



Project Development & Environment Study

I-75 (SR 93A)

From Moccasin Wallow Road (CR 6)
to South of US Highway 301 (SR 43)

Draft Wetlands Evaluation and Biological Assessment Report

WPI Segment No.: 419235-2
Manatee & Hillsborough Counties

Prepared for the

**Florida Department of Transportation
District Seven**



April 2010

Manuel Santos, E.I.
FDOT Project Manager



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EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT) is conducting a Project Development and Environment (PD&E) Study to evaluate capacity improvements along approximately 25 miles of Interstate 75 (I-75) (State Road (SR) 93A) from Moccasin Wallow Road in Manatee County to south of US 301 (SR 43) in Hillsborough County, Florida. The design year for the improvements is 2035.

This PD&E Study is being conducted concurrently with the PD&E Study for the portion of I-75 that extends from south of US 301 to north of Fletcher Avenue (County Road (CR) 582A) in Hillsborough County.

The objective of this PD&E Study is to assist the FDOT and the Federal Highway Administration (FHWA) reach a decision on the type, location, and conceptual design of the necessary improvements for I-75 to safely and efficiently accommodate future travel demand. This study will document the need for the improvements as well as the procedures utilized to develop and evaluate various improvements including elements such as proposed typical sections, preliminary horizontal alignments, and interchange enhancement alternatives. The social, physical, and natural environmental effects and costs of these improvements were identified. The alternatives were evaluated and compared based on a variety of parameters utilizing a matrix format. This process assists in identifying the alternative that will best balance the benefits with the impacts (such as environmental effects and costs).

The PD&E Study satisfies all applicable requirements, including the National Environmental Policy Act (NEPA), in order for this project to qualify for federal-aid funding of subsequent development phases (design, right-of-way (ROW) acquisition, and construction).

The project was evaluated through the FDOT's Efficient Transportation Decision Making (ETDM) process. This project is designated as ETDM project #8001. An ETDM *Programming Screen Summary Report* was published on March 29, 2007, containing comments from the Environmental Technical Advisory Team (ETAT)

on the project's effects on various natural, physical, and social resources. Based on ETAT comments, the FHWA has determined that the project qualifies as a Type 2 Categorical Exclusion (CE).

This *Wetlands Evaluation and Biological Assessment Report (WEBAR)* has been prepared as part of this PD&E Study. This report summarizes the possible impacts to wetlands, federally and state protected species, and protected habitats. Identification of measures to avoid, minimize and mitigate for any potential impacts is also discussed. The possibility of impacts outside of the current ROW for pond and floodplain compensation sites is not included in this analysis and will be evaluated in future project phases as those sites are defined. However, pond sizing has been conducted as part of this PD&E Study.

Roadway improvements for I-75 will generally occur within the existing FDOT ROW, but additional ROW will be required for some interchange improvements, stormwater management facilities, and floodplain compensation sites.

Wetlands

Pursuant to Executive Order 11990 entitled "Protection of Wetlands," (May 1977) the U.S. Department of Transportation (USDOT) has developed a policy, Preservation of the Nation's Wetlands (USDOT Order 5660.1A), dated August 24, 1978, which requires all federally-funded highway projects to protect wetlands to the fullest extent possible. In accordance with this policy, as well as *Part 2, Chapter 18 - Wetlands* of the *FDOT PD&E Manual*, two (2) (this includes 1 no-build and 1 build alternative) project alternatives are assessed to determine potential wetland impacts associated with the construction of each alternative.

Although unavoidable wetland impacts will occur as a result of the proposed project, these wetlands are located adjacent to the existing roadway and have been previously disturbed by highway construction, maintenance activities, and the invasion of opportunistic nuisance and exotic species.

A total of 111 jurisdictional wetland and surface waters and 74 other surface waters have been identified and mapped along the project corridor. A description of the dominant floral species, soil types, Florida Land Use, Cover and Forms Classification System (FLUCFCS) codes, and other pertinent remarks are contained in the following sections. Uniform Mitigation Assessment Methodology (UMAM) analysis was performed on representative wetlands.

Recommended alternatives were identified and recommended for the I-75 mainline and the interchanges within the study area. These recommendations are listed below:

- **I-75 Mainline – Alternative 2**
- **SR 674 Interchange – Option C**
- **Big Bend Road Interchange – Option A**
- **Gibson Drive – Option A**

Proposed wetland impacts for the recommended alternative result in a total wetland impact area of approximately 45.18 acres and 5.33 acres of impacts to other surface waters.

Surface waters proposed for impact consist primarily of ditches and ponds that are located within the existing interchanges. Wetlands proposed for impact are generally of low to moderate quality with existing disturbances from previous roadway construction, maintenance activities, and prevalence of nuisance and exotic species.

Final determination of jurisdictional boundaries, in addition to mitigation requirements will be coordinated between the FDOT and permitting agencies during the final design stage of the project.

The results of this PD&E study indicate there are no practicable alternatives to the proposed impacts due to the need to increase roadway capacity and safety considerations. Furthermore, all impacts have been avoided and minimized to the greatest degree possible, and have been limited to those areas required to

meet minimum safety requirements. Future design of pond and floodplain compensation sites outside of the existing ROW will have to be evaluated for potential impact to protected species and habitat.

Protected Species & Habitat

The project corridor was also assessed for the presence of suitable habitat for federal- and/or state-listed protected species in accordance with 50 Code of Federal Regulations (CFR) Part 402 of the Endangered Species Act (ESA) of 1973, as amended, Chapters 5B-40: *Preservation of Native Flora of Florida* and 68A-27 Florida Administrative Code (F.A.C.) *Rules Relating to Endangered or Threatened Species*, and Part 2, Chapter 27 - *Wildlife and Habitat Impacts* of the *FDOT PD&E Manual*.

Species assessed for this project include but was not limited to the following: **American alligator** (*Alligator mississippiensis*), **American oystercatcher** (*Haematopus palliatus*), **black skimmer** (*Rynchops niger*), **brown pelican** (*Pelecanus occidentalis*), **Eastern indigo snake** (*Drymarchon corais couperi*), **Florida mouse** (*Podomys floridanus*), **Florida sandhill crane** (*Grus canadensis pratensis*), **Florida scrub-jay** (*Aphelocoma coerulescens*), **gopher frog** (*Rana capito*), **gopher tortoises** (*Gopherus polyphemus*), **least tern** (*Sterna antillarum*), **little blue heron** (*Egretta caerulea*), **reddish egret** (*E. rufescens*), **roseate spoonbill** (*Ajaia ajaia*), **snowy egret** (*E. thula*), **Suwannee cooter** (*Pseudemys concinna suwanniensis*), **tricolored heron** (*E. tricolor*), **West Indian manatee** (*Trichechus manatus*), **white ibis** (*Eudocimus albus*), and **wood stork** (*Mycteria americana*). Additionally, review for the de-listed **bald eagle** (*Haliaeetus leucocephalus*) was also conducted.

Field surveys for protected species took place in 2008 and 2009. Nineteen (19) state protected fauna species and twelve (12) state protected flora species are present or have high probability of occurrence along the project corridor. The state protected fauna species include the following: **American alligator**, **American oystercatcher**, **black skimmer**, **brown pelican**, **Eastern indigo**

snake, gopher frog, gopher tortoise, Florida mouse, Florida sandhill crane, least tern, little blue heron, reddish egret, roseate spoonbill, snowy egret, Suwannee cooter, tricolored heron, West Indian manatee, white ibis, and wood stork. Four (4) of these state protected fauna species are also federally protected and include; **American alligator, Eastern indigo snake, West Indian manatee, and wood stork.** One (1) federally protected flora species, **Florida golden aster** (*Chrysopsis floridana*), is also present along the project corridor. A **bald eagle's** nest is also present directly adjacent to the project corridor. Additionally, one area of critical habitat (CH) for the **West Indian Manatee** was determined to be present on the Little Manatee River.

Commitments to protect these species and habitat are provided and detailed in this report. These commitments include but are not limited to protection measures employed during design and construction and opportunity for the relocation of protected plant species. Standard operating measures such as providing compensatory mitigation measures for impacts to foraging habitat and resurveying of suitable habitat areas prior to construction will also provide protection for species and habitat. If protected species are located, coordination with the U.S. Fish and Wildlife Service (USFWS), Florida Fish and Wildlife Conservation Commission (FFWCC) and/or the Florida Department of Agriculture and Consumer Services - Division of Plant Industry (FDACS–DPI) will be initiated to determine any permit requirements or modifications to construction activities that may be required.

Although habitat in the vicinity of this project may support protected species, construction of this project is predominantly within or adjacent to existing ROW and is unlikely to adversely affect resources protected by the ESA of 1973, as amended (16 United States Code (U.S.C.) 1513 et. seq.). It has been determined that the proposed project is not likely to have an adverse affect on any of the federally or state protected species with the exception of the Florida golden aster. Formal consultation with the USFWS is currently ongoing for the Florida golden aster. Future design of pond and floodplain compensation sites

outside of the existing ROW will have to be evaluated for potential impact to protected species and habitat.

A letter of request initiating formal consultation with the USFWS was submitted in March 2010. This request was submitted to address potential impacts to the Florida golden aster and also seeks concurrence for affect determinations. A biological opinion (BO) will be written by USFWS staff and provide a determination of affect for the Florida golden aster. Once the USFWS completes the BO and provides concurrence on the affect determinations this information will be incorporated into the final document.

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- Appendix H - Standard-Manatee Conditions for In-Water Work
- Appendix I - FNAI Reports for Florida Golden Aster & Photographs

SECTION 1 INTRODUCTION

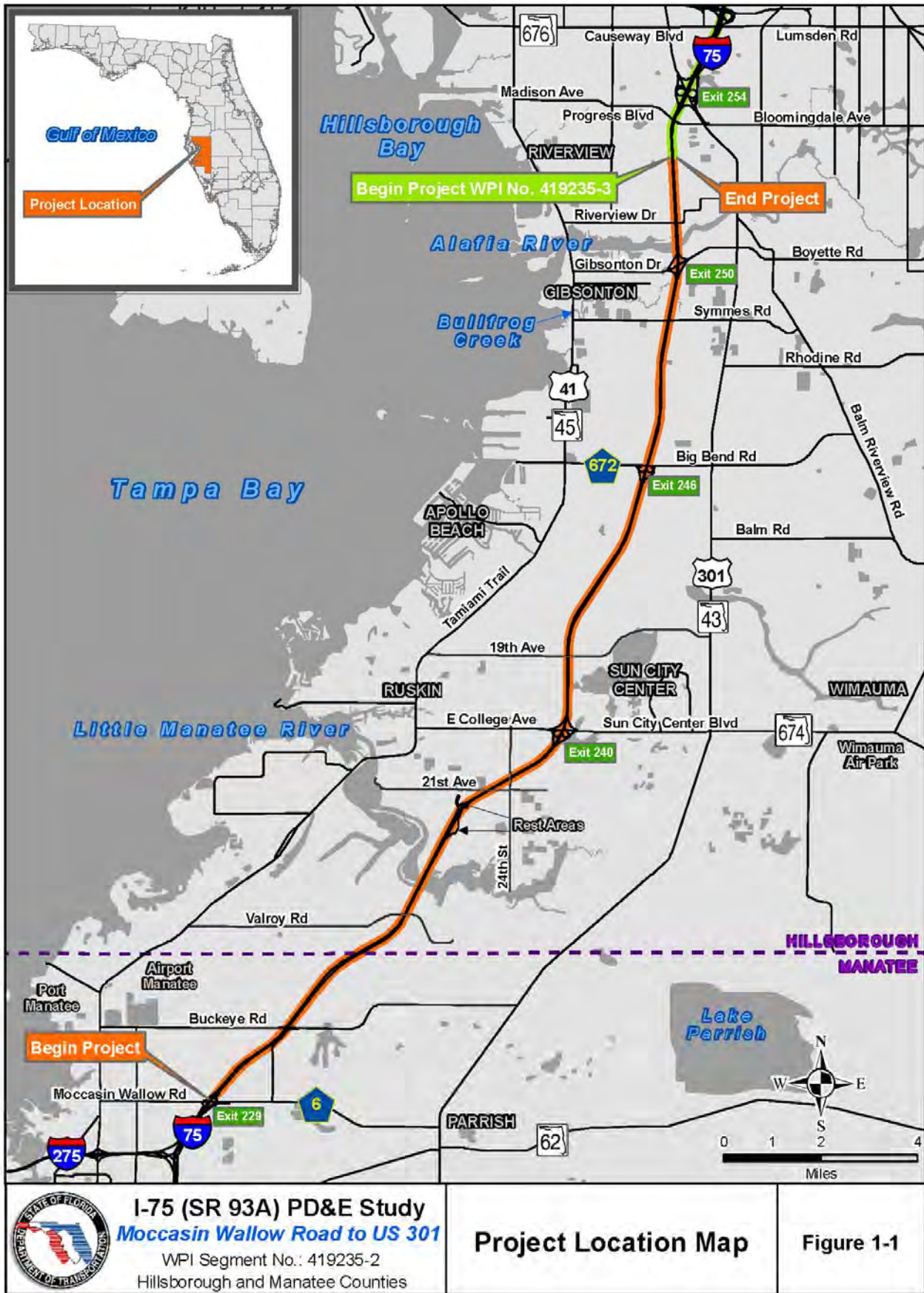
1.1 Project Description

The Florida Department of Transportation (FDOT), District Seven, is conducting a Project Development and Environment (PD&E) Study to evaluate improvements along 25 miles of Interstate 75 (I-75) (State Road (SR) 93A) from Moccasin Wallow Road in Manatee County to south of US 301 (SR 43) in Hillsborough County, Florida. The design year for the improvements is 2035. A project location map is shown in **Figure 1-1** along with a study area aerial map in **Figure 1-2**. The sections, townships and ranges where the project is located are summarized in **Table 1-1**.

Table 1-1 Sections, Townships, and Ranges

Sections	Townships	Ranges
Hillsborough County		
06,07,18,19,30,31	30 S	20 E
01,12,13,23,24,25,26,35	31 S	19 E
02,10,11,15,16,20,21,29,30,31,32	32 S	19 E
Manatee County		
01,02,10,11,15,16	33 S	18 E

The objective of this PD&E Study is to assist the FDOT and the Federal Highway Administration (FHWA) reach a decision on the type, location, and conceptual design of the necessary improvements for I-75 to safely and efficiently accommodate future travel demand. This study will document the need for the improvements as well as the procedures utilized to develop and evaluate various improvements, including elements such as proposed typical sections, preliminary horizontal alignments, and interchange enhancement alternatives. The social, physical, and natural environmental effects and costs of these improvements were identified. The alternatives were evaluated and compared based on a variety of parameters utilizing a matrix format. This process assists in identifying the alternative that will best balance the benefits with the impacts (such as environmental effects and costs).

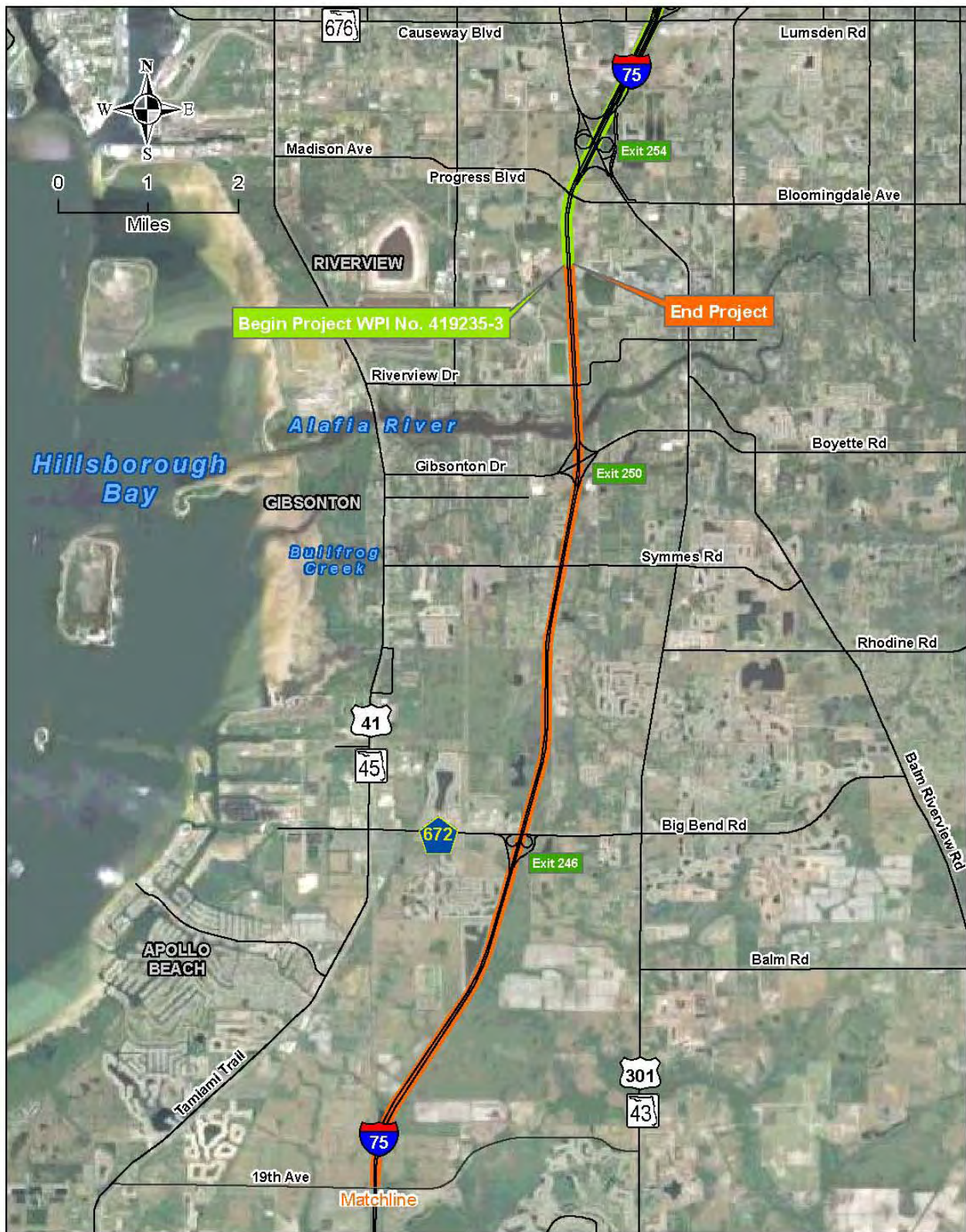




I-75 (SR 93) PD&E Study
Moccasin Wallow Road to US 301
 WPI Segment No.: 419235-2
 Hillsborough and Manatee Counties

Study Area Aerial Map

Figure 1-2
 Sheet 1 of 2



	<p>I-75 (SR 93) PD&E Study Moccasin Wallow Road to US 301 WPI Segment No.: 419235-2 Hillsborough and Manatee Counties</p>	<p>Study Area Aerial Map</p>	<p>Figure 1-2 Sheet 2 of 2</p>
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The PD&E study satisfies all applicable requirements, including the National Environmental Policy Act (NEPA), in order for this project to qualify for federal-aid funding of subsequent development phases (design, right-of-way (ROW) acquisition, and construction).

