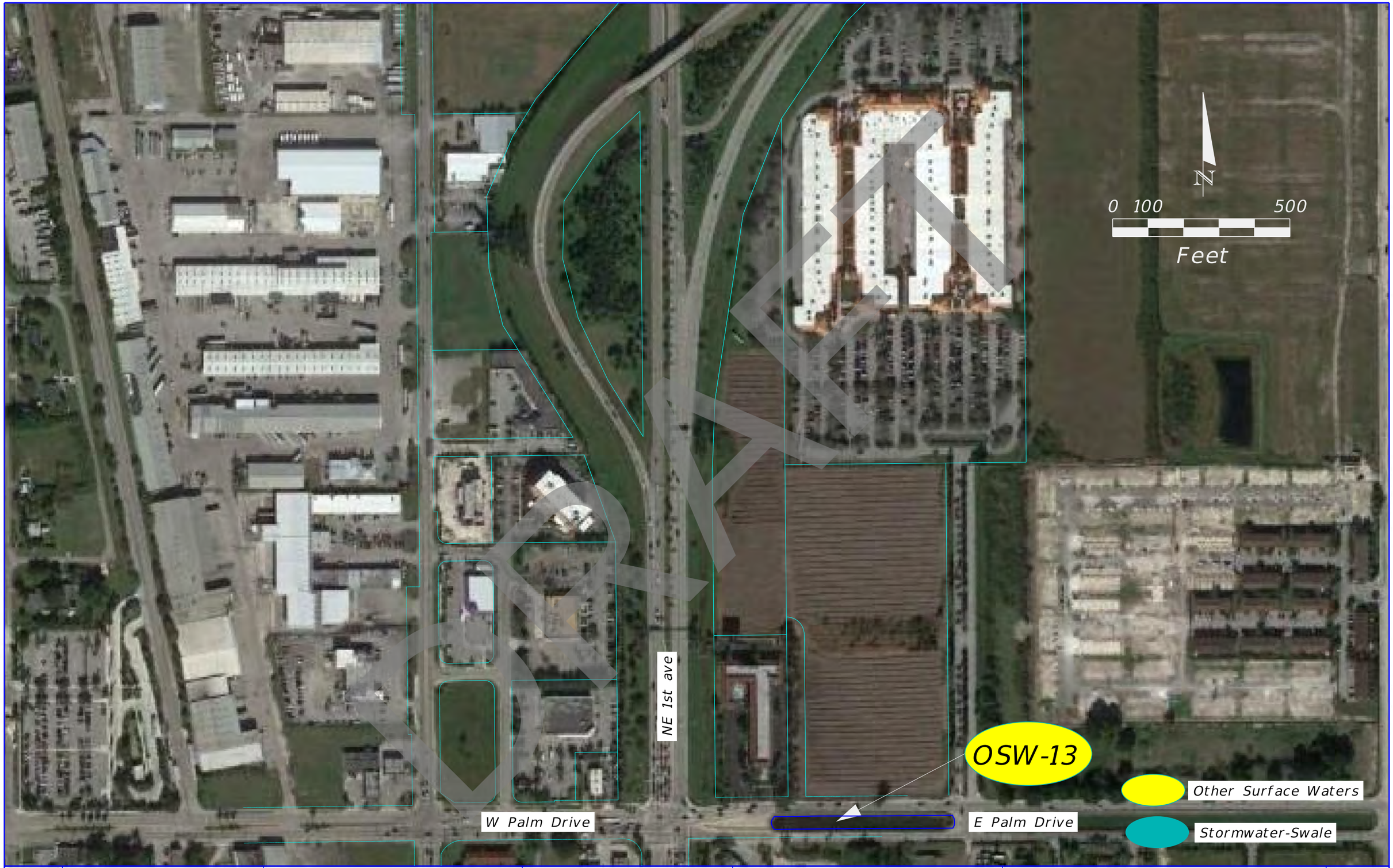

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FLORIDA'S TURNPIKE

NATURAL RESOURCES EVALUATION

TURNPIKE EXTENSION (SR821)

BMA CONSULTING ENGINEERING
18503 PINES BLVD, SUITE 210
PEMBROKE PINES, FL 33029

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 821	MIAMI DADE	439545-1-22-01

WETLANDS & SURFACE WATERS LOCATION

SHEET NO. 3 of 7

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FLORIDA'S TURNPIKE	NATURAL RESOURCES EVALUATION	TURNPIKE EXTENSION (SR821)	BMA CONSULTING ENGINEERING 18503 PINES BLVD, SUITE 210 PEMBROKE PINES, FL 33029	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO. / COUNTY / FINANCIAL PROJECT ID SR 821 / MIAMI DADE / 439545-1-22-01	WETLANDS & SURFACE WATERS LOCATION	SHEET NO. 4 of 7

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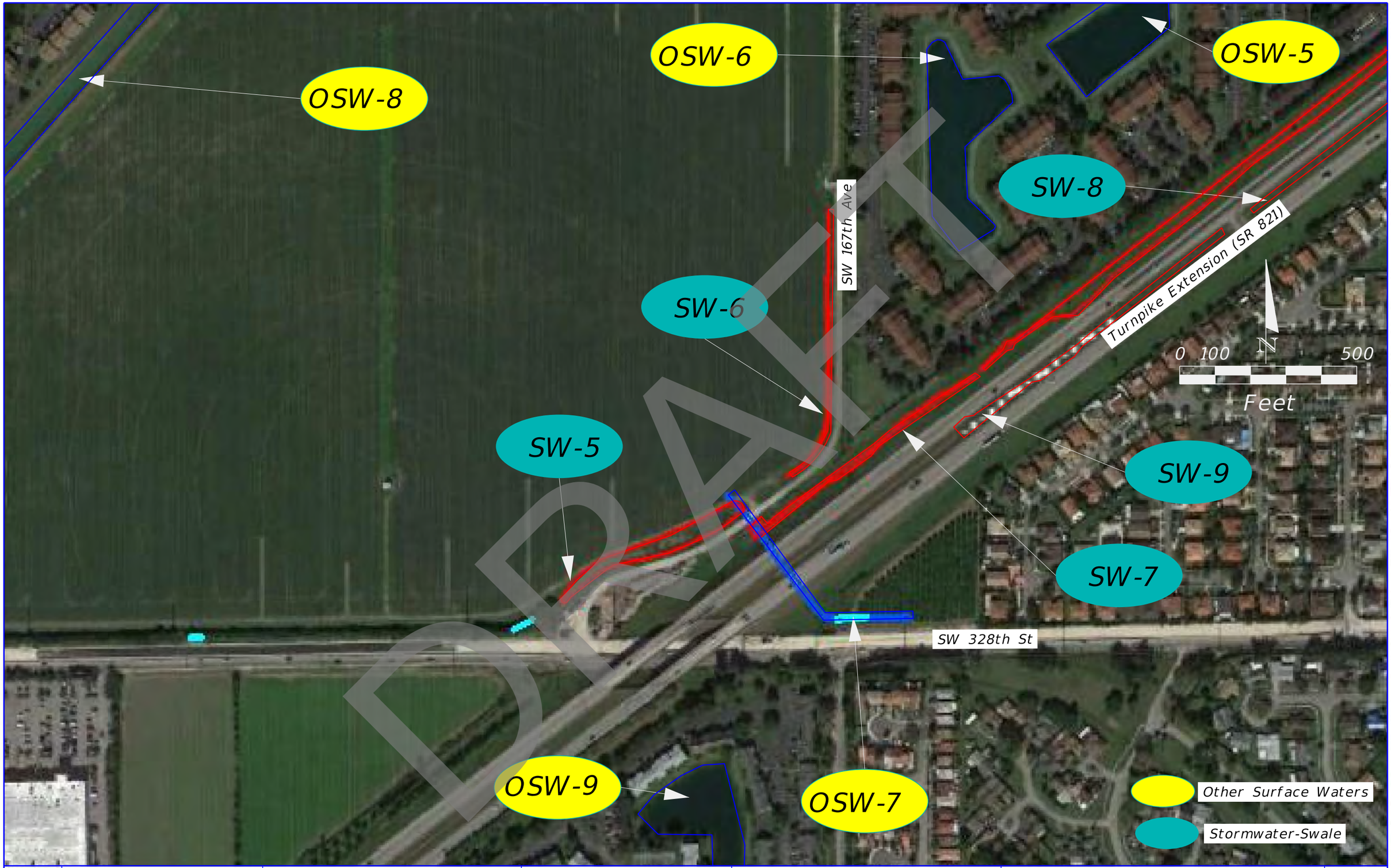

FLORIDA'S TURNPIKE

NATURAL RESOURCES EVALUATION

TURNPIKE EXTENSION (SR821)

BMA CONSULTING ENGINEERING
18503 PINES BLVD, SUITE 210
PEMBROKE PINES, FL 33029

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 821	MIAMI DADE	439545-1-22-01

WETLANDS & SURFACE WATERS LOCATION

SHEET NO. 5 of 7

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

FLORIDA'S TURNPIKE	NATURAL RESOURCES EVALUATION	TURNPIKE EXTENSION (SR821)	BMA CONSULTING ENGINEERING 18503 PINES BLVD, SUITE 210 PEMBROKE PINES, FL 33029	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO. / COUNTY / FINANCIAL PROJECT ID SR 821 / MIAMI DADE / 439545-1-22-01	WETLANDS & SURFACE WATERS LOCATION	SHEET NO. 6 of 7

FLORIDA'S TURNPIKE	NATURAL RESOURCES EVALUATION	TURNPIKE EXTENSION (SR821)	BMA CONSULTING ENGINEERING 18503 PINES BLVD, SUITE 210 PEMBROKE PINES, FL 33029	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO. / COUNTY / FINANCIAL PROJECT ID SR 821 / MIAMI DADE / 439545-1-22-01	WETLANDS & SURFACE WATERS LOCATION	SHEET NO. 7 of 7

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RON DESANTIS
GOVERNOR

Florida Department of Transportation
Florida's Turnpike Enterprise
P.O. Box 613069, Ocoee, FL 34761
407-532-3999

KEVIN J. THIBAULT, P.E.
SECRETARY

Meeting Notes
FDOT, Florida's Turnpike Enterprise/USFWS Technical Assistance

FPID 439545-1, Widen HEFT from US 1, south of Palm Drive to Campbell Drive PD&E
Miami-Dade County

Date: June 25, 2020 via MS TEAMS
Time: 9:00 – 9:30 AM

---

1. **Introductions**
   - **USFWS Staff – John Wrublik**
   - **Turnpike Environmental Administrator – Philip Stein**
   - **Turnpike Permits Coordinator – Annemarie Hammond**
   - **Turnpike Project Manager – Jazlyn Heywood, PE (Atkins)**
   - **Turnpike Permits Coordinator – Fred Gaines, PWS (Atkins)**
   - **Turnpike Environmental Scientist – Doug Zang, AICP (Atkins)**
   - **Consultant Project Manager – Bill Evans, PE**
   - **Consultant Deputy Project Manager – Cassie Piche, PE**
   - **Consultant Environmental Scientist – Millie Radsikovsky**

2. **Project Overview**
   Turnpike provided a brief overview of the project and explained that the main focus of this project is to widen the Turnpike from US 1 to Campbell Drive within the median and provide improved intersection / interchange operations at Campbell Drive, Lucy Street and Palm Drive / US 1. Turnpike indicated that the project had been reviewed under ETDM Project #14322. Existing land uses are described and were briefly mentioned. The work proposed outside of the existing right of way is south of Palm Drive on commercial property parcels, and at Lucy St where existing agricultural land is present.

   The SFWMD C-103 Canal is included within the project limits. The proposed project concept includes 296.86 acres of wetlands/surface waters consisting of roadside ditches, infield ponds, seasonal swales and farm irrigation ditches with no anticipated wetlands impacts. All wetland / surface water areas will be addressed for storm water retention and erosion control measures. This preliminary coordination is to ensure that the USFWS agrees with the project approach to federal listed species and habitat thus far. There were no questions or follow up discussion.

3. **Florida Bonneted Bat (FBB)**
   Turnpike indicated that project area is within the urban consultation area for the FBB. Landscape areas with 30-40' tall palm trees exist along the corridor which could provide habitat for the FBB. Visual surveys of under-bridge areas did not note any presence of the FBB. Acoustic surveys are not planned at this time but limited presence/absence surveys in existing structures are suggested as sufficient since there are less than 5 acres of suitable habitat. If impacts were to change during the design phase, a formal determination and additional coordination with USFWS will be

performed at that time. USFWS agreed with the "may affect / not likely to adversely affect" determination suggested. There were no additional questions or follow up discussion.

4. **West Indian Manatee**
   Turnpike indicated that the SFWMD C-103 Canal is accessible to manatees as documented in USFWS's on-line information. Since the Standard Manatee Conditions for In-water Work will be implemented for a build alternative, USFWS agreed with the "may affect / not likely to adversely affect" determination suggested. There were no additional questions or follow up discussion.

5. **Everglade Snail Kite**
   Turnpike indicated that the Snail Kite habitat within the project area will not be impacted. USFWS agreed with the "no affect anticipated" determination suggested. There were no additional questions or follow up discussion.

6. **Florida Grasshopper Sparrow**
   Turnpike indicated that no suitable habitat for the Sparrow exists in the project area. USFWS agree with the "no affect anticipated" determination suggested. There were no additional questions or follow up discussion.

7. **Wood Stork**
   Turnpike indicated that less than 0.5 acres of suitable foraging habitat for the Wood Stork is impacted with the project build alternative concept. The project is within the CFA for one nesting colony. It was stated that some swales may approach the threshold depth for foraging habitat and will be reevaluated as the design progresses. Roadside swales and ditches providing CFA and any other CFA impacts will be replaced as required. Based on the USFWS Wood Stork determination key, a "not likely to adversely affect" determination was presented. USFWS agreed with this determination. There were no additional questions or follow up discussion.