The project was evaluated through the FDOT's Efficient Transportation Decision Making (ETDM) process. This project is designated as ETDM project #8001. An *ETDM Programming Screen Summary Report* was published on March 29, 2007, containing comments from the Environmental Technical Advisory Team (ETAT) on the project's effects on various natural, physical and social resources. Based on the ETAT comments, the FHWA has determined that this project qualifies as a Type 2 Categorical Exclusion (CE).

This PD&E Study is being conducted concurrently with the PD&E Study for the section of I-75 that extends from south of US 301 to north of Fletcher Avenue in Hillsborough County (WPI Segment No. 419235-3).

1.2 Existing Facility

Interstate 75 is a limited access (L.A.), 1,786-mile-long freeway that travels in a generally north/south direction from a southern terminus at SR 826 (Palmetto Expressway) in Hialeah, Florida, to a northern terminus in Sault Sainte Marie, Michigan, near the border with Canada.

In Florida, I-75 is included in the State Highway System (SHS), designated as SR 93A; the Florida Intrastate Highway System (FIHS); the Strategic Intermodal System (SIS); and the Federal Aid Interstate System. I-75 serves as a major evacuation route throughout the state.

Within the project limits, I-75 is classified as a "Rural (south of 21st Avenue SE) and Urban (north of 21st Avenue SE) Principal Arterial – Interstate". The roadway is generally six lanes south of Gibsonton Drive and eight lanes north of Gibsonton Drive. All travel lanes are 12-ft wide and 12-ft inside and outside shoulders are provided, including 10-ft paved. The median width is a minimum of

88-ft wide; several areas near the south end of the project have a wider median where the roadway has been partially bifurcated. The existing typical sections are shown in **Figure 1-3**.

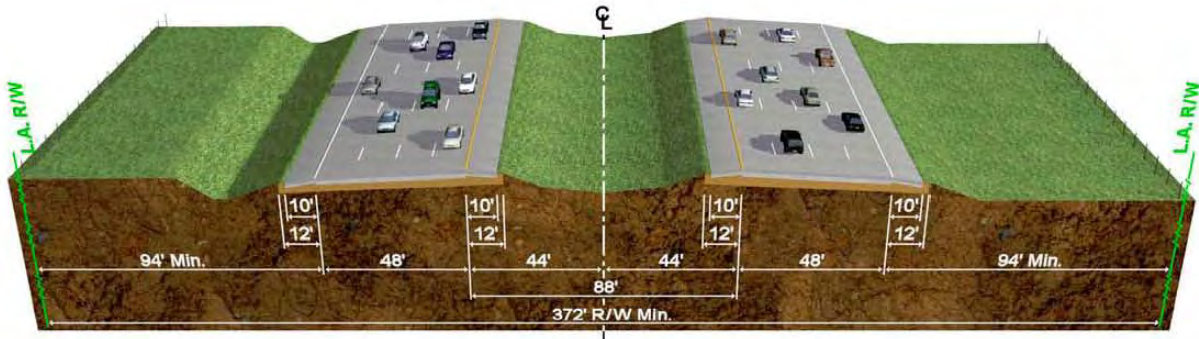
The existing L.A. ROW varies throughout the study limits; however, in most areas, the minimum ROW width is 348-ft. For a segment north of SR 674, the ROW on the west side narrows by as much as 46-ft just north of the interchange, yielding a total ROW of only 302-ft. Several areas near the south end have a ROW as wide as 556-ft, where the two roadways are partially bifurcated with a wider median.

There are three interchanges along I-75 within the project limits. They are located at SR 674 (East College Avenue/Sun City Center Boulevard), Big Bend Road (County Road (CR) 672), and Gibsonton Drive. Existing rest area facilities for northbound and southbound travelers are situated approximately 3-miles south of SR 674. The study area includes 22 bridge structures, including crossings over Curiosity Creek, the Little Manatee River, Bullfrog Creek and the Alafia River.

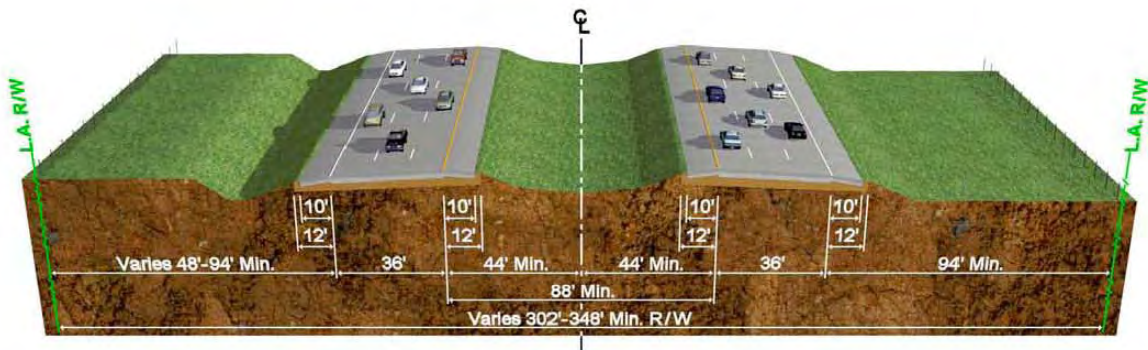
Interstate 75 has not had capacity improvements from Moccasin Wallow Road to south of US 301 since its original construction.

1.3 Project Purpose & Need

Interstate 75 is a vital link in the local and regional transportation network as well as a critical evacuation route as shown on the Florida Division of Emergency Management's evacuation route network. As a major north/south corridor, I-75 links the Tampa Bay region with the remainder of the state and the nation, supporting commerce, trade, and tourism. I-75 is part of the FIHS, a statewide transportation network that provides for the movement of goods and people at high speeds and high traffic volumes. The FIHS is comprised of interconnected limited and controlled access roadways, such as Florida's Turnpike, selected urban expressways, and major arterial highways. The FIHS is the Highway



Typical Section #2
 From Gibsonton Drive to South of US 301
 Design Speed = 70 mph



Typical Section #1
 From Moccasin Wallow Road to Gibsonton Drive
 Design Speed = 70 mph



I-75 (SR 93A) PD&E Study
 Moccasin Wallow Rd to US 301
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Existing Roadway Typical Sections

Figure 1-3

Component of the SIS, which is a statewide network of highways, railways, waterways, and transportation hubs that handle the bulk of Florida's passenger and freight traffic. As an SIS/FIHS facility and part of the regional roadway network, I-75 is included in the 2025 Regional Long-Range Transportation Plan (LRTP) developed by the West Central Florida Metropolitan Planning Organization's (MPO) Chairs Coordinating Committee (CCC). Preserving the operational integrity and regional functionality of I-75 is critical to mobility, as it is a vital link in the transportation network that connects the Tampa Bay region to the remainder of the state and the nation.

A portion of the study corridor, from SR 674 to Big Bend Road, is included in the FIHS 2025 Cost Feasible Plan Update, dated August 2003. Due to the intense traffic growth and high levels of congestion, the remaining portions of the study corridor are proposed to be included in the latest update of the FIHS 2025 Cost Feasible Plan. This project is identified in the SIS Multimodal Unfunded Needs Plan (May 2006) and in the earlier SIS 2030 Highway Component Unfunded Needs Plan (April 2004). This project is consistent with the Transportation Element of the Hillsborough County Local Government Comprehensive Plan adopted in March 2001 and last amended in January 2005. It is also included in the Hillsborough County MPO's 2035 LRTP Needs Assessment adopted on December 9, 2009 indicating the need for managed lanes throughout the length of the project and a total of 10 lanes south of Gibsonton Drive and 12 lanes north of Gibsonton Drive. The Sarasota/Manatee MPO's 2030 Needs Assessment adopted November 28, 2005 indicates the need for the addition of two special use lanes (SULs) in each direction throughout the length of the project. This project is also consistent with other similar projects planned along the I-75 corridor throughout the state and provides continuity with these projects. This study is being conducted concurrently with the PD&E Study for the section of I-75 that extends from south of US 301 to north of Fletcher Avenue in Hillsborough County (WPI Segment No. 419235-3). Also, FDOT's District One is currently completing two PD&E Studies for the widening of two contiguous portions of I-75, which when combined extend from SR 681 in Sarasota County to Moccasin

Wallow Road in Manatee County (WPI Segment Nos. 201277-1 and 201032-1). FDOT, District Seven, is currently designing capacity improvements to I-75 from Fowler Avenue in Hillsborough County to the Pasco/Hernando Line (WPI Segment Nos. 408459-2, 408459-3, 408459-4, 258736-2 and 41014-2) and from the Pasco/Hernando County Line north to the Sumter County Line (WPI Segment Nos. 411011-2 and 411012-2).

In 2007, the traffic volumes along I-75 in the study area ranged from 58,000 vehicles per day (vpd) north of Moccasin Wallow Road to 115,200 vpd north of Gibsonton Drive. These volumes included truck traffic that varied from 9.0 to 16.0 percent of the daily volumes. As a result of this high travel demand, several sections of I-75 already operate at congested conditions and levels of service (LOS) worse than the FHWS minimum LOS standard for both “urbanized areas” and “rural areas”, which are LOS “D” and LOS “B”, respectively. Without improvements, the operating conditions along I-75 and connecting roadways will continue to deteriorate, resulting in unacceptable LOS throughout the entire study corridor. Capacity improvements could also enhance travel safety by reducing congestion, thereby decreasing vehicle conflicts.

According to the crash records for the years 2003 through 2007, obtained from the FDOT’s crash database, a total of 1,562 crashes were reported along I-75 within the project limits. The 1,562 crashes involved a total of 1,035 reported injuries and 34 fatalities. The total economic loss from these crashes is estimated to be approximately \$60 million.

1.4 Report Purpose

This *Wetlands Evaluation and Biological Assessment Report (WEBAR)* is one of several documents that will be prepared as part of this PD&E Study. This report documents wetlands and protected species. Pursuant to Presidential Executive Order 11990 entitled “Protection of Wetlands,” the U.S. Department of Transportation (USDOT) has developed a policy, Preservation of the Nation’s Wetlands (USDOT Order 5660.1A), dated August 24, 1978, which requires all

federally-funded highway projects to protect wetlands to the fullest extent possible. In accordance with this policy, as well as *Part 2, Chapter 18 - Wetlands* of the *FDOT PD&E Manual*, two (2) project alternatives were assessed to determine potential wetland impacts associated with construction of each alternative.

This report also documents existing wildlife resources and assesses existing habitat types found within the project area for potential occurrences of federal and state listed protected plant and animal species in accordance with *Part 2, Chapter 27 - Wildlife and Habitat Impacts* of the *FDOT PD&E Manual*. Potential impacts to protected species and critical habitat (CH) that may support these species are also addressed in this report.

SECTION 2 IMPROVEMENT ALTERNATIVES

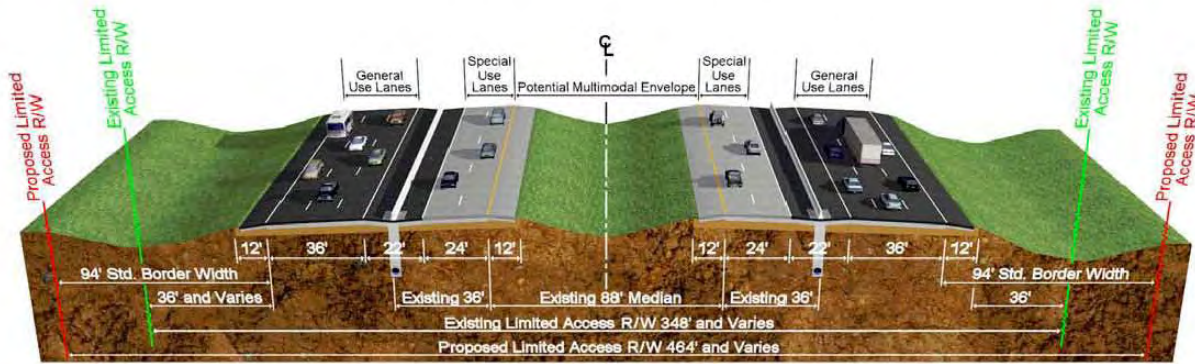
A detailed *Design Traffic Technical Memorandum (DTTM)* was prepared as part of this PD&E Study. The *DTTM* documented the existing travel conditions along I-75, presented forecasts of the design year travel demand along I-75 and the crossing corridors, and summarized LOS evaluations of several improvement alternatives for the mainline of I-75. This document concluded that the construction of two SULs in each direction would be the most advantageous alternative because it provides mobility options and preserves acceptable LOS for the regional travelers.

2.1 No-Build Alternative

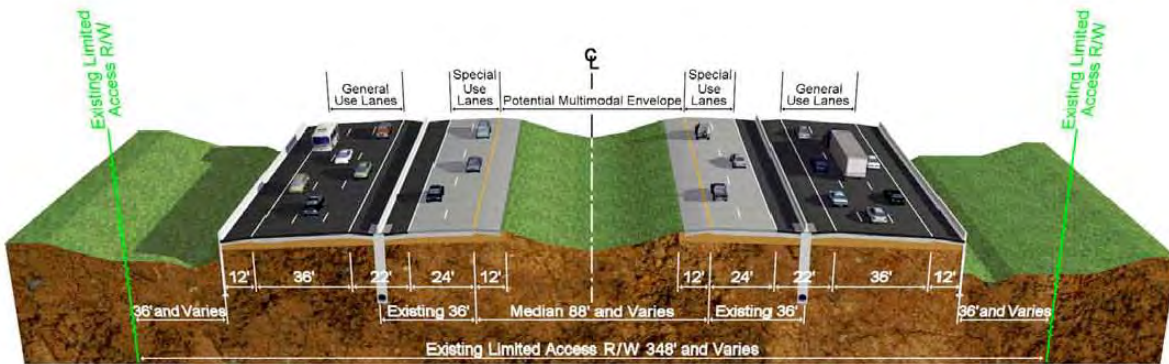
For the No-Build Alternative it was assumed that no capacity improvements, other than those already planned and funded, would be made to the I-75 corridor. The advantages to the No-Build Alternative include no new costs for design and construction, no effects to existing land uses and natural resources, and no disruption to the public during construction. However, the No-Build Alternative would not address the travelers' needs and would result in increased congestion and user costs. This option will remain under consideration as a viable alternative throughout the PD&E study process.

2.2 Mainline Build Alternatives

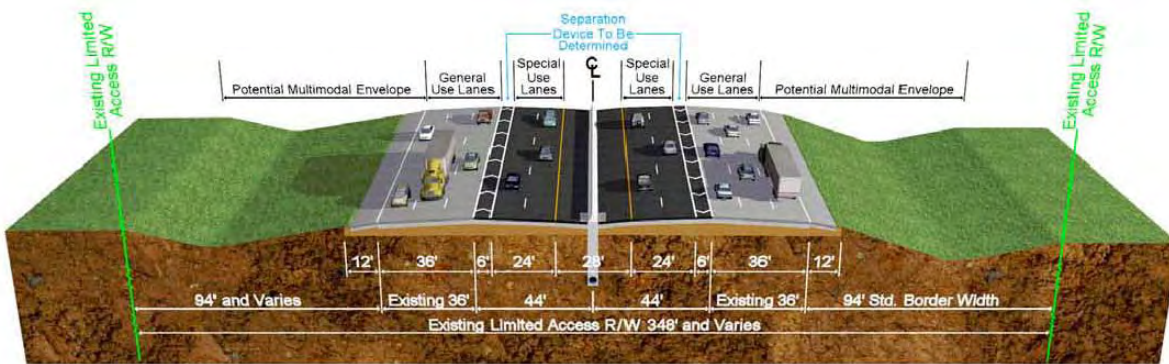
For the I-75 mainline, two Build Alternative alignments were developed and evaluated based on three alternate typical sections. The typical sections generally consist of 10 travel lanes with six general use lanes (GUL) (three in each direction) and four SULs (two in each direction). The main differences between the typical sections are the type of separation provided between the GULs and the SULs and whether widening takes place within the median or to the outside. Each mainline alternative considered is summarized below with the typical sections illustrated in **Figure 2-1**. A more detailed description of these alternatives can be found in the *Project Development Engineering Report (PDER)*.