8. **American Crocodile**
   Turnpike indicated that potential habitat for the Crocodile exists in the project area at the SFWMD C-103 Canal but habitat consists of steep, well maintained canal banks. Any occurrence of the Crocodile would be expected to be transient in nature. No observations have been noted. USFWS agreed with the "no affect anticipated" determination suggested. There were no additional questions or follow up discussion.

9. **American Alligator**
   Turnpike indicated that the Alligator was included on the list due to similarity to the American Crocodile, but no occurrences of the species have been noted and a "no affect" determination recommended. USFWS stated that consultation is not normally performed for this species and a formal determination is not needed. USFWS suggested that this species could be removed from the list for this project. There were no additional questions or follow up discussion.

10. **Eastern Indigo Snake**
    Turnpike indicated that potential habitat for the Indigo snake exists in the project area, specifically in the pine rocklands and neighboring agriculture fields. No observations of the species have been noted and Eastern Indigo Snake standard protection provisions will be included in the plans. Based on the USFWS Eastern Indigo Snake determination key, a "not likely to adversely affect" determination is recommended. USFWS agreed with this determination. There were no additional questions or follow up discussion.

11. **Miami Tiger Beetle**
    Turnpike indicated that potential habitat for the Tiger Beetle exists in the project area, specifically in the fenced pine rocklands within the Turnpike's Campbell Drive interchange. No formal surveys have been performed and opportunistic pedestrian surveys have not resulted in observance of the beetle. Currently, there is no work planned within the fenced pine rockland areas but standard exclusion/protection measures are anticipated to be included in the plans. USFWS agreed with the "no effect" determination suggested. There were no additional questions or follow up discussion.

12. **Anticipated Permits**
    Turnpike listed the anticipated permits for the project.
    - South Florida Water Management District (SWFMD) – ERP Permit
    - US Army Corps of Engineers Permit w/ Section 7 Consultation
    - SFWMD Right-of-way Permit for C-103 Canal
    - Florida Department of Environmental Protection (FDEP) – NPDES

    Turnpike stated that additional technical assistance requests may be anticipated as the design progresses for confirmation of determinations and necessary measures to be included in the plans. Standard Section 7 consultation with the USACE is expected as well as Sections 404 and 408.

    USFWS suggested that while there will be no further involvement from USFWS, that when coordinating with USACE, to inform them of the determination keys used and prior USFWS coordination / concurrence in order to help keep the process moving.

13. **Roundtable/Questions/Comments**

    There was no further discussion or comments from the attendees.

MEETING AGENDA AND EXHIBITS HAVE BEEN ATTACHED TO THESE MINUTES FOR REFERENCE.

FDOT, Florida's Turnpike Enterprise/USFWS Technical Assistance Meeting Agenda

FPID 439545-1, Widen HEFT from US 1, south of Palm Drive to Campbell Drive PD&E
Miami-Dade County

Date: June 25, 2020 via Microsoft Teams
Time: 9:00 – 10:00 AM

---

1. **Introductions**

2. **Project Overview**
   - Current Alignment (map provided – Exhibit 1)
     - 3 miles along the Florida's Turnpike corridor, from US 1, south of Palm Drive to Campbell Drive in Miami-Dade County, Florida. The area to the east of the Turnpike is primarily residential land use with some commercial uses along the major arterials. The area west of the Turnpike is primarily commercial, agricultural with some residential land uses.
   - The following federally listed species have Consultation Areas that cover the project or the potential for occurrence within the project area (Exhibit 2)
     - Florida Bonneted Bat (*Eumops floridanus*)
     - West Indian Manatee (*Trichechus manatus*)
     - Everglade Snail Kite (*Rostrhamus sociabilis plumbeus*)
     - Florida Grasshopper Sparrow (*Ammodramus savannarum floridanus*)
     - Wood Stork (*Mycteria americana*)
     - America Crocodile (*Crocodylus acutus*)
     - American Alligator (*Alligator mississippiensis*)
     - Eastern Indigo Snake (*Drymarchon corais couperi*)
     - Miami Tiger Beetle (*Cicindelidia floridana*)
   - 296.86 acres of wetlands and surface waters within the project area (Exhibits 3)
     - Project area - 3 wetlands, 11 surface waters (stormwater swales with hydrophytic vegetation) and 12 other surface waters
     - 10.1 acres of surface water/other surface waters impact are primarily grassed maintained swales or steep bank ditches/canals with little or no littoral shelf and will be replaced with similar functioning drainage systems.
     - No impacts to wetlands

3. **Florida Bonneted Bat**
   - Within FBB South Florida Urban Area
   - Less than 5 acres of potential habitat within the project area (landscaped royal palm trees located in pond area at the southern project limits)
   - No observations within the project area and no documented occurrences within one mile
   - Determination based on Florida Bonneted Bat Consultation Key
   - Will conduct limited roost survey
   - ***May Affect Not Likely to Adversely Affect – P if BMPs used and survey reports are submitted. Programmatic concurrence.*** (Exhibit 4)

4. **West Indian Manatee**
    - Potential habitat exists along the SFWMD C-103 canal. The C-103 Canal is accessible by the Manatee (USFWS & SFWMD Central and Southern Florida Project Manatee Accessibility Map, September 2006)
    - No observations within the project area and no documented occurrences within one mile
    - Standard Manatee Conditions for In-water to be implemented during construction
    - ***May Affect Not Likely to Adversely Affect (MANLAA) anticipated***

5. **Everglade Snail Kite**
    - Large, open water lakes exist adjacent to the study area; however, these lakes lack the emergent vegetation required by the snail kite for nesting. These lakes will not be impacted.
    - No observations within the project area and no documented occurrences within one mile
    - ***No Effect anticipated***

6. **Florida Grasshopper Sparrow**
    - No potential habitat within the study area that meets the requirements of the Florida Grasshopper sparrows.
    - No observations within the project area and no documented occurrences within one mile
    - No impacts anticipated
    - ***No Effect anticipated***

7. **Wood Stork**
    - Less than 0.5 acres suitable habitat within the project area (SW-5)
    - Located within the 18.6 mile core foraging area (CFA) of one nesting colony
        - Grossman Ridge West CFA
    - Determination based on Wood Stork Determination Key, South Florida (05/18/2010)
    - ***Not Likely to Adversely Affect (NLAA) anticipated*** (Exhibit 5)

8. **American Crocodile**
    - Potential habitat exists within the SFWMD C-103 canal
    - No observations of individuals, nests or signs of this species within the project area and no documented occurrences within one mile
    - No impacts anticipated
    - ***No Effect anticipated***

9. **American Alligator**
    - Potential habitat exists within the SFWMD C-103 canal
    - No observations of individuals, nests or signs of this species within the project area and no documented occurrences within one mile
    - No impacts anticipated
    - ***No Effect anticipated***

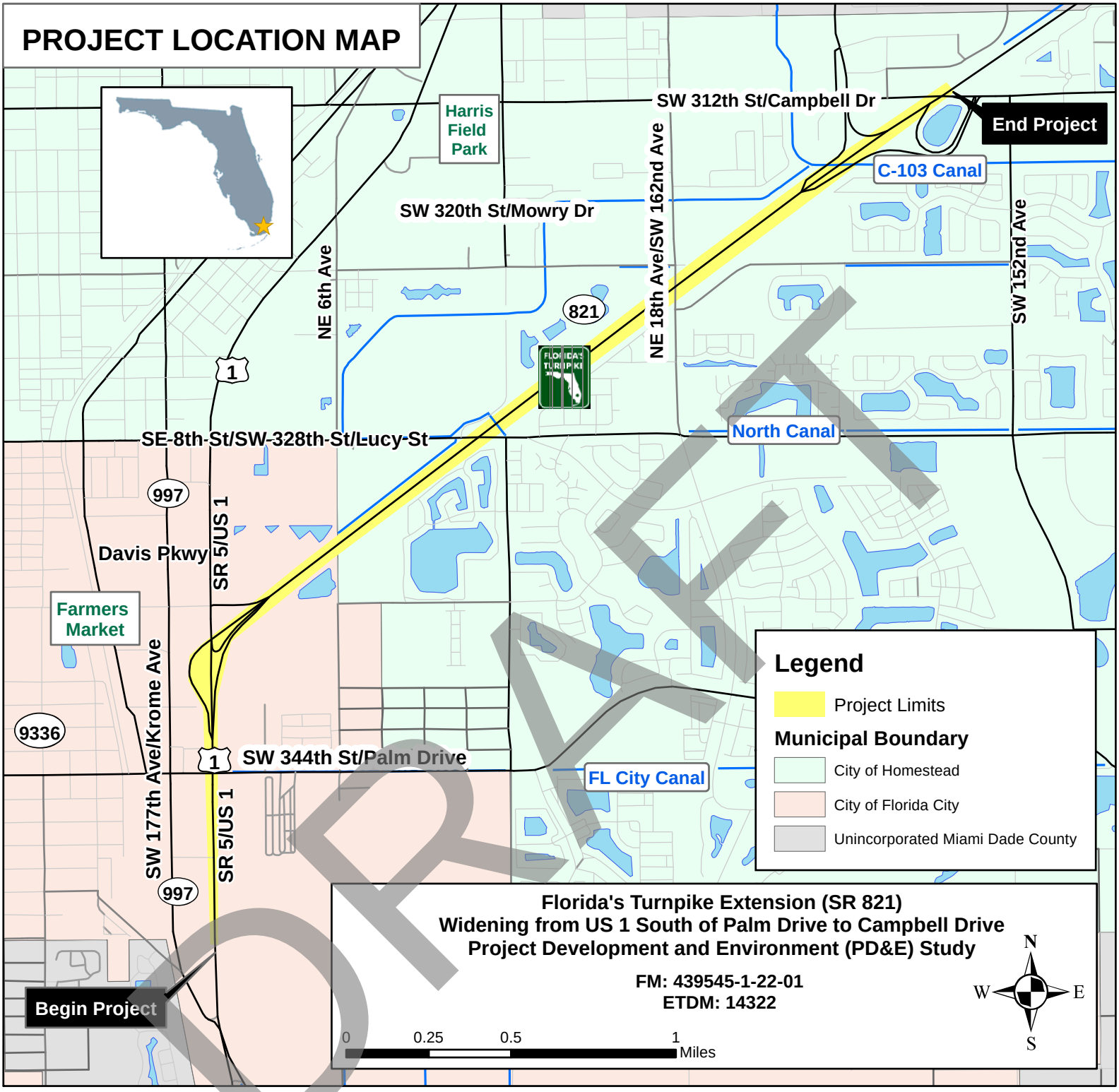
10. **Eastern Indigo Snake**
    - Potential habitat for the Eastern Indigo Snake within the project area is the remnant pine rocklands as defined by the Consultation Key for the Eastern Indigo Snake. Potential habitats include sandhill, scrub, pine flatwoods, pine rocklands, scrubby flatwoods, high pine, dry prairie, coastal prairie, mangrove swamps, tropical hardwood hammocks, hydric hammocks, edges of freshwater marshes, agricultural fields [including sugar cane fields and active, inactive, or abandoned citrus groves], and coastal dunes. These habitats are not found within the project area.
    - No observations within the project area and no documented occurrences within one mile
    - Determination based on Consultation Key for the Eastern Indigo Snake (Revised August 1, 2017)
    - Standard Protection Measures to be implemented during construction
    - ***Not Likely to Adversely Affect (NLAA) anticipated*** (Exhibit 6)

11. **Miami Tiger Beetle**
    - Potential habitat exists within the remnant pine rocklands near the Campbell Drive Interchange (Exhibit 7)
    - No observations within the project area and no documented occurrences within one mile
    - No work is proposed in the pine rocklands and the area is currently fenced. A 25-ft buffer between the pine rocklands and construction activities should be noted in the plans.
    - ETDM # 14322
    - ***No Effect anticipated***

12. Anticipated Permits
- South Florida Water Management District (SWFMD) – ERP Permit
- US Army Corps of Engineers Permit w/ Section 7 Consultation
- SFWMD Right-of-way Permit
- Florida Department of Environmental Protection (FDEP) – NPDES

13. Roundtable/Questions/Comments

EXHIBIT 1 – PROJECT CORRIDOR


PROJECT LOCATION MAP
Harris Field Park
SW 312th St/Campbell Dr
End Project
C-103 Canal
SW 320th St/Mowry Dr
NE 6th Ave
NE 18th Ave/SW 162nd Ave
SW 152nd Ave
821
1
SE-8th-St/SW-328th-St/Lucy-St
North Canal
997
Davis Pkwy
SR 5/US 1
Farmers Market
9336
SW 177th Ave/Krome Ave
SW 344th St/Palm Drive
FL City Canal
Begin Project
Legend
Project Limits
Municipal Boundary
City of Homestead
City of Florida City
Unincorporated Miami Dade County
Florida's Turnpike Extension (SR 821)
Widening from US 1 South of Palm Drive to Campbell Drive
Project Development and Environment (PD&E) Study
FM: 439545-1-22-01
ETDM: 14322
0
0.25
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1
Miles
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FLORIDA'S TURNPIKE (SR 821) WIDENING PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY

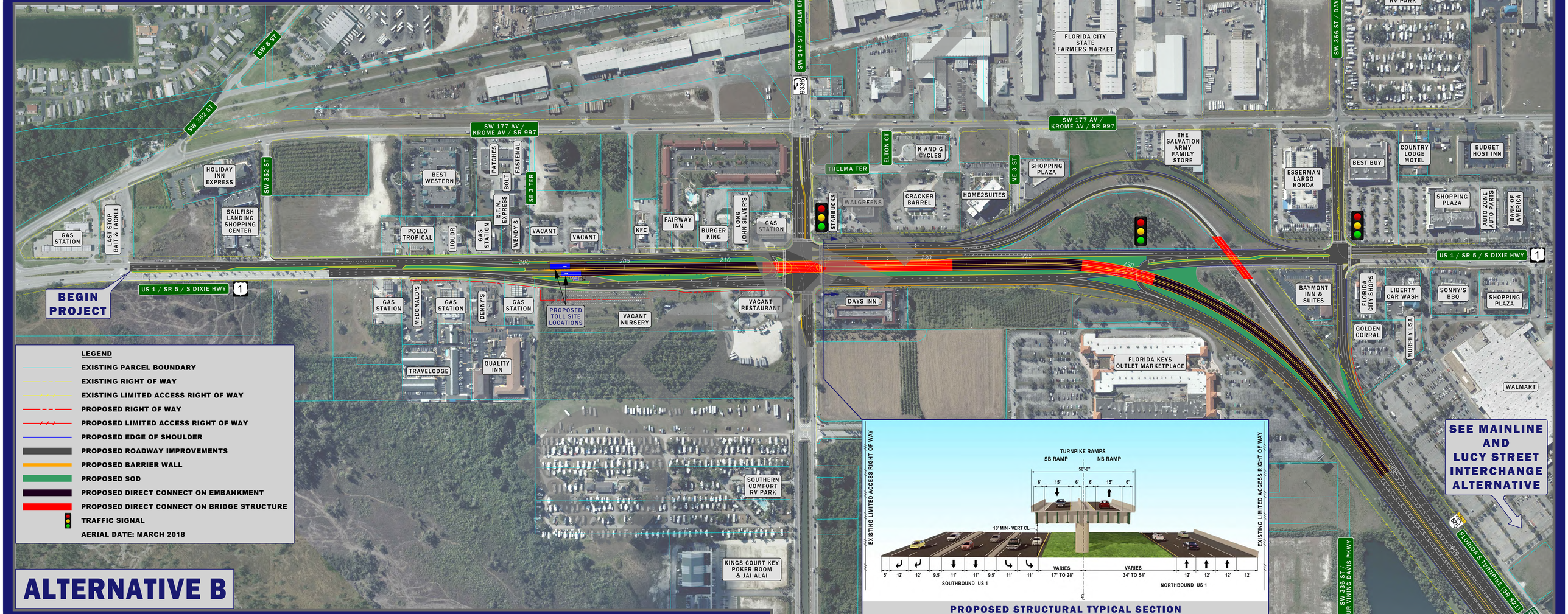
FROM US 1 (SOUTH OF PALM DRIVE) TO CAMPBELL DRIVE IN MIAMI-DADE COUNTY, FLORIDA

FINANCIAL PROJECT IDENTIFICATION (FPID) NUMBER: 439545-1

EFFICIENT TRANSPORTATION DECISION MAKING (ETDM) NUMBER: 14322

FDOT

FLORIDA'S TURNPIKE



LEGEND

- EXISTING PARCEL BOUNDARY
- EXISTING RIGHT OF WAY
- EXISTING LIMITED ACCESS RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PROPOSED LIMITED ACCESS RIGHT OF WAY
- PROPOSED EDGE OF SHOULDER
- PROPOSED ROADWAY IMPROVEMENTS
- PROPOSED BARRIER WALL
- PROPOSED SOD
- PROPOSED DIRECT CONNECT ON EMBANKMENT
- PROPOSED DIRECT CONNECT ON BRIDGE STRUCTURE
- TRAFFIC SIGNAL
- AERIAL DATE: MARCH 2018

PROPOSED STRUCTURAL TYPICAL SECTION ALTERNATIVE B

ALTERNATIVE B

PUBLIC INFORMATION MEETING | 5:30 P.M. TO 7:30 P.M. | TUESDAY, JANUARY 21, 2020

PHICHOL WILLIAMS COMMUNITY CENTER | 951 SW 4TH STREET | HOMESTEAD, FLORIDA 33030

TOLL 821

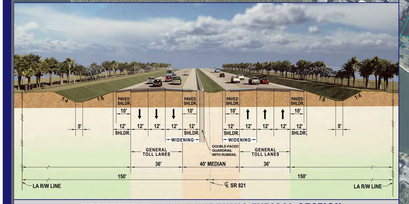
FLORIDA'S TURNPIKE (SR 821) WIDENING PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY
FROM US 1 (SOUTH OF PALM DRIVE) TO CAMPBELL DRIVE IN MIAMI-DADE COUNTY, FLORIDA

FINANCIAL PROJECT IDENTIFICATION (FPID) NUMBER: 439545-1
EFFICIENT TRANSPORTATION DECISION MAKING (ETDM) NUMBER: 14322

FDOT

PROPOSED LUCY STREET INTERCHANGE

SEE ALTERNATIVE A AND ALTERNATIVE B



PROPOSED MAINLINE WIDENING TYPICAL SECTION
FROM DAVIS PARKWAY TO CAMPBELL DRIVE

LEGEND
- EXISTING PARCEL BOUNDARY
- EXISTING RIGHT OF WAY
- EXISTING LIMITED ACCESS RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PROPOSED LIMITED ACCESS RIGHT OF WAY
- PROPOSED EDGE OF SHOULDER
- PROPOSED ROADWAY IMPROVEMENTS
- PROPOSED BARRIER WALL
- PROPOSED SOD
- PROPOSED DIRECT CONNECT ON EMBANKMENT
- PROPOSED BRIDGE STRUCTURE
- TRAFFIC SIGNAL
- AERIAL DATE: MARCH 2018

0 50 100 200 FEET

END PROJECT

MAINLINE AND LUCY STREET INTERCHANGE ALTERNATIVE

PUBLIC INFORMATION MEETING | 5:30 P.M. TO 7:30 P.M. | TUESDAY, JANUARY 21, 2020
PHICHOL WILLIAMS COMMUNITY CENTER | 951 SW 4TH STREET | HOMESTEAD, FLORIDA 33030

EXHIBIT 2 – FEDERALLY LISTED SPECIES

Table 1 – Federally Listed Endangered Species with the Potential to Occur within the Project Corridor and Effects Determination

Common Name	Scientific Name	Federal Status	Occurrence Potential	Observed	Effects Determination
Florida Bonneted Bat	*Eumops floridanus*	E	Low	No	May Affect Not Likely to Adversely Affect – P if BMPs used and survey reports are submitted. Programmatic concurrence.
West Indian manatee	*Trichechus manatus*	T	Low	No	May Affect Not Likely to Adversely Affect (MANLAA) anticipated
Everglade Snail Kite	*Rostrhamus sociabilis plumbeus*	E	Low	No	No effect
Florida Grasshopper Sparrow	*Ammodramus savannarum floridanus*	E	Low	No	No effect
Wood Stork	*Mycteria americana*	T	Moderate	No	Not Likely to Adversely Affect (NLAA)
American Crocodile	*Crocodylus acutus*	T	Low	No	No effect
American Alligator	*Alligator mississippiensis*	T (SA)	Low	No	No effect
Eastern Indigo Snake	*Drymarchon corais couperi*	T	Low	No	Not Likely to Adversely Affect (NLAA)
Miami Tiger Beetle	*Cicindelidia floridana*	E	Low	No	No effect