Alternative 1A



Alternative 1B



Alternative 2



I-75 (SR 93A) PD&E Study
Moccasin Wallow Rd to US 301
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 Hillsborough and Manatee Counties

Proposed Typical Sections

Figure 2-1

The mainline alternative improvements could be constructed within the existing ROW. Additional ROW may be required, however, for stormwater management facilities, floodplain compensation sites and to maintain the standard border width under Alternative 1A.

2.2.1 Mainline Alternative 1

Mainline Alternative 1 consists of widening to the outside and maintaining a multimodal envelope within the existing median. This alternative preserves a multimodal envelope within the existing 88-ft median and widens to the outside in each direction to provide two SULs and three GULs separated by 10-ft shoulders and a 2-ft barrier. Two alternative typical sections were prepared and evaluated for this alternative.

Mainline Alternative 1 - Typical 1A (Alternative 1A)

The main objective for this alternative typical section was to maintain a standard border width of 94-ft, per FDOT *Plans Preparation Manual (PPM)* requirements. The exceptions to this guideline are at locations where it would be impractical to relocate major facilities such as the Hillsborough County's wastewater treatment plant near SR 674. In these instances, a design variation for border width would be required. This alternative has longitudinal ROW requirements along the entire corridor (up to 58-ft on both sides of I-75).

Mainline Alternative 1 – Typical 1B (Alternative 1B)

This alternative typical section is very similar to Alternative 1A except that its footprint is intended to be constructed within the existing L.A. ROW. As a result, the border width would be less than the required standard border width and would require a design variation. However, as a result of the elevation difference between the pavement and the side ditches, mechanically stabilized earth (MSE) walls or “retaining walls” would be required at the outside shoulders on both sides of I-75 for a significant portion of the corridor.

2.2.2 Mainline Alternative 2

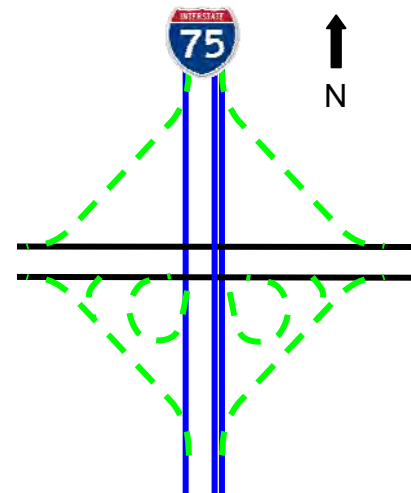
Mainline Alternative 2 was developed by widening towards the inside, thereby moving a potential multimodal envelope to the outside. This alternative is achieved within the existing L.A. ROW as it generally holds the existing roadway pavement as the six GULs. It includes a median barrier separating northbound and southbound traffic. It also includes two SULs and three GULs separated by a 6-ft buffer (painted or pylons) in each direction.

2.3 Interchange Build Alternatives

There are three interchanges along I-75 within the project limits located at SR 674, Big Bend Road and Gibsonton Drive. Three configuration changes were evaluated for the SR 674 and Big Bend Road interchanges while one option was evaluated for the Gibsonton Drive interchange. All interchange options considered work with either mainline alternative and also include operational improvements at the ramps terminal intersections. A general description of the configuration improvements evaluated for each interchange follows below.

2.3.1 SR 674 Interchange Improvement Alternatives

The SR 674 interchange is presently a combination diamond-partial cloverleaf configured interchange as depicted on the figure shown to the right with I-75 carried over SR 674. Three improvement options (Option A, Option B, and Option C) were evaluated at the SR 674 interchange. A brief description of each alternative is shown below:

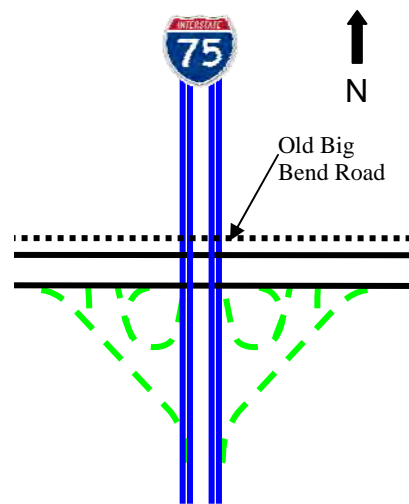


- Option A - Diverging Diamond Interchange (DDI) – This interchange option would eliminate the EB to NB and SB to EB loop ramps and modify the interchange to a DDI configuration.

- Option B- Single Point Urban (SPUI) – This interchange option would eliminate the EB to NB and SB to EB loop ramps and modify the interchange to a SPUI configuration
- Option C – Modify Existing Partial Cloverleaf (PARCLO) – This interchange option would not eliminate the existing loop ramps, but simply modify the SB exit ramps. The modifications consist of providing a single exit point from I-75 for the SB to WB and SB to EB off-ramps and provide a two lane SB to EB ramp.

2.3.2 Big Bend Road Interchange Improvement Alternatives

The Big Bend Road interchange is presently a half-cloverleaf configured interchange as depicted on the figure shown to the right with I-75 carried over Big Bend Road and Old Big Bend Road. Three improvement options (Option A, Option B, and Option C) were evaluated at the Big Bend Road interchange. A brief description of each alternative is shown below:

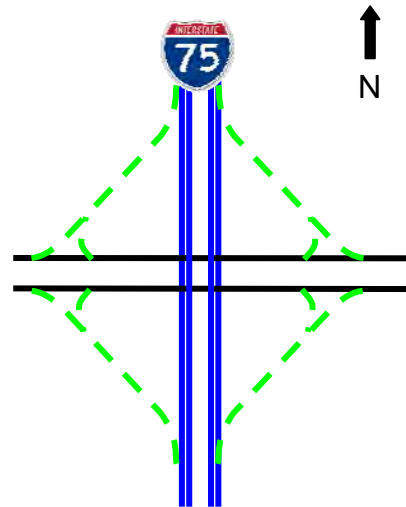


- Option A – Grade Separated option with Frontage Road open – This interchange option would retain the existing loop ramps and add a SB to WB off-ramp and a WB to NB on-ramp. This option would allow for Old Big Bend Road to remain open underneath I-75.
- Option B – At Grade option with Frontage Road closed – This interchange option would retain the existing loop ramps and add a SB to WB off-ramp and a WB to NB on-ramp. This option would require that the existing Old Big Bend Road to be closed while relocating Bullfrog Creek Road.

- Option C – Flyover option – This interchange option would remove the existing EB to NB loop ramp and replace it with a flyover ramp. This option would also add a SB to WB off-ramp along with a WB to NB on-ramp.

2.3.3 Gibsonton Drive Interchange Improvement Alternatives

The Gibsonton Drive interchange is presently a diamond configured interchange as depicted on the figure shown to the right with Gibsonton Drive carried over I-75. A single option (Option A) was considered for this interchange consisting of a partial cloverleaf design. This option would remove the existing NB to WB and SB to EB movements and replace them with loop ramps.



2.3.4 Possible New Interchanges

No new interchanges have been formally evaluated at this point under this PD&E Study, however; two separate analyses have been performed or are currently underway.

- Between SR 674 and Gibsonton Drive

A planning level analysis was performed for a potential future interchange at three possible locations based on local agency requests. The purpose of this analysis was not to select a particular location, but to quantify the potential impacts and benefits of each location with respect to one another. The Hillsborough County Planning and Growth Management Department is continuing to investigate the various location options, in cooperation with local developers and the FDOT.

- Possible Port Manatee Connector Interchange

A PD&E Study is currently being conducted by FDOT District One under FPID No.: 422724-1-22-01 to provide improved access to Port Manatee from I-75. There are five corridors being evaluated as a part of this study with the possibility of a new interchange being added along I-75 between the I-275 junction in Manatee County to Valroy Road in Hillsborough County.

2.4 Recommended Build Alternative

All options considered and discussed previously have been evaluated with regards to costs, operational factors and environmental impacts. Based on these evaluations, recommended build alternatives have been identified for the I-75 mainline along with each interchange within the corridor and are listed below:

- **I-75 Mainline – Alternative 2**
- **SR 674 Interchange – Option C**
- **Big Bend Road Interchange – Option A**
- **Gibson Drive – Option A**

The methodology for the selection of the recommended build alternative is discussed in detail *PDER*.

SECTION 3 EXISTING ENVIRONMENTAL CONDITIONS

3.1 Existing Land Use

Existing land use along the project corridor was determined utilizing a variety of resources including the National Wetlands Inventory (NWI), the Natural Resources Conservation Service's (NRCS (formerly the Soil Conservation Service)) maps, Soil Surveys for Hillsborough and Manatee Counties, U.S Geological Survey (USGS) topographical maps, aerial photographs (2007 & 2008), land use mapping from the Southwest Florida Water Management District (SWFWMD, 2004), and field verification during habitat and species reviews.

Appendix A provides a map of existing land use for the project corridor.

Land use along the southern half of the project is dominated by agricultural use with moderately interspersed urban and built up areas primarily associated with major interchanges. The northern half of the corridor is dominated by urban and built up land uses but still maintains a relatively large percentage of agricultural use.

Field reviews generally agreed with the SWFWMD's land use mapping. Although, minor updates to the SWFWMD's base map were made in December 2009. A mosaic of upland and wetland community types were found within the areas mapped as agricultural and transportation. Most upland habitats adjacent to the project corridor have been developed as low to medium density residential and agricultural uses, as well as a few commercial and retail facilities. Upland habitats that have not been developed consist of palmetto prairie, pine flatwoods, and xeric oak. Although undeveloped at the time of surveys, most of these habitats have moderate levels of disturbance and are not considered pristine. Wetlands adjacent to the project corridor are the same or similar to those described for the project corridor. Detailed descriptions of upland and wetland communities are provided in **Sections 3.1.2 and 3.1.3**. **Table 3-1** provides a summary of land use cover types and prevalence within and immediately adjacent to the project corridor.

Table 3-1 – Existing Land Use Cover (FLUCFCS)

FLUCFCS Code		Description	Percent Cover
100: Urban & Built-Up	110	Residential, Low Density	4.20%
	120	Residential, Medium Density	1.48%
	130	Residential, High Density	1.24%
	132	Mobile Home Units	0.58%
	140	Commercial and Services	0.35%
	143	Professional Services	0.22%
	155	Other Light Industrial	0.58%
	170	Institutional	0.20%
	190	Open Land	2.66%
	192	Inactive Land with Street Patterns but without Structures	0.23%
			Total
200: Agriculture	210	Cropland and Pastureland	9.26%
	214	Row Crops	0.37%
	224	Abandoned Groves	0.57%
	240	Nurseries and Vineyards	0.14%
	242	Sod Farms	1.01%
	254	Aquaculture	0.19%
	260	Other Open Lands	3.89%
			Total
300: Rangeland	320	Shrub and Brushland	3.39%
	321	Palmetto Prairies	0.13%
			Total
400: Upland Forests	410	Upland Coniferous Forest	1.15%
	411	Pine Flatwoods	3.49%
	413	Sand Pine	0.26%
	421	Xeric Oak	1.28%
	422	Brazilian Pepper	3.77%
	434	Hardwood - Conifer Mixed	7.71%
	440	Tree Plantations	0.10%
			Total

Table 3-1 (continued)

FLUCFCS Code		Description	Percent Cover
500: Water	510	Streams and Waterways	0.92%
	530	Reservoirs	1.63%
	540	Bays and Estuaries	0.32%
	Total		2.86%
600: Wetlands	610	Wetland Hardwood Forest	4.37%
	615	Streams and Lake Swamps	0.34%
	617	Mixed Wetland Hardwoods	0.71%
	620	Wetland Coniferous Forest	0.00%
	621	Cypress	0.55%
	630	Wetland Forested Mixed	0.55%
	631	Wetland Scrub	0.71%
	640	Vegetated Non-Forested Wetlands	0.09%
	641	Freshwater Marshes	1.16%
	6417	Freshwater Marsh with Shrubs, Brush, and Grasses	0.24%
	642	Saltwater Marshes	0.27%
	643	Wet Prairies	0.23%
	644	Emergent Aquatic Vegetation	0.06%
	Total		9.29%
700: Barren Land	740	Disturbed Lands	0.42%
	Total		0.42%
800: Transportation, Communication, Utilities	810	Transportation	38.39%
	830	Utilities	0.82%
	Total		39.21%

3.1.1 Natural & Biological Features

Major rivers within the study limits in Hillsborough County include the Alafia and Little Manatee, and the principal stream system is Bullfrog Creek. Drainage is directed to the west toward Old Tampa Bay, Hillsborough Bay and Tampa Bay. Flatwoods are common in the western, southern, and northeastern portions of the county. A wide variety of intermittent ponds, marshes, and swamps are found in this flatwoods habitat. Drainage within the flatwoods habitat is generally slow and is aided by the creek and riverine systems.

The Little Manatee River is the primary river system within the Manatee County portion of the study corridor. Numerous stream systems feed into this river throughout the county. Manatee County is relatively flat with wide expanses of agricultural activity throughout eastern portions of the county. Agricultural activity has given way to large areas of residential development in the past 10 years.

Riverine systems provide travel corridors for wildlife through developed and undeveloped habitats such as those that exist along the project corridor. Additionally, these riverine systems provide a great deal of foraging area for wetland dependent species.

Overall topography along the corridor varies with elevations identified along the project corridor ranging from about 5 ft. National Geodetic Vertical Datum (NGVD) to about 50 ft. Elevation at the northern end of the project is about 30 ft. NGVD while the southern end is about 25 ft. NGVD.

3.1.2 Upland Communities

Upland communities identified within and directly adjacent to the project corridor are provided in this section. These communities are classified according to *Florida Land Use, Cover and Forms Classification System (FLUCFCS)*, (FDOT 1999). Field reviews confirmed community boundaries, dominant vegetation, nuisance and exotic vegetation coverage in natural communities, and were conducted to determine the presence or potential for occurrence of threatened

and endangered species. Nuisance and exotic species coverage is only discussed for habitats that maintain a more natural character and have greater potential of supporting protected species. A description of federal and state protected species observed during field surveys is also included, where applicable. These protected species are also discussed in greater detail in **Section 5.0.**

Residential (FLUCFCS 110 - 130)

This classification encompasses residential lands ranging from high-density urban housing developments to low-density rural areas with a low number of homes per acre. Along the corridor Residential, Low Density (FLUCFCS 110) is more prevalent than either Medium Density (FLUCFCS 120) or High Density (FLUCFCS 130). Bahia grass (*Paspalum notatum*) and other sod type grasses are present in all of residential lands. An open canopy of slash pine (*Pinus elliottii*) and oak species (*Quercus* spp.) are more common in the Low Density residential areas along with some native shrubs and forbs reminiscent of the original native habitats.

Evidence of the gopher tortoise (*Gopherus polyphemus*), a state-protected species, was identified in some of the low density residential areas. Additional protected species which utilize gopher tortoise burrows are also likely present.

Mobile Home Units <Six or more dwelling units per acre> (FLUCFCS 132)

This classification encompasses high density mobile home housing. Vegetative species cover and diversity is extremely limited with sod grasses being the most prevalent type found.

No protected species were observed in this habitat during field surveys for this project.

Commercial and Services & Professional Services (FLUCFCS 140 & 143)

These classifications are predominantly associated with the distribution of products and services. Along the corridor these areas are generally small with parking facilities and moderate sized landscape areas with sod grasses. Small medical offices are the most common facilities.

No protected species were observed in this habitat during field surveys for this project.

Other Light Industrial (FLUCFCS 155)

Light manufacturing enterprises such as this typically incorporate activities including steel fabrication, small boat manufacturing, electronic manufacturing, and assembly plants. Vegetation in this land use was limited to sod grasses and a minimal amount of landscape trees associated with parking areas and storm water retention facilities.

No protected species were observed in this habitat during field surveys for this project.

Institutional (FLUCFCS 170)

This classification incorporates educational, religious, health, and military facilities. Vegetative species cover was dominated by mowed and maintained sod grasses.

No protected species were observed in this habitat during field surveys for this project.

Open Lands & Open Lands with Street Patterns but without Structures (FLUCFCS 190 & 192)

These land use types include undeveloped land and inactive land with street patterns but without structures found within urban areas. These areas were generally cleared of canopy and shrub species and maintained low growing forbs and grass species.

No protected species were observed in this habitat during field surveys for this project.

Cropland and Pastureland (FLUCFCS 210)

This land use type includes lands that are managed for row crops or pasture production of livestock. A mix of improved and unimproved pasturelands is present along the project corridor. Bahia grass and Bermuda grass (*Cynodon dactylon*) are the dominant species found within the pasturelands along with a mix of shrubs and trees. Subdominant grasses included bluestems (*Andropogon* spp.) and dropseed grasses (*Sporobolus* spp.) When present the shrubs observed included falsewillow (*Baccharis* spp.), wax myrtle (*Myrica cerifera*), and Brazilian pepper (*Schinus terebinthifolius*).

Evidence of the gopher tortoise, a state-protected species, was made in the unimproved pastures with limited evidence and area also identified in the improved pastures. Additional protected species which utilize gopher tortoise burrows are also likely present. Although no longer protected by the Endangered Species Act (ESA), an active bald eagle's (*Haliaeetus leucocephalus*) nest was located on a cell phone tower within a pasture area adjacent to the project ROW.

Row Crops (FLUCFCS 214)

Vegetables such as corn, tomatoes, potatoes, and beans are typical row crops grown in Florida. At the time of field surveys most row crop species were not readily apparent and other than crop vegetation only occasional weedy species were observed.