TABLE LEGEND

E = Endangered **T = Threatened**

SSC = Species of Special Concern **SA = Similar Appearance**

EXHIBIT 3 – WETLANDS & SURFACE WATERS LOCATION MAP

End Project

Turnpike Extension (SR 821)

OSW-2
OSW-3
OSW-4
OSW-1
SW-10
SW-11
OSW-5
SW-7
Mowry Dr
SW-8
OSW-8
SW-6
OSW-6
SW-5
SW 167th Ave
SW 162nd Ave
SW 328th St
SW-9
OSW-12
OSW-7
SW-1
OSW-9
OSW-10
SW-2
SW-4
SW-3
OSW-11
NE 1st ave
E Palm Drive
W Palm Drive
S Dixie Hwy
FW-2
EW-1
Begin Project
FW-1

N

0 400 2000
Feet

Forested Wetland
Emergent Wetland
Other Surface Waters
Stormwater-Swale

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FLORIDA'S TURNPIKE

NATURAL RESOURCES EVALUATION

TURNPIKE EXTENSION (SR821)

BMA CONSULTING ENGINEERING
18503 PINES BLVD, SUITE 210
PEMBROKE PINES, FL 33029

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 821	MIAMI DADE	439545-1-22-01

WETLANDS & SURFACE WATERS LOCATION

SHEET NO. 1 of 7

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FLORIDA'S TURNPIKE

NATURAL RESOURCES EVALUATION

TURNPIKE EXTENSION (SR821)

BMA CONSULTING ENGINEERING
18503 PINES BLVD, SUITE 210
PEMBROKE PINES, FL 33029

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 821	MIAMI DADE	439545-1-22-01

WETLANDS & SURFACE WATERS LOCATION

SHEET NO. 2 of 7

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FLORIDA'S TURNPIKE

NATURAL RESOURCES EVALUATION	TURNPIKE EXTENSION (SR821)	BMA CONSULTING ENGINEERING 18503 PINES BLVD, SUITE 210 PEMBROKE PINES, FL 33029	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			WETLANDS & SURFACE WATERS LOCATION	SHEET NO.
			ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
			SR 821	MIAMI DADE	439545-1-22-01		3 of 7

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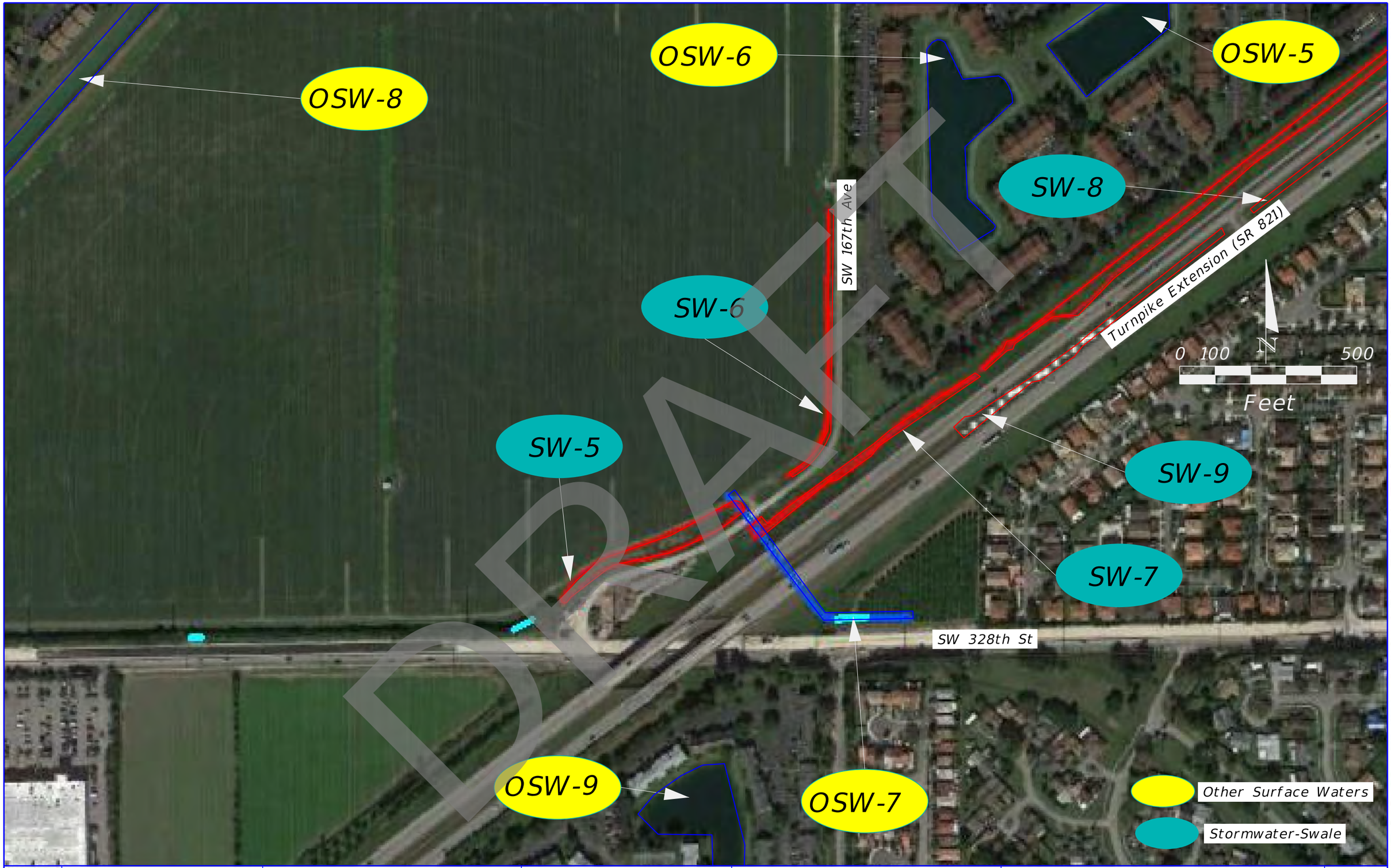
FLORIDA'S TURNPIKE	NATURAL RESOURCES EVALUATION	TURNPIKE EXTENSION (SR821)	BMA CONSULTING ENGINEERING 18503 PINES BLVD, SUITE 210 PEMBROKE PINES, FL 33029	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO. / COUNTY / FINANCIAL PROJECT ID SR 821 / MIAMI DADE / 439545-1-22-01	WETLANDS & SURFACE WATERS LOCATION	SHEET NO. 4 of 7



FLORIDA'S TURNPIKE	NATURAL RESOURCES EVALUATION	TURNPIKE EXTENSION (SR821)	BMA CONSULTING ENGINEERING 18503 PINES BLVD, SUITE 210 PEMBROKE PINES, FL 33029	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO. / COUNTY / FINANCIAL PROJECT ID SR 821 / MIAMI DADE / 439545-1-22-01	WETLANDS & SURFACE WATERS LOCATION	SHEET NO. 5 of 7