No protected species were observed in this habitat during field surveys for this project.

Abandoned Groves (FLUCFCS 224)

This classification incorporates abandoned tree groves. Citrus (*Citrus* spp.) was the primary species observed with a varying amounts of falsewillow, white beggar-ticks (*Bidens alba*), dogfennel (*Eupatorium capillifolium*), laurel oak (*Quercus laurifolia*), Brazilian pepper, and other weedy species also observed.

No protected species were observed in this habitat during field surveys for this project.

Nurseries and Vineyards (FLUCFCS 240)

Nurseries, floricultural areas, and seed-and-sod activities that are used perennially and generally not rotated with other uses are the agricultural operations of this land use. Most vegetation in these areas was planted material (potted and in ground) with cleared, mowed and maintained sod species interspersed.

No protected species were observed in this habitat during field surveys for this project.

Sod Farms (FLUCFCS 242)

This category is unique and required the sod crop to be in the harvest stage for detection. Bahia grass was the primary sod species observed in this agricultural operation type.

No protected species were observed in this habitat during field surveys for this project.

Aquaculture (FLUCFCS 254)

This category is identified in the aerial by the clearly visible, numerous, and consecutive ponds. Mowed and maintained sod grass is present on what limited land is still present in these areas.

No protected species were observed in this habitat during field surveys for this project.

Other Open Lands (FLUCFCS 260)

Agricultural lands with an undetermined usage falls into this category. These lands were generally dominated by Bahia grass with some areas maintaining moderate numbers of pioneer shrub species and occasional oak or slash pine trees. Nuisance and exotic species coverage in these areas is moderate to high when present and generally consisted of Brazilian pepper.

No protected species were observed in this habitat during field surveys for this project.

Shrub and Brushland (FLUCFCS 320)

A variety of shrub species including saw palmettos (*Serenoa repens*), gallberry (*Ilex glabra*), wax myrtle, coastal scrub, and other shrubs and brush dominate this habitat type. Saw palmetto, Brazilian pepper, and falsewillow were the most prevalent shrub species. Occasional oak trees, slash pines, and cabbage palms (*Sabal palmetto*) were also observed. Understory vegetation was dominated by bluestem grasses, with winged sumac (*Rhus copallinum*), muscadine grape (*Vitus rotundifolia*), and cogongrass (*Imperata cylindrica*) also observed. Nuisance and exotic species coverage in these areas is variable but generally considered low to moderate when present.

Active and inactive burrows of the state-protected species, gopher tortoise, were identified in this habitat. Additional protected species which utilize gopher tortoise burrows are also likely present. Although no longer protected by the ESA, a bald eagle was observed flying low over this habitat in the vicinity of an active nest. Simpson's zephyr lily (*Zephyranthes simpsonii*), a state-protected flora species, was observed in this habitat within the Gibsonton Drive interchange.

Palmetto Prairies (FLUCFCS 321)

Palmetto prairie is a shrubby habitat dominated by saw palmetto. Palmetto prairie is found in several locations along the project corridor. In addition to a dense stand of saw palmetto, muscadine grape was also observed growing over much of the vegetation within this habitat. Brazilian pepper is present in low density due to the dense growth of saw palmetto. Other species found within this habitat type are wiregrass (*Aristida stricta* var. *beyrichiana*), slender goldenrod (*Euthamia caroliniana*), pricklypear (*Opuntia humifusa*), blackroot (*Pterocaulon pycnostachyum*), winged sumac, and goldenrod (*Solidago* sp.). Nuisance and exotic species coverage in these areas is low to moderate when present.

Active and inactive burrows of the state-protected species, gopher tortoise, were identified in this habitat. Additional protected species which utilize gopher tortoise burrows are also likely present. Nodding pinweed (*Lechea cernua*), a state-protected species, was also observed in this habitat.

Upland Coniferous Forests (FLUCFCS 410)

Any natural forested habitat which is dominated by a coniferous canopy of at least 66 percent type is included in this habitat type. Generally these areas are found within the ROW and consisted of remnant pine flatwoods with cleared understory and possibly some planted slash pine. Understory vegetation in these areas is generally mowed and maintained but encroachment of Brazilian pepper and muscadine grape in the understory of some areas has occurred. Other species observed included white beggar-ticks and Caesarweed (*Urena lobata*). Brazilian pepper was the primary exotic species observed with coverage ranging from low to high.

No protected species were observed in this habitat during field surveys for this project.

Pine Flatwoods (FLUCFCS 411)

This forested habitat type is common throughout central and northern Florida. A few areas of pine flatwoods are present along the corridor. Vegetation is similar to that of the palmetto prairie (FLUCFCS 321) with the addition of a canopy of slash pine and lower coverage of muscadine grape. Nuisance exotic coverage in this habitat was generally low with Brazilian pepper the most common invasive species.

Active and inactive burrows of the state-protected species, gopher tortoise, were identified in this habitat. Additional protected species which utilize gopher tortoise burrows are also likely present.

Sand Pine (FLUCFCS 413)

Sand pine (*Pinus clausa*) habitat is found on deep, infertile deposits of marine sands and clays. Canopy species found in this habitat include sand pines, live oak, Chapman's oak (*Quercus chapmanii*), and other xeric oak species. Shrub and ground cover species observed include saw palmetto, Hercule's club (*Zanthoxylum clava-herculis*), nodding pinweed, and silkgrass (*Pityopsis* sp.). Nuisance exotic species presence was generally low with Brazilian pepper and rose natalgrass (*Melinis repens*) the most prevalent.

Active and inactive burrows of the state-protected species, gopher tortoise, were identified in this habitat. Additional protected species which utilize gopher tortoise burrows are also likely present. Nodding pinweed, a state-protected plant species, was also observed in this habitat.

Xeric Oak (FLUCFCS 421)

This forested habitat is similar to and occupies the same ecotones as Longleaf Pine – Xeric Oak (FLUCFCS 412), except that longleaf pines are not present or are not a dominant feature. A few areas of xeric oak exist along the corridor. These areas are relatively small, fragmented, and generally overgrown. Xeric oak habitat also exists adjacent to the project area in the Golden Aster Scrub Nature Preserve. Scrub species including sand live oak (*Quercus geminata*), coastalplain (*Balduina angustifolia*), scrubland golden aster (*Chrysopsis subulata*), British soldier moss (*Cladonia leporina*), fragrant eryngo (*Eryngium aromaticum*), Florida scrub frostweed (*Helianthemum nashii*), nodding pinweed, pine pinweed (*Lechea divaricata*), rusty lyonia (*Lyonia ferruginea*), natal grass, Feay's palafox (*Palafoxia feayi*), sand pine, narrowleaf silkgrass (*Pityopsis graminifolia*), jointweed (*Polygonella* sp.), sand spikemoss (*Selaginella arenicola*), saw palmetto, greenbriar (*Smilax* spp.), and hogplum (*Ximenia americana*) are present. Brazilian pepper is present in low density in some areas as is cogongrass.

Two (2) populations of Florida golden aster (*Chrysopsis floridana*), which is federally and state listed as endangered, were also documented. Nodding pinweed is listed as threatened by the Florida Department of Agriculture and Consumer Services - Division of Plant Industry (FDACS-DPI) and pine pinweed is listed as endangered by the FDACS-DPI. Active and inactive burrows of the state-protected species, gopher tortoise, were identified in this habitat. Additional protected species which utilize gopher tortoise burrows are also likely present. Scrub-jays were not observed in this habitat. Due to the small size, fragmented locations, and overgrown structure, utilization of the habitat is unlikely.

Brazilian Pepper (FLUCFCS 422)

This habitat is dominated by the exotic, pestilent species from Brazil and found from the Tampa Bay area southward. Large portions of the upland habitat along the corridor have been overwhelmed with Brazilian pepper, resulting in exotic monocultures. Little or no other vegetation exists in the understory of this habitat type. Laurel and water oak (*Quercus nigra*), cabbage palm, and muscadine grape are occasionally present.

No protected species were observed in this habitat during field surveys for this project.

Hardwood – Conifer Mixed (FLUCFCS 434)

Neither conifers nor hardwoods achieve 66% dominance in this habitat. This habitat was likely pine flatwoods (FLUCFCS 411) at one time but overgrowth of hardwoods and exotic species has occurred. Presence of these hardwoods and exotics is likely due to fire suppression. Canopy species including slash pine, red maple (*Acer rubrum*) and both laurel and live oaks (*Quercus virginiana*) are present. Saw palmetto is also present with an inverse relationship to the coverage of Brazilian pepper. Other species observed in this habitat include Caesarweed, dogfennel, falsewillow, goldenrod, and muscadine grape. Coverage of exotic species is low to moderate with Brazilian pepper the most abundant of these species. Other nuisance and exotic canopy species includes Australian-pine (*Casuarina equisetifolia*) and silk tree (*Albizia julibrissin*).

Evidence of the state-protected species, gopher tortoise, was identified at the edges of this habitat type. Additional protected species which utilize gopher tortoise burrows are also likely present.

Tree Plantations (FLUCFCS 440)

According to the FLUCFCS manual, Florida is one of the most productive timber producing regions of the world. Small areas of planted slash pine are present along the project corridor. Ground cover is generally limited to sod grass and weed species when present. Brazilian pepper was the primary exotic species observed with coverage ranging from low to high.

No protected species were observed in this habitat during field surveys for this project.

Disturbed Lands (FLUCFCS 740)

Those disturbed lands which have been changed due primarily to human activities other than mining. A few areas of disturbed lands were present along the corridor. Low vegetation diversity is present with the areas generally dominated by Bahia grass with occasional shrub species also present.

No protected species were observed in this habitat during field surveys for this project.

Transportation (FLUCFCS 810)

These facilities are utilized for the movement of people and goods and as a result are major influences on land and define many land use boundaries. The transportation corridor for I-75 is dominated by a grassy maintained ROW along with the transportation facilities. Upland and wetland habitats described above and below are interspersed along this maintained ROW. These maintained areas are dominated by Bermuda grass and Bahia grass. Other vegetation found within the maintained ROW includes white beggar-ticks, pennywort (*Hydrocotyle umbellata*), frog-fruit (*Phyla nodiflora*), slash pine, sabal palmetto, Brazilian pepper, and muscadine grape. Thin strips of planted pine, palmetto prairie, and xeric oak are also located within the transportation corridor. Brazilian pepper is present in the understory of the planted pine strips in moderate to high

density. A few locations are generally free of Brazilian pepper but these areas are infrequent.

Protected species were observed within the transportation corridor but were generally limited to the thin strips of habitat which are not actively mowed. These species include the state-protected nodding pinweed and gopher tortoise. Additional protected associate species of the gopher tortoise are also likely present. A Florida sandhill crane (*Grus canadensis pratensis*), a state-protected species, was also observed flying over I-75 from east to west (location presented in Figure 5-4).

Utilities (FLUCFCS 830)

This category includes power generation facilities, water treatment plants in addition to the transmission lines and aeration fields associated with the facilities. These areas are generally heavily maintained areas with a prevalence of sod grasses and some landscape shrubbery, in addition to other low lying grasses and forbs.

No protected species were observed in this habitat during field surveys for this project.

3.1.3 Wetlands & Surface Water Communities

In accordance with Executive Order 11990, "Protection of Wetlands" (May 1977), the proposed project has been evaluated for potential effects to wetlands. Wetland locations and boundaries were identified and approximated using aerial interpretation and field reconnaissance in the spring and summer of 2008. Wetland boundaries were visually approximated using the U.S. Army Corps of Engineer's (USACOE) "*Interim Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Atlantic and Gulf Coastal Plain Region*" (2008) and the Florida Department of Environmental Protection's (FDEP) "*Delineation of the Landward Extent of Wetlands and Surface Waters*" (1995) (Chapter 62-340,

F.A.C). Mapping of wetland habitat types for areas impacted by this project are provided in **Appendix A**.

3.1.3.1 Methodology

A variety of resources including the NWI maps, Soil Surveys for Hillsborough and Manatee Counties, USGS topographical maps, aerial photographs (2007 & 2008), and field surveys were employed to identify the wetland communities that occur within the study area.

All wetlands and surface water features within and immediately adjacent to the project corridor were mapped on a scale of 1" = 400' aerial photographs (2007 & 2008), assigned an identification number and categorized in accordance with the FLUCFCS designation. Wetlands were also classified utilizing the "*Classification of Wetlands and Deepwater Habitats of the United States*" (Cowardin *et al.*, 1979) developed by the U.S. Fish and Wildlife Service (USFWS).

Distinction between wetland habitat and other surface water systems is required on this project primarily because of linear and generally man-made features which are present along much of the project corridor. These systems are present in both upland and wetland mapped soil units. Man-made systems such as excavated ditch systems are identified as wetlands only in the portions which are located within hydric soil mapping units and are otherwise identified as other surface waters. Shallow swale systems associated with the roadway are not considered wetlands or other surface waters and therefore were not evaluated or recorded during field surveys.

Ten (10) wetland habitats and a variety of surface water types are present within the project corridor. Wetlands include shallow wet prairies, herbaceous and shrubby marshes, estuarine wetlands, and a variety of forested wetland types. Surface waters include herbaceous, shrubby, and forested ditches and ponds. Detailed descriptions of the wetland and surface water community types are

provided below. Representative photographs of most wetland types are provided in **Appendix B**.

3.1.3.2 Wetlands

Streams and Waterways (FLUCFCS 510)

According to the FLUCFCS manual this category includes rivers, creeks, canals and other linear water bodies. Areas mapped as FLUCFCS 510 along the corridor are generally open water areas with little to no emergent vegetation. Sub-aquatic species, such as sea grasses, are not readily visible within main water bodies but may be present in some areas depending on light penetration and salinity levels. This category is further divided by NWI classification with more detailed descriptions by such classification provided below.

Field surveys identified protected species in the adjacent vegetated habitats which are discussed within those habitat specific habitats. State and federal manatee protection zones are present in the Little Manatee River and a state protection zone for manatees is also present in the Alafia River.

Estuarine Subtidal Open Water (E1OW)

This NWI category includes both the Alafia and Little Manatee Rivers. Water regimes range from intermittently flooded to permanently flooded. Both river systems are primarily open water systems with adjacent saltwater marshes (642 / E2EM1) and stream and lake swamps (615 / PFO1/3).

Riverine Lower Perennial Open Water (R2OW)

Bullfrog Creek intersects the project area on I-75 just north of Symmes Road and also on Big Bend Road just east of the I-75 interchange. Water regimes range from intermittently flooded to permanently flooded. Primrose willow (*Ludwigia peruviana*) and paragrass (*Urochloa mutica*) are present within the creek system along with numerous weedy species along the creek banks.

Wetland Hardwood Forests (FLUCFCS 610)

Palustrine Forested with Broad-Leaved Deciduous & Needle-Leaved Evergreen (PFO1/4)

According to the FLUCFCS manual Wetland Hardwood Forests are those wetland areas which meet crown closure requirements for forestland as outlined under the Upland Forest Classification (400) (minimum 10 percent closure). A large number of wetland hardwood forests are located along the project corridor. Hydrologic conditions within these wetland areas generally consist of saturated soils to seasonal flooding. Canopy species observed include: red maple, dahoon holly (*Ilex cassine*), sweetbay (*Magnolia virginiana*), swamp bay (*Persea palustris*), slash pine, cabbage palm, American elm (*Ulmus americana*), laurel, water and live oak. Oak species are generally the dominant tree species found within this habitat type with red maple also abundant in some systems. Herbaceous and shrub species observed within this habitat type include: falsewillow, swamp fern (*Blechnum serrulatum*), small-spike false nettle (*Boehmeria cylindrica*), rough button-weed (*Diodia virginiana*), softrush (*Juncus effusus*), primrose willow, wax myrtle, cinnamon fern (*Osmunda cinnamomea*), wild coffee (*Psychotria nervosa*), southern willow (*Salix caroliniana*), elderberry (*Sambucus nigra* subsp. *canadensis*), saw palmetto, shield fern (*Thelypteris* spp.), netted chainfern (*Woodwardia areolata*), and Virginia chainfern (*Woodwardia virginica*). Vining species observed include pepper-vine (*Ampelopsis arborea*), Virginia creeper (*Parthenocissus quinquefolia*), several greenbriars, poison ivy (*Toxicodendron radicans*), and muscadine grape. Vine cover is high on the fringe of many of the wetlands, with muscadine grape the most abundant vining species. All of the wetlands have a moderate level of disturbance and moderate to high cover of nuisance and exotic species. These wetlands typically exhibit moderate to high cover by Brazilian pepper, especially on the wetland fringe. Nuisance and exotic species consist primarily of Brazilian pepper and primrose willow.

Field surveys identified one protected plant species, cinnamon fern, which is listed as commercially exploited (C) by the FDACS-DPI.

Stream and Lake Swamps (FLUCFCS 615)

Palustrine Forested with Broad-Leaved Deciduous & Broad-Leaved Evergreen (PFO1/3)

According to the FLUCFCS manual this community, often referred to as bottomland or stream hardwoods, is usually found on, but not restricted to river, creek and lake floodplain or overflow areas. Several stream and lake swamps are located along the project corridor and are generally located directly adjacent to or within the floodplain of the riverine and creek systems (Bullfrog and Curiosity Creeks). Interstate 75 spans Bullfrog Creek just north of Symmes Road and also on Big Bend Road just east of the I-75 interchange. Interstate 75 also spans Curiosity Creek about halfway between the Little Manatee River and the Moccasin Wallow Road interchange. Hydrologic conditions within these wetland areas generally consist of saturated soils to intermittent and seasonal flooding. Canopy species observed include: sweetgum (*Liquidambar styraciflua*), slash pine, cabbage palm, laurel, water and live oaks. Oak species are generally the dominant tree species found within this habitat type. Herbaceous and shrub species observed within this habitat type include the following: small-spike false nettle, St. Andrews cross (*Hypericum hypercooides*), primrose willow, wild coffee, castor bean (*Ricinus communis*), southern willow, elderberry, and shield ferns. Virginia creeper is the primary vining species present. All of the wetlands have a moderate level of disturbance and moderate to high cover of nuisance and exotic species. High cover of Brazilian pepper is present in all of these wetlands especially on the wetland fringe. Brazilian pepper and castor bean were the primary nuisance and exotic species observed.

During field surveys, the state protected species white ibis (*Eudocimus albus*) was observed flying over this habitat.

Mixed Wetland Hardwoods (FLUCFCS 617)

Palustrine Forested with Broad-Leaved Deciduous & Needle-Leaved Evergreen (PFO1/4)

According to the FLUCFCS manual this category is reserved for those wetland hardwood communities which are composed of a large variety of hardwood species tolerant of hydric conditions yet exhibit an ill defined mixture of species. Several mixed wetland hardwood systems are located along the project corridor. Hydrologic conditions within these wetland areas generally consist of saturated soils to seasonal flooding. Canopy species observed include dahoon holly, sweetbay, swamp bay, slash pine, cabbage palm, laurel oak, and live oak. Canopy cover in these wetlands is high and most tree species are mature. Oaks and sweetbay species are generally the dominant tree species but no one species type dominates the canopy. Herbaceous and shrub species observed within this habitat type include: swamp fern, small-spike false nettle, fetter-bush (*Lyonia lucida*), wax myrtle, cinnamon fern, royal fern (*Osmunda regalis* var. *spectabilis*), southern willow, saw palmetto, shield fern, netted chainfern, and Virginia chainfern. Fern species dominate the understory of this habitat type. Vining species observed include Virginia creeper, greenbriars, poison ivy, and muscadine grape. These wetlands typically exhibit moderate to high cover by Brazilian pepper along the wetland fringe. All of the wetlands support a moderate level of disturbance and overall cover of nuisance and exotic species is low to moderate. Brazilian pepper was the primary nuisance and exotic species observed.

Field surveys identified the state protected plant species, cinnamon and royal fern which are both listed as commercially exploited (C) by the FDACS-DPI.

Cypress Wetlands (FLUCFCS 621)

Palustrine Forested with Needle-Leaved Deciduous (PFO2)

According to the FLUCFCS manual this community is composed of pond cypress (*Taxodium ascendens*) or bald cypress (*T. distichum*) which is either pure or predominant. A few cypress wetlands are located along the project corridor. Hydrologic conditions within these wetland areas generally consist of saturated soils to seasonal flooding. Bald cypress is the primary canopy species present. Herbaceous and shrub species observed within this habitat type include the following: swamp fern, small-spike false nettle, primrose willow, southern willow, shield fern, netted chainfern, and Virginia chainfern. Muscadine grape is the only vining species identified. All of the wetlands have a moderate level of disturbance and low to moderate overall cover of nuisance and exotic species. Brazilian pepper and primrose willow were the primary nuisance and exotic species observed in this habitat type. Brazilian pepper is located on the wetland fringe in dense cover.

No protected species were observed in this habitat during field surveys for this project.

Wetland Scrub (FLUCFCS 631)

Palustrine Shrub-Scrub Broad-Leaved Deciduous & Broad-Leaved Evergreen (PSS1/3)

According to the FLUCFCS manual this community is associated with topographic depressions and poorly drained soil. A large number of wetland scurbs are located along the project corridor. Hydrologic conditions within these wetlands generally consist of saturated soils to seasonal flooding. High cover of the shrub species southern willow and Brazilian pepper persist in these wetlands. Other herbaceous and shrub species observed within this habitat type include: falsewillow, bur-marigold (*Bidens laevis*), swamp fern, small-spike false nettle, buttonbush, dayflower (*Commelina diffusa*), flatsedges (*Cyperus* spp.),

dogfennel, pennywort, softrush, primrose willow, wax myrtle, cinnamon fern, royal fern, torpedograss (*Panicum repens*), elderberry, shield fern, and cattail. Sapling and subcanopy tree species are also occasionally observed and include red maple, laurel oak, and water oak. All of the wetlands have moderate to high levels of disturbance and moderate to high cover of nuisance and exotic species. Nuisance and exotic species observed include: Brazilian pepper, primrose willow, torpedograss, and cattail (*Typha* spp.).

Field surveys identified the state protected plant species, cinnamon and royal fern which are both listed as commercially exploited (C) by the FDACS-DPI.

Freshwater Marsh (FLUCFCS 641)

Palustrine Emergent with Persistent Vegetation (PEM1)

According to the FLUCFCS manual this community is dominated by one or more of a list of freshwater herbaceous species. A number of freshwater marshes are located along the project corridor. Water levels within these marshes vary and range from permanently to seasonally flooded. These freshwater marshes support a variety of emergent species which include: bur-marigold, flatsedges, dogfennel, pennywort, softrush, needlepod rush (*Juncus scirpoides*), primrose willow, torpedograss, southern willow, sand cordgrass (*Spartina bakeri*), cattail, and paragrass. A moderate level of disturbance and moderate to high cover of nuisance and exotic species are present in these wetlands and include primrose willow, torpedograss, cattail, and paragrass. Cover of shrubby species is the major distinction between the freshwater marshes and the shrubby marsh category described below. One freshwater marsh located just north of the Little Manatee River is likely a created mitigation area. Additionally, herbaceous-dominated wetland ditches located within hydric soil mapping units are incorporated into this freshwater marsh category.

No protected species were observed in this habitat during field surveys for this project.

Freshwater Marsh with Shrubs, Brush, and Grasses (FLUCFCS 6417)

Palustrine Shrub-Scrub Broad-Leaved Deciduous (PSS1)

According to the FLUCFCS manual this community is a freshwater marsh with shrubs, brush, and vines. Two shrubby marshes are located along the project corridor. Water levels within these marshes range from permanently to intermittently flooded. These marshes support a variety of emergent and shrub species which include: broomsedge bluestem (*Andropogon virginicus*), white beggar-ticks, buttonbush (*Cephalanthus occidentalis*), flatsedges, pennywort, primrose willow, frog-fruit, southern willow, sand cordgrass, cattail, and water spangles (*Salvinia minima*). Both of the shrub marshes exhibit a moderate level of disturbance and moderate to high cover of nuisance and exotic species. Primrose willow is the primary nuisance species, with cover estimated up to 80% in one of the marshes.

No protected species were observed in this habitat during field surveys for this project.

Saltwater Marsh (FLUCFCS 642)

Estuarine Intertidal Emergent with Persistent Vegetation (E2EM1)

According to the FLUCFCS manual this community is dominated by one or more of a list of salt tolerant herbaceous species. Saltwater marshes are located along the project corridor and are associated with the Alafia and Little Manatee River crossings. Water levels within these marshes are semi-permanent and likely tidally influenced. These marshes are dominated by needle rush (*Juncus roemerianus*), with occasional giant leather fern (*Acrostichum danaeifolium*), scattered Brazilian pepper, and cabbage palm. Brazilian pepper is the primary nuisance/exotic species and occurs in low numbers.

Field surveys identified the state-protected species little blue heron (*Egretta caerulea*) foraging in this habitat. Giant leather fern, a state-protected plant

species which is listed as commercially exploited (C) by the FDACS-DPI, was also observed in this habitat.

Wet Prairie (FLUCFCS 643)

Palustrine Emergent with Persistent Vegetation (PEM1)

According to the FLUCFCS manual this classification is composed predominantly of grassy vegetation on hydric soils and is usually distinguished from marshes by having less water and shorter herbage. A few wet prairies are also located along the project corridor. Hydrologic conditions within these prairies generally appear to consist of saturated soils to intermittent flooding. Common species observed within the wet prairies include: bushy bluestem (*Andropogon glomeratus*), broomsedge bluestem, Mohr's thoroughwort (*Eupatorium mohrii*), redroot (*Lachnanthes caroliniana*), needlepod rush, maidencane (*Panicum hemitomon*), and Virginia chainfern. There is very little cover of nuisance and exotic species within the prairies.

No protected species were observed in this habitat during field surveys for this project.

3.1.3.3 Other Surface Waters

A variety of man-made swales, ditches, and ponds are located along the corridor. These features are associated with the stormwater management facilities currently in place to serve I-75 and adjacent roadways. Other surface water features are man-made features located within upland soil mapping units. Water regimes generally consist of intermittent flooding with the exception of the shrubby ponds which are semi-permanently flooded. This feature type is divided into three (3) sub-categories which are described below. Note: x denotes excavated.

Field surveys identified one state protected plant species, cinnamon fern, within the forested surface water category. Cinnamon fern is listed as commercially exploited (C) by the FDACS-DPI.

Wetland Hardwood Forest - Excavated(FLUCFCS 610x)

Palustrine Forested Broad-Leaved Evergreen (PFO3x)

One (1) Forested Ditch / Swale is present and dominated by a relatively young stand of laurel oaks with a subcanopy of dahoon holly and Brazilian pepper. Understory vegetation consists of cinnamon fern, muscadine grape, and Virginia chainfern.

Wetland Scrub - Excavated (FLUCFCS 631x)

Palustrine Shrub-Scrub Broad-Leaved Deciduous & Broad-Leaved Evergreen (PSS1/3x)

Shrubby Ditch / Swales are generally dominated by shrubby species such as Brazilian pepper, wax myrtle, primrose willow, falsewillow, and southern willow. Herbaceous and vining species observed include small-spike false nettle, swamp fern, muscadine grape, and Virginia chainfern. Periodic maintenance appears to occur on the edges of these areas to prevent spread of the shrubby vegetation.

Shrubby Ponds are found in several locations on the corridor and are generally dominated by southern willow with Brazilian pepper subdominant when present. Understory vegetation consists of pennywort, duckweed (*Lemna* spp.), red-leaf ludwigia (*Ludwigia repens*), climbing hempvine, frog-fruit, and water spangles.

Freshwater Marsh - Excavated (FLUCFCS 641x)

Palustrine Emergent with Persistent Vegetation (PEM1x)

Herbaceous Ditch / Swales are dominated by herbaceous species but some also have a low density of shrubby species. Shrubby species include those found within the shrubby ditch / swale category. Herbaceous species include: paragrass, Long's sedge (*Carex longii*), flatsedges, dayflower, oak-leaf fleabane (*Erigeron quercifolius*), softrush, pennywort, torpedograss, vasey grass (*Paspalum urvelli*), bishop weed (*Ptilimnium capillaceum*), cattail, and Virginia

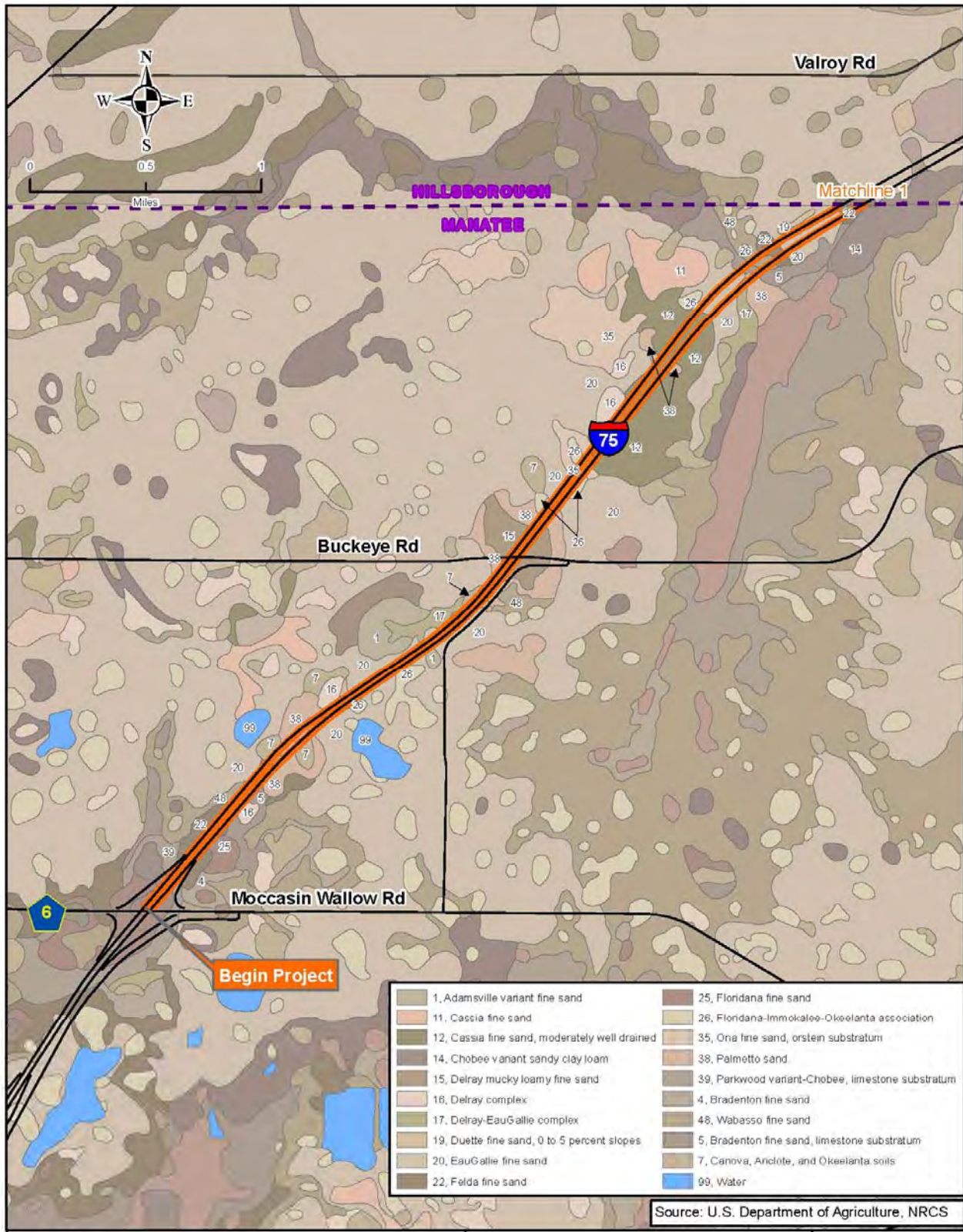
chainfern. Mowing of the herbaceous ditch / swale category is conducted on a routine basis.


3.2 Soils

Review of the United States Department of Agriculture (USDA) NRCS soil surveys for Hillsborough (HIL) and Manatee (MAN) Counties, Florida (1989 and 1983) identified thirty-seven (37) types within the project corridor. Dominant soil types identified along the corridor and their identification numbers include: Myakka fine sand (HIL #29), EauGallie fine sand (MAN #20) with many areas of Pomella fine sand, 0 to 5 percent slopes (HIL #41), and St. Johns fine sand (HIL #46) dispersed throughout the corridor. According to the Florida Association of Environmental Soil Scientists' (FAESS) "*Hydric Soils of Florida Handbook*" (2007), the most common hydric soil types found within the project corridor include the following: Delray mucky loamy fine sand (MAN #15), Palmetto sand (MAN #38), Basinger, Holopaw, and Samsula soils, depressional (HIL #5), Malabar fine sand (HIL #27), Chobee loamy fine sand (HIL #10), and Chobee muck, depressional (HIL #11). All of these state listed soils are also federally listed with hydric classification obtained from the NRCS website (<http://soils.usda.gov/use/hydric/lists/included.html>, last updated in January 2009).

According to the FAESS a soil may not be classified as hydric in all situations. Nullifying factors include the inclusion of certain soil types or the composition of the dominant soil in addition to the soil being located within a specific landform type (i.e. marine terrace, sloughs, tidal marsh, etc...). Final determination of hydric condition for those soils which may be hydric will be determined during the permitting and design stage of this project.

Soils identified along the project corridor are presented in **Figure 3-1**. Detailed descriptions of the dominant soil types follow.