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FLORIDA'S TURNPIKE	NATURAL RESOURCES EVALUATION	TURNPIKE EXTENSION (SR821)	BMA CONSULTING ENGINEERING 18503 PINES BLVD, SUITE 210 PEMBROKE PINES, FL 33029	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			WETLANDS & SURFACE WATERS LOCATION	SHEET NO.
				ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				SR 821	MIAMI DADE	439545-1-22-01		6 of 7

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End Project

Remnant
Pine Rockland Area

Turnpike Extension (SR 821)

OSW-2

OSW-3

OSW-1

0 100 500
Feet

Other Surface Waters

Stormwater-Swale

DRAFT

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FLORIDA'S TURNPIKE

NATURAL RESOURCES EVALUATION

TURNPIKE EXTENSION (SR821)

BMA CONSULTING ENGINEERING
18503 PINES BLVD, SUITE 210
PEMBROKE PINES, FL 33029

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 821	MIAMI DADE	439545-1-22-01

WETLANDS & SURFACE WATERS LOCATION

SHEET NO. 7 of 7

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EXHIBIT 4 – FLORIDA BONNETED BAT KEY

Florida Bonneted Bat Consultation Key#

Use the following key to evaluate potential effects to the Florida bonneted bat (FBB) from the proposed project. Refer to the Glossary as needed.

1a. Proposed project or land use change is partially or wholly within the Consultation Area (Figure 1)..... **Go to 2**
1b. Proposed project or land use change is wholly outside of the Consultation Area (Figure 1)..... **No Effect**

2a. Potential FBB roosting habitat exists within the project area..... **Go to 3**
2b. No potential FBB roosting habitat exists within the project area..... **Go to 13**

3a. Project size/footprint* ≤ 5 acres (2 hectares)..... **Conduct Limited Roost Survey (Appendix C)** then Go to 4 **NOTE: LIMITED ROOST SURVEY HAS NOT BEEN CONDUCTED**
3b. Project size/footprint* > 5 acres (2 hectares)..... **Conduct Full Acoustic/Roost Surveys (Appendix B)** then **Go to 6**

4a. Results show FBB roosting is likely ..... **Go to 5**
4b. Results do not show FBB roosting is likely..... **MANLAA-P if BMPs (Appendix D) used and survey reports are submitted. Programmatic concurrence.**

5a. Project will affect roosting habitat..... **LAA+ Further consultation with the Service required.**
5b. Project will not affect roosting habitat..... **MANLAA-C with required BMPs (Appendix D). Further consultation with the Service required.**

6a. Results show some FBB activity..... **Go to 7**
6b. Results show no FBB activity..... **No Effect**

7a. Results show FBB roosting is likely..... **Go to 8**
7b. Results do not show FBB roosting is likely..... **Go to 10**

8a. Project will not affect roosting habitat..... **Go to 9**
8b. Project will affect roosting habitat..... **LAA+ Further consultation with the Service required.**

9a. Project will affect* > 50 acres (20 hectares) (wetlands and uplands) of foraging habitat..... **LAA+ Further consultation with the Service required.**
9b. Project will affect* ≤ 50 acres (20 hectares) (wetlands and uplands) of foraging habitat..... **MANLAA-C with required BMPs (Appendix D). Further consultation with the Service required.**

10a. Results show high FBB activity/use..... **Go to 11**
10b. Results do not show high FBB activity/use..... **Go to 12**

11a. Project will affect* > 50 acres (20 hectares) (wetlands and uplands) of FBB habitat (roosting and/or foraging)..... **LAA+ Further consultation with the Service required.**
11b. Project will affect* ≤ 50 acres (20 hectares) (wetlands and uplands) of FBB habitat (roosting and/or foraging)..... **MANLAA-C with required BMPs (Appendix D). Further consultation with the Service required.**

12a. Project will affect* > 50 acres (20 hectares) (wetlands and uplands) of FBB habitat..... **LAA+ Further consultation with the Service required.**
12b. Project will affect* ≤ 50 acres (20 hectares) (wetlands and uplands) of FBB habitat..... **MANLAA-P if BMPs (Appendix D) used and survey reports are submitted. Programmatic concurrence. 7**

13a. FBB foraging habitat exists within the project area and foraging habitat will be affect……..***Go to 14***

13b. FBB foraging habitat exists within the project area and foraging habitat will not be affected OR no FBB foraging habitat exists within the project area……..**No Effect**

14a. Project size* > 50 acres (20 hectares) (wetlands and uplands) ……..**Go to 15**

14b. Project size* ≤ 50 acres (20 hectares) (wetlands and uplands……. **MANLAA-P if BMPs (Appendix D) used. Programmatic concurrence.**

15a. Project is within 8 miles (12.9 kilometers) of high quality potential roosting areas^……**Conduct Full Acoustic Survey (Appendix B) and Go to 16**

15b. Project is not within 8 miles (12.9 kilometers) of high quality potential roosting area^……**MANLAA-P if BMPs (Appendix D) used. Programmatic concurrence.**

16a. Results show some FBB activity……..**Go to 17**

16b. Results show no FBB activity……..**No Effect**

17a. Results show high FBB activity/use……..**LAA+ Further consultation with the Service required.**

17b. Results do not show high FBB activity/use…….. **MANLAA-P if BMPs (Appendix D) used and survey reports submitted. Programmatic concurrence.**

If you are within the urban environment and you are renovating an existing artificial structure (with or without additional ground disturbing activities), these Guidelines do not apply. The Service is developing separate guidelines for consultation in these situations. Until the urban guidelines are complete, please contact the Service for additional guidance

*Includes wetlands and uplands that are going to be altered along with a 250- foot (76.2- meter) buffer around these areas if the parcel is larger than the altered area.

+Project modifications could change the LAA determinations in numbers 5, 8, 9, 11, 12, and 17 to MANLAA determinations.

^Determining if high quality potential roosting areas are within 8 mi (12.9 km) of a project is intended to be a desk-top exercise looking at most recent aerial imagery, not a field exercise.

EXHIBIT 5 - WOOD STORK KEY

WOOD STORK DETERMINATION KEY

South Florida (05/18/2010)

A. Project within 0.76 km (0.47 mile)[2] of an active colony site[3] "*may affect*[4]"

Project impacts Suitable Foraging Habitat (SFH) ~ at a location greater than 0.76 km (0.47 mile) from a colony site go to B"

NOTE: ACTIVE COLONY IS APPROXIMATELY 18.6 MILES AWAY

Project does not affect SFH……."no effect1".