I-75 (SR 93A) PD&E Study
Moccasin Wallow Road to US 301
 WPI Segment No.: 419235-2
 Hillsborough and Manatee Counties

NRCS Soils Map

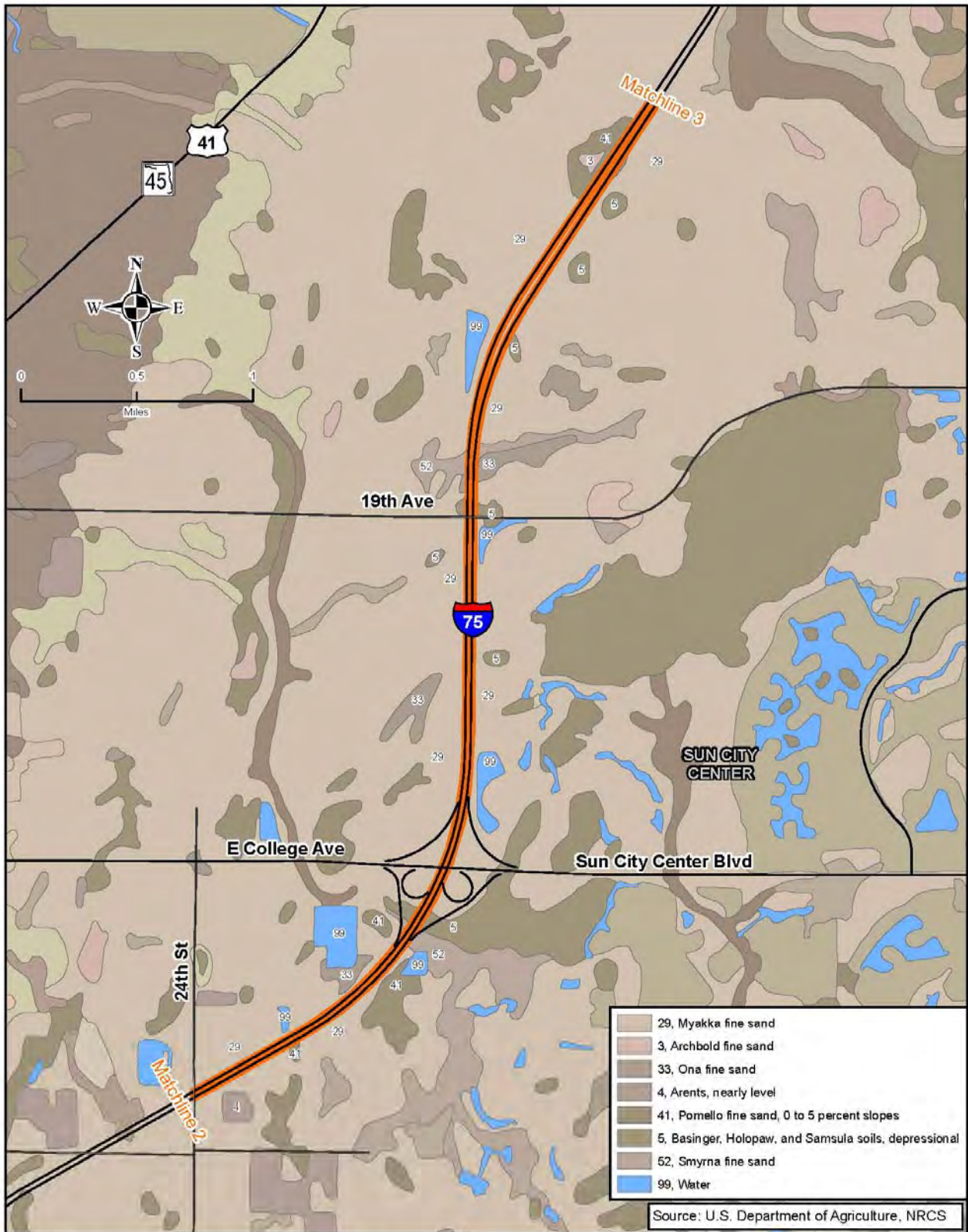
Figure 3-1
Sheet 1 of 5




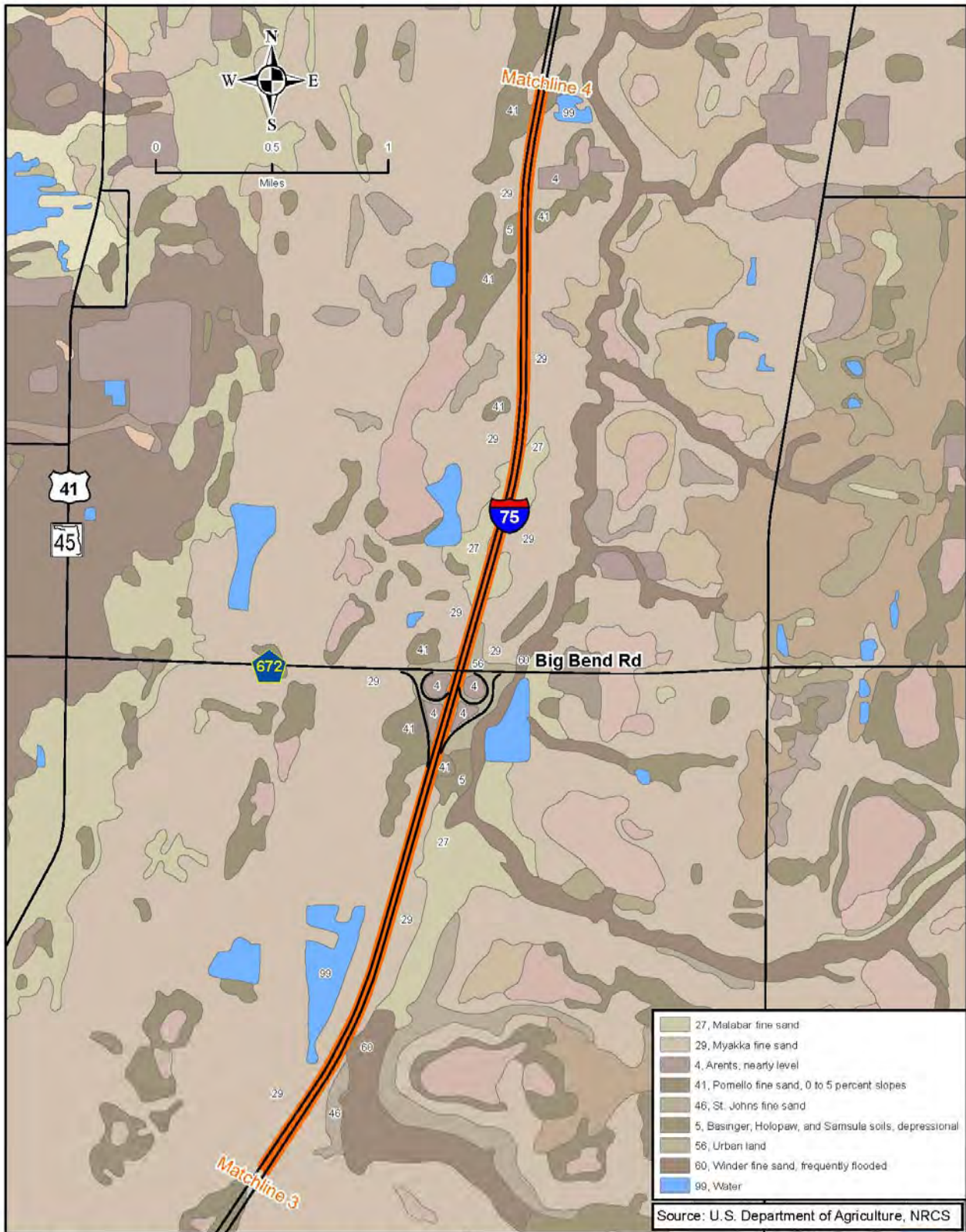

I-75 (SR 93A) PD&E Study
Moccasin Wallow Road to US 301
 WPI Segment No.: 419235-2
 Hillsborough and Manatee Counties

NRCS Soils Map

Figure 3-1
Sheet 2 of 5



	<p>I-75 (SR 93A) PD&E Study Moccasin Wallow Road to US 301 WPI Segment No.: 419235-2 Hillsborough and Manatee Counties</p>	<p>NRCS Soils Map</p>	<p>Figure 3-1 Sheet 3 of 5</p>
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I-75 (SR 93A) PD&E Study
Moccasin Wallow Road to US 301
 WPI Segment No.: 419235-2
 Hillsborough and Manatee Counties

NRCS Soils Map

Figure 3-1
 Sheet 4 of 5



	<p>I-75 (SR 93A) PD&E Study Moccasin Wallow Road to US 301 WPI Segment No.: 419235-2 Hillsborough and Manatee Counties</p>	<p>NRCS Soils Map</p>	<p>Figure 3-1 Sheet 5 of 5</p>
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- **Myakka fine sand (HIL #29)** – Nearly level, poorly drained soil in flatwoods on marine terraces. Slopes range from 0 to 2 percent. The surface layer is very dark gray fine sand about 5 inches thick. In most years, under natural conditions, the water table is within a depth of 6 to 18 inches. This soil is sometimes considered as hydric by both the FAESS and NRCS.
- **EauGallie fine sand (MAN #20)** – Nearly level, poorly drained soil in flatwoods on marine terraces. Slopes range from 0 to 2 percent. The surface layer is very dark gray fine sand about 5 inches thick. In most years, under natural conditions, the water table is within a depth of 6 to 18 inches. This soil is sometimes considered as hydric by both the FAESS and NRCS.
- **Pomella fine sand (HIL #41)** – Nearly level to gently sloping, moderately well drained soil found on ridges and knolls on marine terraces, with irregularly shaped areas. Slopes range from 0 to 5 percent. The surface layer is very dark gray fine sand about 3 inches thick. In most years, under natural conditions, the water table is at a depth of 24 to 42 inches. This soil is not considered hydric by either the FAESS or NRCS.
- **St. Johns fine sand (HIL #46)** – Nearly level and poorly drained soil found on low lying plains in flatwoods. Slopes range from 0 to 2 percent. The surface layer is black fine sand about 6 inches thick. In most years, under natural conditions, the water table is at a depth of 0 to 12 inches. This soil is sometimes considered as hydric by both the FAESS and NRCS.

3.3 Significant Waters & Protection Areas

3.3.1 Outstanding Florida Waters (OFWs)

The Little Manatee River is designated as an OFW. Currently there is an existing I-75 twin bridge structure over the river with a total of six lanes and emergency pull off areas. Additional lanes will require an increase in bridge width with the recommended alternative resulting in the increase on the interior of the existing

structure. Best management practices (BMPs) will be utilized during bridge construction to address water quality issues. Additionally, future design of stormwater management plans for the road expansion will incorporate design standards for the protection of OFWs.

3.3.2 Protection Areas

A variety of protected lands and/or conservation lands are present within the surrounding landscape around the I-75 corridor in the Hillsborough County portion of the project (**Figure 3-2**). Several sites are located directly adjacent to or are within the corridor and these sites are discussed below.

Golden Aster Scrub Nature Preserve, which is operated by the Hillsborough County Environmental Lands Acquisition and Protection Program (ELAPP), is located directly adjacent to I-75. This preserve is located on the west side of I-75 just north of the Big Bend Road (CR 672) interchange. Sand pine and oak scrub habitats dominate the landscape of this 1,236 acre preserve. Improvements to the Big Bend Road interchange will require approximately less than one acre of nature preserve acquisition.

Bullfrog Creek Mitigation Park and Wildlife Environmental Area which is managed by the Florida Fish and Wildlife Conservation Commission (FFWCC) is also located directly adjacent to I-75. This site is located on the east side of I-75 about midway between Big Bend Road (CR 672) and Sun City Boulevard (CR 674). This site is adjacent, on the east, to the Bullfrog Creek Scrub Preserve which is managed by Hillsborough County's ELAPP. FFWCC maintains this site as a gopher tortoise mitigation park, while the adjacent portion managed by ELAPP is designated as an upland mitigation bank. Upland scrub habitats dominate the landscape of both these areas with total area of 1,620 acres. The recommended alternative does not result in direct impacts to these management areas.



Legend

- Corridor
- Aquatic Preserves
- Lands Managed for Conservation



I-75 (SR-93) PD&E Study
Moccasin Wallow Road to US 301
 WPI Segment No.: 419235-2
 Hillsborough and Manatee Counties

Conservation Lands

Figure
3-2

Little Manatee River Preserve is adjacent to I-75 on both the east and west sides and is located at the Little Manatee River crossing. This site is dominated by estuarine and palustrine wetland systems which provide protection to the Little Manatee River. The property contains 1,902 acres and is managed by Hillsborough County's ELAPP. The recommended alternative does not result in direct impacts to this preserve.

Cockroach Bay Aquatic Preserve is a state designated aquatic preserve (designated as such under Chapter 18 - 20, Florida Administrative Code (F.A.C.)). Limits of this preserve extend from Tampa Bay, up the Little Manatee River and terminate inside of the Little Manatee River State Park in the vicinity of U.S. Highway 301. The Preserve encompasses 8,583 acres. The existing I-75 bridge spans over the Preserve through the center of the FDOT ROW that is approximately 350 ft wide. This site is dominated by sea grass beds and estuarine and palustrine wetland systems. Widening of the bridge over the Little Manatee River may result in impacts to this preserve. These proposed impacts would occur within the footprint of the bridge crossing and within existing ROW. BMPs will be utilized during bridge construction to address water quality issues. Additionally, stormwater management plans for the road expansion will incorporate design standards for the protection of OFWs. Impacts to this aquatic preserve will be addressed through coordination and permitting with the FDEP.

Cockroach Creek Greenway is located just west of I-75 in Hillsborough County near the Manatee County line. This preserve is approximately 500 acres in size and was purchased by the Hillsborough County ELAPP in 2001. This preserve provides protection to a portion of the headwaters of Cockroach Creek. Pine flatwoods with isolated wetlands and forested wetlands associated with the creek dominate the landscape of this preserve. The recommended alternative does not result in direct impacts to this preserve.

SECTION 4 WETLAND IMPACTS

All improvements to the I-75 corridor are proposed to occur within the existing ROW for the recommended alternative with the exception of minor amounts of ROW that will need to be procured for the Big Bend Road and Gibsonton Drive interchanges. The recommended alternative will result in a total of 45.18 acres of wetland and jurisdictional surface water impacts and 5.33 acres of impacts to other surface waters. Although only the recommended alternative is addressed in this report, ultimately future construction plans may require additional impacts within the existing ROW. Total acreage for wetlands and jurisdictional surface waters within the existing ROW is 88.80 and total acreage for other surface waters is 14.61. Wetlands proposed for impact are generally of moderate to poor quality with moderate to high coverage of nuisance and exotic species present.

Table 4-1 summarizes potential wetland impacts by habitat type for the recommended alternative. Conceptual design plans for the project are provided in **Appendix C**. Compensatory mitigation will be proposed for all wetland impacts during the permitting phase for this project.

Each wetland and surface water within the project corridor has been assigned a unique identification code based on position along the corridor. These codes considered whether the wetland or surface water is located on the left, within the middle (median), or right of the existing roadway (R = Right (east side), M = Middle, and L = Left (west side)). Additionally the unique code is linked to future construction stationing numbers. **Appendix D** provides details on the impacts by individual wetland and surface water type.

Table 4-1 – Wetland Impacts (Acres) by Habitat Type

NWI	Wetland Type	FLUCFCS	Impact Acreage	Total ROW Acreage
Palustrine				
PEM1	Freshwater Marsh	641	0.19	3.27
	Wet Prairie	643	0.33	0.66
PSS1	Freshwater Marsh with Shrubs, Brush, and Grasses	6417	0.00	1.24
PSS1/3	Wetland Scrub	631	0.76	4.90
PFO1/3	Stream and Lake Swamps	615	1.31	2.54
PFO1/4	Wetland Hardwood Forest	610	21.66	45.55
	Mixed Wetland Hardwoods	617	11.96	14.87
PFO2	Cypress	621	1.26	1.29
Estuarine				
E2EM1	Saltwater Marsh	642	2.08	3.95
E1OW	Estuarine River	510	5.39	10.09
Riverine				
R2OW	Riverine	510	0.24	0.44
Total Wetland Impacts			45.18	88.80
Other Surface Waters				
PEM1x/PSS1/3x/ PFO3x	Man-Made (Swales, Ditches, & Ponds)	641 _x /631 _x /610 _x	5.33	14.61
Total Wetland & Surface Waters Impacts			50.51	103.41

Table 4-2 details the impacts by position within the ROW and discerns impacts within interchanges and the mainline. Although the recommended alternative is aligned to the inside (median) of the existing lanes, wetland impacts are identified to the left and right sides of the existing lanes. These impacts are due to interchange improvements which will impact wetlands located within the existing interchange formations.

Table 4-2 – Wetland Impacts (Acres) by Habitat Type & Location

NWI	Wetland Type	FLUCFCS	Impact Acreage Position		
			Left	Middle	Right
Big Bend Interchange Impacts					
PEM1	Freshwater Marsh	641	0.00	0.00	0.00
	Wet Prairie	643	0.00	0.00	0.00
PSS1	Freshwater Marsh with Shrubs, Brush, and Grasses	6417	0.00	0.00	0.00
PSS1/3	Wetland Scrub	631	0.00	0.00	0.76
PFO1/3	Stream and Lake Swamps	615	0.00	0.00	0.00
PFO1/4	Wetland Hardwood Forest	610	0.00	0.00	0.00
	Mixed Wetland Hardwoods	617	0.00	0.00	10.09
PFO2	Cypress	621	0.00	0.00	0.00
E2EM1	Saltwater Marsh	642	0.00	0.00	0.00
E1OW	Estuarine River	510	0.00	0.00	0.00
R2OW	Riverine	510	0.00	0.00	0.09
Total Wetland Impacts – Big Bend Rd			0.00	0.00	10.94
PEM1x/PSS1/3x/ PFO3x	Man-Made (Swales, Ditches, & Ponds)	641 _x /631 _x /610 _x	0.00	0.00	0.38
Total Wetland & Other Surface Water Impacts - Big Bend Rd			0.00	0.00	11.32
Gibsonton Drive Interchange Impacts					
PEM1	Freshwater Marsh	641	0.00	0.00	0.00
	Wet Prairie	643	0.00	0.00	0.33
PSS1	Freshwater Marsh with Shrubs, Brush, and Grasses	6417	0.00	0.00	0.00
PSS1/3	Wetland Scrub	631	0.00	0.00	0.00
PFO1/3	Stream and Lake Swamps	615	0.00	0.00	0.00
PFO1/4	Wetland Hardwood Forest	610	0.00	0.00	0.00
	Mixed Wetland Hardwoods	617	0.00	0.00	0.00
PFO2	Cypress	621	0.00	0.00	0.00
E2EM1	Saltwater Marsh	642	0.00	0.00	0.00
E1OW	Estuarine River	510	0.00	0.00	0.00
R2OW	Riverine	510	0.00	0.00	0.00
Total Wetland Impacts – Gibsonton Dr			0.00	0.00	0.33
PEM1x/PSS1/3x/ PFO3x	Man-Made (Swales, Ditches, & Ponds)	641 _x /631 _x /610 _x	3.07	0.03	0.12
Total Wetland & Other Surface Water Impacts - Gibsonton Dr			3.07	0.00	0.45

Table 4-2 – Wetland Impacts (Acres) by Habitat Type & Location

NWI	Wetland Type	FLUCFCS	Impact Acreage Position		
			Left	Middle	Right
SR 674 Interchange Impacts					
PEM1	Freshwater Marsh	641	0.00	0.00	0.19
	Wet Prairie	643	0.00	0.00	0.00
PSS1	Freshwater Marsh with Shrubs, Brush, and Grasses	6417	0.00	0.00	0.00
PSS1/3	Wetland Scrub	631	0.00	0.00	0.00
PFO1/3	Stream and Lake Swamps	615	0.00	0.00	0.00
PFO1/4	Wetland Hardwood Forest	610	4.72	0.00	10.90
	Mixed Wetland Hardwoods	617	0.00	0.00	0.00
PFO2	Cypress	621	0.00	0.00	1.26
E2EM1	Saltwater Marsh	642	0.00	0.00	0.00
E1OW	Estuarine River	510	0.00	0.00	0.00
R2OW	Riverine	510	0.00	0.00	0.00
Total Wetland Impacts – SR 674			4.72	0.00	12.36
PEM1x/PSS1/3x/ PFO3x	Man-Made (Swales, Ditches, & Ponds)	641 _x /631 _x /610 _x	0.00	0.00	1.73
Total Wetland & Other Surface Water Impacts - SR 674			4.72	0.00	14.09
Mainline Impacts					
PEM1	Freshwater Marsh	641	0.00	0.00	0.00
	Wet Prairie	643	0.00	0.00	0.00
PSS1	Freshwater Marsh with Shrubs, Brush, and Grasses	6417	0.00	0.00	0.00
PSS1/3	Wetland Scrub	631	0.00	0.00	0.00
PFO1/3	Stream and Lake Swamps	615	0.00	1.31	0.00
PFO1/4	Wetland Hardwood Forest	610	0.00	6.03	0.00
	Mixed Wetland Hardwoods	617	0.00	1.87	0.00
PFO2	Cypress	621	0.00	0.00	0.00
E2EM1	Saltwater Marsh	642	0.00	2.08	0.00
E1OW	Estuarine River	510	0.00	5.39	0.00
R2OW	Riverine	510	0.00	0.15	0.00
Total Wetland Impacts - Mainline			0.00	16.83	0.00
PEM1x/PSS1/3x/ PFO3x	Man-Made (Swales, Ditches, & Ponds)	641 _x /631 _x /610 _x	0.00	0.03	0.00
Total Wetland & Other Surface Water Impacts - Mainline			0.00	16.86	0.00
Total Wetland & Other Surface Water Impacts – All Areas			7.79	16.86	25.86

4.1 Results of UMAM Analysis

Uniform Mitigation Assessment Method (UMAM) analyses were conducted to evaluate wetland function and values for representative wetlands for each type of wetland identified along the project corridor. UMAM values range from 0 to 1, with a value of 0 reflecting the lowest quality wetland and a value of 1 representing the highest quality wetland.

UMAM analyses were conducted for representative wetland habitats and were not conducted for other surface water systems. Results of the scoring and impacts associated with the recommended alternative are provided in **Table 4-3**. Scores (delta values) range from 0.30 to 0.77, with potential functional loss calculated to be 25.31 for impacts associated with the recommended alternative. Data sheets for representative wetland and surface water types are included in **Appendix E**. Habitat value for wood storks (*Mycteria americana*) and other protected species is discussed in detail on the UMAM data sheets.

Table 4-3 – UMAM Scores by Wetland Type

NWI Type	FLUCFCS Description	Representative UMAM Scores (delta values)	Potential Impact Acreage	Functional Loss Values
PEM1	Herbaceous Wetlands	0.30	0.52	0.16
E2EM	Saltwater Marshes	0.70	2.08	1.46
PSS1/3 & PSS1	Wetland Scrub	0.33	0.76	0.25
PFO2, PFO1/3 & PFO1/4	Forested Wetlands	0.53	36.19	19.18
R2OW	Freshwater Creeks	0.47	0.24	0.11
E1OW	Riverine	0.77	5.39	4.15
Total			45.18	25.31

4.2 Wetland Impact Mitigation

Project constraints and ROW limits provide no practicable alternatives to avoid construction within wetlands. Whenever possible, permanent impacts will be limited to the smallest degree possible through design modification. Temporary impacts to wetlands will be conducted utilizing BMPs and FDOT's "*Standard Specifications for Road and Bridge Construction*".

Impacts for this project will likely be addressed pursuant to S. 373.4137, Florida Statutes (F.S.) in order to satisfy all mitigation requirements of Part IV, Chapter 373, F.S. and 33 United States Code (U.S.C.) 1344.

Several other options for mitigation of wetland impacts exist for FDOT and include public or private mitigation banks and wetland creation, restoration, and / or preservation within the project watersheds (Alafia, Little Manatee, and the Tampa Bay and Coastal Areas). One private bank, the Tampa Bay Mitigation Bank, has been investigated and provides service to sizable portions of the I-75 corridor. The UMAM analysis discussed above would be utilized to determine how many credits would be required for banking purposes or used in conjunction with UMAM analysis for wetland creation, restoration, and / or preservation within the project watersheds.

Mitigation options will be investigated further during the final design phase of the project.

4.3 Coordination with the Permitting Agencies

Environmental permits and authorizations will likely be required for this project from the following agencies:

- USACOE
- USFWS
- SWFWMD
- Hillsborough County Environmental Protection Commission (HCEPC)
- FDEP
- FFWCC
- FDACS – DPI

SECTION 5 PROTECTED SPECIES & HABITAT

The project corridor was assessed for the presence of suitable habitat for federal- and/or state-listed protected species in accordance with 50 Code of Federal Regulation (CFR) Part 402 of the ESA of 1973, as amended, Chapters 5B-40 and 68A-27 F.A.C., and *Part 2, Chapter 27 - Wildlife and Habitat Impacts* of the *FDOT PD&E Manual*.

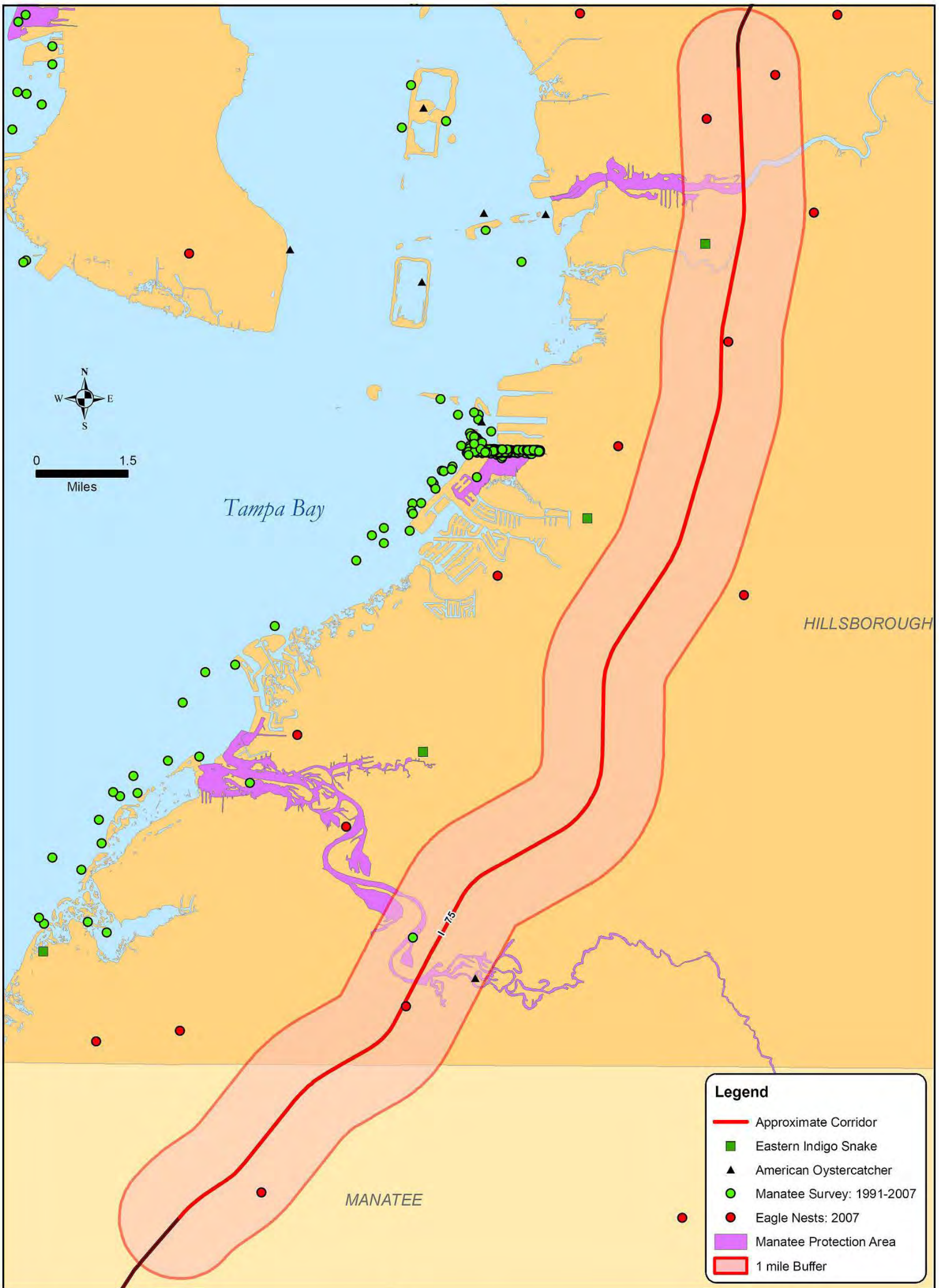
5.1 Methodology

Literature reviews, agency data base searches and coordination, and preliminary field reviews of potential habitat areas were conducted to identify state and federally protected species occurring or potentially occurring within the project area. The Hillsborough and Manatee County Soil Surveys and recent aerial photographs (2007 & 2008) were reviewed to determine habitat types occurring within and adjacent to the project corridor. Information sources and databases utilized include the following:

- *ETDM Programming Screen Summary Report* for I-75 (Project #8001)
- USFWS
- Florida Natural Areas Inventory (FNAI)
- FFWCC database
- TESS (Threatened and Endangered Species Software) list for Hillsborough & Manatee Counties
- Hillsborough and Manatee County Soil Surveys
- FFWCC - Eagle Nest Locator for Hillsborough & Manatee Counties (2007-2008 nesting season data) (1 mile radius)
- FFWCC - Waterbird Colony Locator (1999) (10 mile radius)
- FFWCC - Strategic Habitat Conservation Areas (SHCA) (1994) (10 mile radius)
- USFWS - CH for Threatened and Endangered Species
- USFWS - Wood Stork Rookeries Core Foraging Area (CFA) (15.0 mile radius)

Figures 5-1, 5-2, and 5-3 provide historic species occurrence and protected habitat results from the database searches. **Figure 5-1** is based on a 1-mile radius from the project corridor and includes a variety of species, while **Figure 5-2** includes the results of the Wood Stork Core Foraging Area (CFA), and **Figure 5-3** is based on a 10-mile radius and includes the SHCAs, the Waterbird Colony Locator, and CH results.

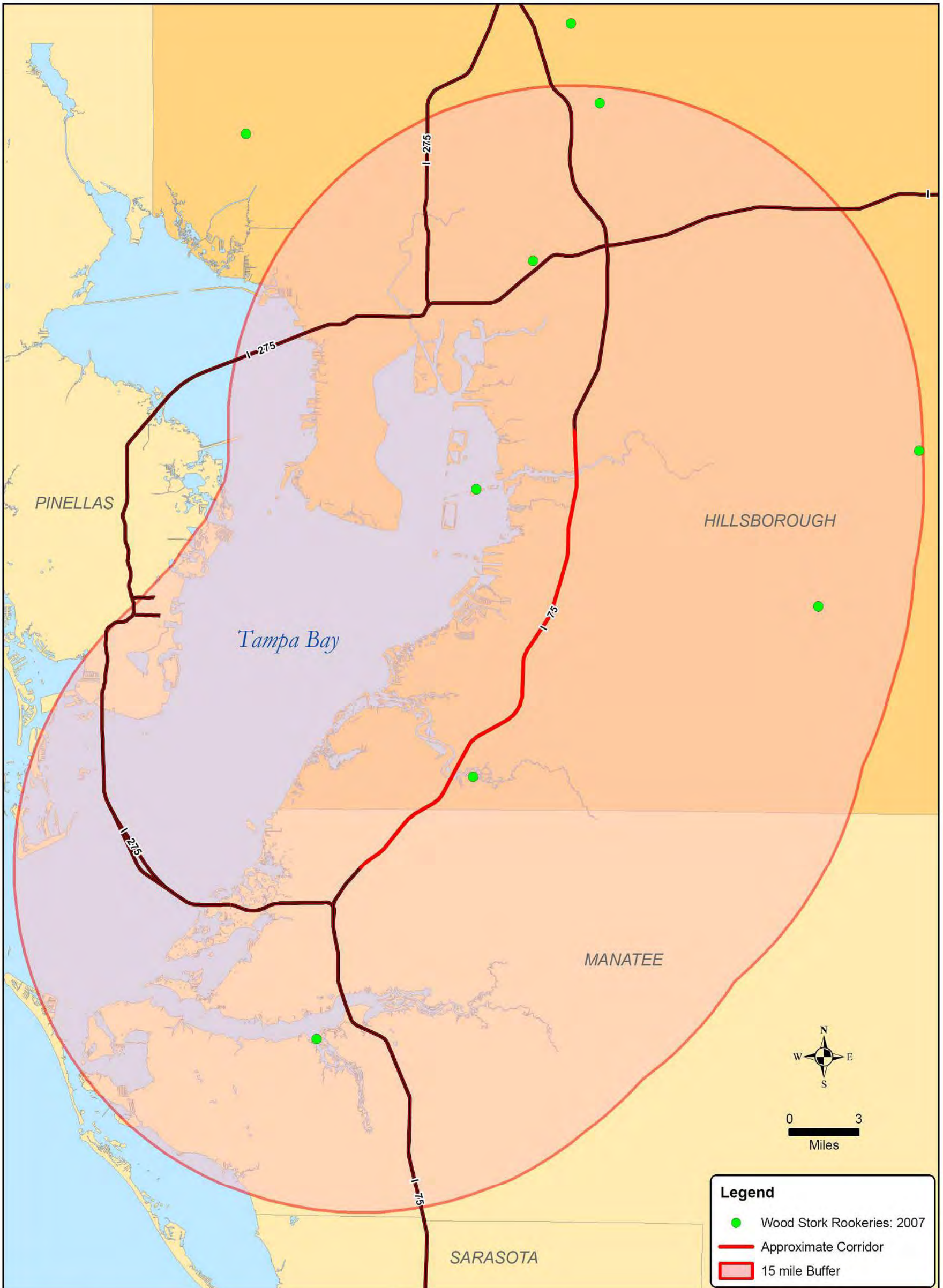
Based on the results of database searches, preliminary field reviews and review of aerial photographs and soil surveys, field survey methods for specific habitat types and lists of target species were developed. Additionally, environmental concerns expressed by the ETAT members in the *ETDM Programming Screen Summary Report* were considered when identifying target species and survey methods. Field reviews consisted of vehicular surveys, roadside observations and detailed pedestrian surveys through natural areas and altered habitats with the potential to support protected species. In the absence of physical evidence of a protected species, evaluation of the appropriate habitat was conducted to determine the likelihood of a species being present. Surveys were performed in the summer and fall of 2008 with additional observations in December 2009. Surveys took place within the existing ROW of I-75, with visual observations conducted on adjacent lands. Any observations of protected plant and wildlife species or indicators of their presence (i.e., vocalizations, tracks, scat, burrows, etc.) within or immediately adjacent to the study area were documented. Observed protected species occurrences have been compiled and mapped in **Figure 5-4**.