B. Project impact to SFH is less than 0.20 hectare (one-half acre)[6]……NLAA[1]"

Project impact to SFH is greater in scope than 0.20 hectare (one-half acre) ……go to C

C. Project impacts to SFH not within the CFA (29.9 km, 18.6 miles) of a colony site ……go to D

Project impacts to SFH within the CFA of a colony site …….. go to E

D. Project impacts to SFH have been avoided and minimized to the extent practicable; compensation (Service approved mitigation bank or as provided in accordance with Mitigation Rule 33 CFR Part 332) for unavoidable impacts is proposed in accordance with the CWA section 404(b)(1) guidelines; and habitat compensation replaces the foraging value matching the hydroperiod[7] of the wetlands affected and provides foraging value similar to, or higher than, that of impacted wetlands. See Enclosure 3 for a detailed discussion of the hydroperiod foraging values, an example, and further guidance[8]…….. NLAA[1]"

Project not as above…….. "*may affect*[4]"

E. Project provides SFH compensation in accordance with the CWA section 404(b)(1) guidelines and is not contrary to the HMG; habitat compensation is within the appropriate CFA or within the service area of a Service-approved mitigation bank; and habitat compensation replaces foraging value, consisting of wetland enhancement or restoration matching the hydroperiod[7] of the wetlands affected, and provides foraging value similar to, or higher than, that of impacted wetlands. See Enclosure 3 for a detailed discussion of the hydroperiod foraging values, an example, and further guidance[8] …… "NLAA[1]"

Project does not satisfy these elements "may affect[4]"

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[1] With an outcome of "no effect" or "NLAA" as outlined in this key, and the project has less than 20.2 hectares (50 acres) of wetland impacts, the requirements of section 7 of the Act are fulfilled for the wood stork and no further action is required. For projects with greater than 20.2 hectares (50 acres) of wetland impacts, written concurrence of NLAA from the Service is necessary.

[2] Within the secondary zone (the average distance from the border of a colony to the limits of the secondary zone is 0.76 km (2,500 feet, or 0.47 mi).

[3] An active colony is defined as a colony that is currently being used for nesting by wood storks or has historically over the last 10 years been used for nesting by wood storks.

[4] Consultation may be concluded informally or formally depending on project impacts.

[5] Suitable foraging habitat (SFH) includes wetlands that typically have shallow-open water areas that are relatively calm and have a permanent or seasonal water depth between 5 to 38cm (2 to 15 inches) deep. Other shallow non-wetland water bodies are also SFH. SFH supports and concentrates, or is capable of supporting and concentrating small fish, frogs, and other aquatic prey. Examples of SFH include, but are not limited to freshwater marshes, small ponds, shallow, seasonally flooded roadside or agricultural ditches, seasonally flooded pastures, narrow tidal creeks or shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs.

[6] On an individual basis, SFH impacts to wetlands less than 0.20 hectare (one-half acre) generally will not have a measurable effect on wood storks, although we request that the Corps require mitigation for these losses when appropriate. Wood storks are a wide-ranging species, and individually, habitat change from impacts to SFH less than one-half acre are not likely to adversely affect wood storks. However, collectively they may have an effect and therefore regular monitoring and reporting of these effects are important.

[7] Several researchers (Flemming et al. 1994; Ceilley and Bortone 2000) believe that the short hydroperiod wetlands provide a more important pre-nesting foraging food source and a greater early nestling survivor value for wood storks than the foraging base (grams of fish per square meter) than long hydroperiod wetlands provide. Although the short hydroperiod wetlands may provide less fish, these prey bases historically were more extensive and met the foraging needs of the pre-nesting storks and the early-age nestlings. Nest productivity may suffer as a result of the loss of short hydroperiod wetlands. We believe that most wetland fill and excavation impacts permitted in south Florida are in short hydroperiod wetlands. Therefore, we believe that it is especially important that impacts to these short hydroperiod wetlands within CFAs are avoided, minimized, and compensated for by enhancement/restoration of short hydroperiod wetlands.

[8] For this Key, the Service requires an analysis of foraging prey base losses and enhancements from the proposed action as shown in the examples in Enclosure 3 for projects with greater than 2.02 hectares (5 acres) of wetland impacts. For projects with less than 2.02 hectares (5 acres) of wetland impacts, an individual foraging prey base analysis is not necessary although type for type wetland compensation is still a requirement of the Key.

This Key does not apply to Comprehensive Everglades Restoration Plan projects, as they will require project-specific consultations with the Service.

EXHIBIT 6 – EASTERN INDIGO SNAKE KEY

Consultation Key for the Eastern Indigo Snake

Revised August 1, 2017

A. Project is not located in open water or salt marsh……go to B

Project is located solely in open water or salt marsh……**no effect**

B. Permit will be conditioned for use of the Service's most current guidance for Standard Protection Measures For The Eastern Indigo Snake (currently 2013) during site Preparation and project Construction……go to C

Permit will not be conditioned as above for the eastern indigo snake, or is not known Whether an applicant intends to use these measures and consultation with the Service is Requested…… **may effect**

C. The project will impact less than 25 acres of eastern indigo snake habitat (e.g. sandhill, scrub, pine flatwoods, pine rocklands, scrubby flatwoods, high pine, dry prairie, coastal prairie, mangrove swamps, tropical hardwood hammocks, hydric hammocks, edges of freshwater marshes, agricultural fields [including sugar cane fields and active, inactive, or abandoned citrus groves], and coastal dunes) …… go to D

The project will impact 25 acres or more of eastern indigo snake habitat (e.g. sandhill, scrub, pine flatwoods, pine rocklands, scrubby flatwoods, high pine, dry prairie, coastal prairie, mangrove swamps, tropical hardwood hammocks, hydric hammocks, edges of freshwater marshes, agricultural fields [including sugar cane fields and active, inactive, or abandoned citrus groves], and coastal dunes) …… **May affect**

D. The project has no known holes, cavities, active or inactive gopher tortoise burrows, or Other underground refugia where a snake could be buried, trapped and/or injured during Project activities…… **NLAA**

The project has known holes, cavities, active or inactive gopher tortoise burrows, or Other underground refugia where a snake could be buried, trapped and/or Injured……go to E

E. Any permit will be conditioned such that all gopher tortoise burrows, active or inactive, Will be excavated prior to site manipulation in the vicinity of the burrow[1]. If an eastern Indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity. Any permit will be conditioned such that holes, cavities, and snake refugia other than gopher tortoise burrows be inspected each morning before planned site manipulation of a particular area, and if occupied by an eastern indigo snake, no work will commence until the snake has vacated the vicinity of proposed work……**NLAA**[2]

Permit will not be conditioned as outlined above…… **may affect**

End Key

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[1] If excavating potentially occupied burrows, active or inactive, individuals must first obtain authorization via a Florida Fish and Wildlife Conservation Authorized Gopher Tortoise Agent permit. The excavation method selected should also minimize the potential for injury of an indigo snake. Application should follow the excavation guidance provided with the most current Gopher Tortoise Permitting Guidance found at http:/myfwc.com/gophertortoise

[2] Please note: If the proposed project will impact less than 25 acres of vegetated eastern indigo snake habitat (not urban/human-altered) completely surrounded by an urban development, and an eastern indigo snake has been observed on site, NLAA is not the appropriate conclusion. The Service recommend formal consultation for this situation because the expected increased value of the vegetated habitat within the individual's home range.

EXHIBIT 7 – REMNANT PINE ROCKLAND

Pine Rockland