I-75 (SR-93) PD&E Study
Moccasin Wallow Road to US 301
 WPI Segment No.: 419235-2
 Hillsborough and Manatee Counties

**Historic Listed Species
 Observations Database
 Search Results**

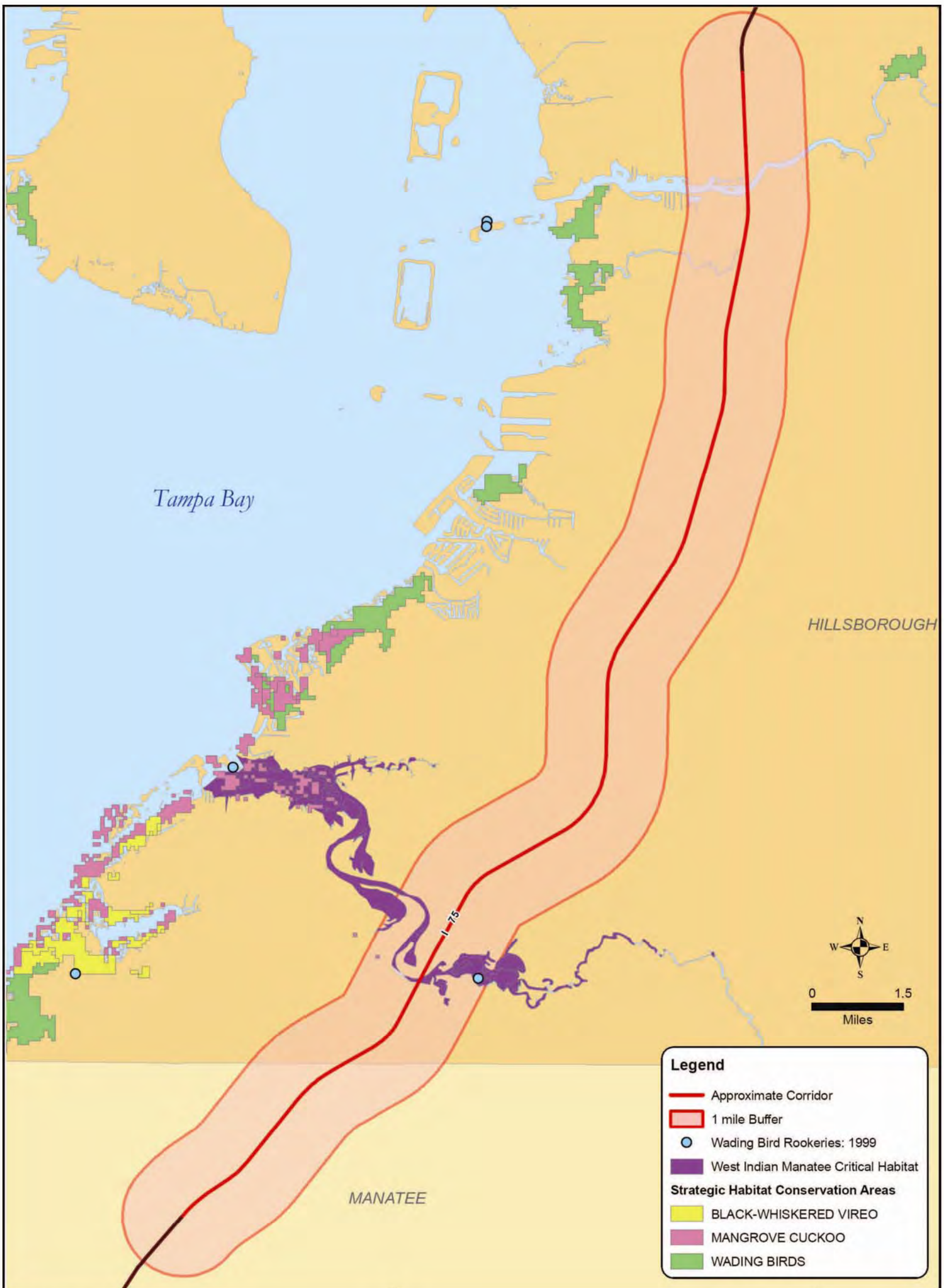
Figure 5-1



I-75 (SR-93) PD&E Study
Moccasin Wallow Road to US 301
 WPI Segment No.: 419235-2
 Hillsborough and Manatee Counties

Wood Stork Rookeries

Figure 5-2




I-75 (SR-93) PD&E Study
Moccasin Wallow Road to US 301
 WPI Segment No.: 419235-2
 Hillsborough and Manatee Counties

**Strategic Habitat Conservation Areas,
 Historic Wading Bird Rookeries,
 & USFWS Critical Habitat**

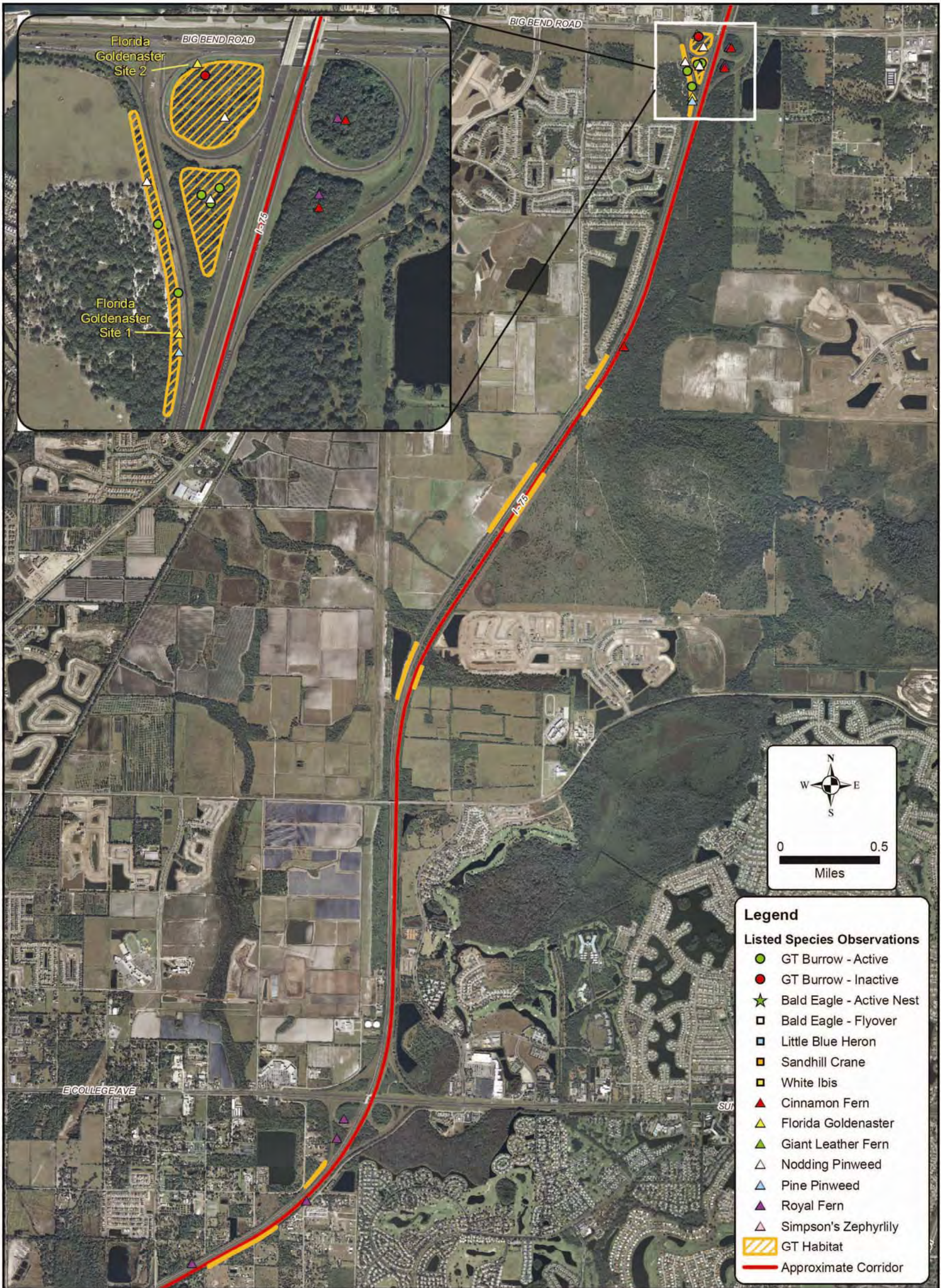
Figure 5-3




I-75 (SR-93) PD&E Study
Moccasin Wallow Road to US 301
 WPI Segment No.: 419235-2
 Hillsborough and Manatee Counties

Observed Listed Species and Habitat

Figure 5-4
Sheet 1 of 3





I-75 (SR-93) PD&E Study
Moccasin Wallow Road to US 301
 WPI Segment No.: 419235-2
 Hillsborough and Manatee Counties

Observed Listed Species and Habitat

Figure 5-4
 Sheet 3 of 3

Based on the above methods, a list of potentially occurring protected species was developed, and each species was assigned a low, moderate or high likelihood for occurrence within habitats found on the project corridor. If a species or species indicator was observed during field reviews it is identified as present. **Table 5-1** lists the federal and state protected wildlife species with the potential to occur within the project corridor, based on potential availability of suitable habitat and known ranges. **Table 5-2** provides the same information for federal and state protected plant species. Definitions for likelihood of occurrence are provided below:

Low - Species with a low likelihood of occurrence within the project corridor are defined as those species that are known to occur in Hillsborough & Manatee Counties or the bio-region, but preferred habitat is limited on the project corridor, or the species is rare or has been extirpated.

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

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

**TABLE 5-1
POTENTIALLY OCCURRING & OBSERVED LISTED PLANT SPECIES
I-75 PD&E STUDY - HILLSBOROUGH & MANATEE COUNTIES**

SPECIES	COMMON NAME	FDACS-DPI	FWS	DCA	HABITAT	PROBABILITY OF PRESENCE OR OCCURRENCE ⁴
<i>Acrostichum aureum</i>	Golden leather fern	E	-	R	Marine and estuarine tidal swamp and tidal marsh	Moderate
<i>Acrostichum danaeifolium</i>	Giant leather fern	C	-	-	Freshwater and brackish marshes, brackish swamps	Present
<i>Adiantum tenerum</i>	Brittle maidenhair fern	E	-	R	Rockland hammock, sinkhole, on limestone, upland hardwood forest, stream-banks	Low
<i>Asclepias curtissii</i>	Curtiss' milkweed	E	-	R	Dry hammocks, scrub, and flatwoods.	Moderate
<i>Asplenium auritum</i>	Auricled spleenwort	E	-	I	Live oaks in mesic hammocks, strand swamp.	Moderate
<i>Bonamia grandiflora</i>	Florida bonamia	E	T	R	Sandy soil, scrub.	Low
<i>Calapogon multiflorus</i>	Many-flowered grass pink	E	-	-	Damp pinelands and meadows (fire maintained).	Low
<i>Calopogon barbatus</i>	Bearded grass pink	T	-	-	Wet pine flatwoods.	Low
<i>Campyloneurum phyllitidis</i>	Long strap fern	E	-	-	Hammocks and swamps	Low
<i>Chionanthus pygmaeus</i>	Pygmy fringetree	E	E	R	Dry sandy soils of central FL scrub.	Low
<i>Chrysopsis floridana</i>	Florida golden aster	E	E	CI	Sand pine scrub, on bare sand.	Present
<i>Cladonia perforata</i>	Deer moss	E	E	CI	Rosemary sandhills.	Low
<i>Ctenitis sloanei</i>	Red-hair comb fern	E	-	I	Limestone ledges, rockland hammocks, cypress strand swamps.	Low
<i>Drosera intermedia</i>	Water sundew	T	-	R	Seepage slopes, wet flatwoods, depression marshes, sinkhole lakes, ditches	Moderate
<i>Encyclia tampensis</i>	Butterfly orchid	C	-	-	Mangrove, cypress and hardwood swamps and hammocks	Low
<i>Epidendrum conopseum</i>	Greenfly orchid	C	-	-	Cypress and hardwood swamps, moist hammocks	Low
<i>Eragrostis tracyi</i>	Sanibel Island lovegrass	E	-	I	Beach dunes, maritime hammocks, coastal strand, coastal grassland, old fields, clearings, disturbed sites	Low
<i>Eulophia alta</i>	Wild coco	T	-	-	Roadside ditches, coastal prairies, open pineland, banks of rivers, marsh edges, hammocks	High
<i>Garberia heterophylla</i>	Garberia	T	-	-	Dry sandy pine or pine-oak scrub and prairies	High
<i>Habenaria distans</i>	Rein orchid	E	-	-	Hydric hammocks, strand swamps	Low
<i>Harrisella filiformis</i>	Threadroot orchid	T	-	-	Old orange groves, strand swamps, hardwood swamps, hammocks	Moderate
<i>Lechea cernua</i>	Nodding pinweed	T	-	R	Sand scrub, openings, fire maintained	Present

Table 5-1 (Continued)

SPECIES	COMMON NAME	FDACS-DPI	FWS	DCA	HABITAT	PROBABILITY OF PRESENCE OR OCCURRENCE ⁴
<i>Lechea divaricata</i>	Pine pinweed	E	-	I	Dry sandy soil, scrubby flatwoods.	Present
<i>Lilium catesbaei</i>	Catesby's lily	T	-	R	Wet flatwoods, bogs, usually with grasses	Low
<i>Listera australis</i>	Southern twayblade	T	-	-	Rich humus of low moist woods, sphagnum moss, stream banks	Low
<i>Lobelia cardinalis</i>	Cardinal flower	T	-	-	Riverbanks, springs, coastal hammocks	Low
<i>Lycopodium cernuum</i>	Nodding clubmoss	C	-	-	Wet depressions, ditches, moist areas	Moderate
<i>Lythrum flagellare</i>	Lowland loosestrife	E	-	-	Low open ground, swamps, thickets.	Low
<i>Matela floridana</i>	Florida milkweed	E	-	I	Bluffs, pine-oak-hickory woods.	Low
<i>Maytenus phyllanthoides</i>	Mayten	T	-	-	Hammocks, dunes.	Low
<i>Nephrolepis biserrata</i>	Giant sword fern	T	-	-	Mesic hammocks, roadside, clearings, swamps	Moderate
<i>Ophioglossum palmatum</i>	Hand fern	E	-	I	Grows in bases of cabbage palm leaves in hydric hammocks, strand swamps	Low
<i>Osmunda cinnamomea</i>	Cinnamon fern	C	-	-	Swamps and wetlands	Present
<i>Osmunda regalis</i>	Royal fern	C	-	-	Swamps and wetlands	Present
<i>Pecluma dispersa</i>	Polypoda fern	E	-	-	Hammocks	Low
<i>Pecluma plumula</i>	Plume polypoda fern	E	-	-	Hammocks	Low
<i>Pecluma ptilodon</i>	Swamp plume polypoda fern	E	-	-	Hammocks, swamps	Low
<i>Pinguicula caerulea</i>	Blue flowered butterwort	T	-	-	Sandy to sandy-peaty soils of pine flatwoods, ditches, roadsides	Moderate
<i>Pinguicula lutea</i>	Yellow flowered butterwort	T	-	-	Sandy-peaty soils, pine flatwoods, seepage bogs, ditches, roadsides	Moderate
<i>Platanthera blephariglottis</i>	Large white-fringed orchid	T	-	-	Marshes, meadows, bogs, depressions in pine savannahs	Low
<i>Platanthera ciliaris</i>	Yellow-fringed orchid	T	-	-	Bogs, swamps, marshes, pine savannahs, and flatwoods, floodplain forests	Low
<i>Platanthera cristata</i>	Golden fringed orchid	T	-	-	Sphagnum and sedge bogs, meadows, pine savannahs, flatwoods, wet prairies, swamps, and seepage slopes	Low
<i>Platanthera nivea</i>	Snowy orchid	T	-	-	Bogs, wet pine savannas and flatwoods, wet prairies	Low
<i>Pogonia ophioglossoides</i>	Rose pogonia	T	-	-	Sphagnum bogs, meadows, swamps, pine savannahs, pine flatwoods, prairies	Low
<i>Rudbeckia nitida</i>	St. John's-Susan	E	-	I	Moist flatwoods, prairies, roadside ditches	Moderate
<i>Sarracenia minor</i>	Hooded pitcherplant	T	-	-	Flatwoods, bogs, ditches,	Low

Table 5-1 (Continued)

SPECIES	COMMON NAME	FDACS-DPI	FWS	DCA	HABITAT	PROBABILITY OF PRESENCE OR OCCURRENCE ⁴
<i>Spiranthes longilabris</i>	Long-lip ladies' tresses	T	-	-	Flatwoods, prairies, marshes, sandy bogs.	Moderate
<i>Spiranthes longilabris</i>	Long-lip ladies' tresses	T	-	-	Flatwoods, prairies, marshes, sandy bogs.	Moderate
<i>Stenorrhynchos lanceolata</i> var. <i>lanceolata</i> (= <i>Sacoila lanceolata</i> var. <i>lanceolata</i>)	Leafless beak orchid	T	-	-	Open pastures, roadside, wet pine flatwoods, sandhills	Moderate
<i>Tillandsia fasciculata</i>	Common wild pine	E	-	-	Hammocks, cypress swamps, pinelands	High
<i>Tillandsia flexuosa</i>	Twisted air plant, banded air plant	E	-	-	Shell ridges or mounds, hammocks, swamps, mangrove, pinelands, scrub	Moderate
<i>Tillandsia utriculata</i>	Giant wild pine	E	-	-	Hammocks, cypress swamps, pinelands	High
<i>Triphora amazonica</i> (= <i>Triphora latifolia</i>)	Broad-leaved nodding-caps	E	-	-	Hardwood hammocks	Low
<i>Zamia pumila</i> (= <i>Z. floridana</i> , <i>Z. integrifolia</i> , <i>Z. umbrosa</i>)	Florida coontie	C	-	-	Well-drained sandy or loamy soils	Moderate
<i>Zephyranthes atamasco</i>	Rain lily	T	-	-	Low ground, rich moist woods, wet pastures & meadows, limestone outcrops in woods	High
<i>Zephyranthes simpsonii</i>	Simpson's zephyr lily	T	-	R	Wet pinelands and pastures, adjacent roadsides	Present

USFWS listings last updated 10/14/08 via web site. DCA updated 10/14/08 via web site.

* DCA - Department of Community Affairs, Division of Resource Planning and Management, 9J-2.041, Listed Plant and Wildlife Resources Uniform Standard Rule.

[C - critically imperiled, I - imperiled, R - rare]

1. FNAI - Florida Natural Areas Inventory; Matrix of habitats and distribution by county of rare/endangered species in Florida, published April, 1990
2. FGFWFC - Florida Game and Fresh Water Fish Commission; Official lists of endangered and potentially endangered fauna and flora in Florida, published April, 1996.
[E - endangered, T - threatened, C - commercially exploited]
3. Habitats described by:
Bell, C.R. and B.J. Taylor. 1982. Florida wild flowers and roadside plants. Laurel Hill Press, Chapel Hill, NC 308 pp.
Coile, Nancy C. 1996. Notes on Florida's Endangered and Threatened Plants. Florida Department of Agricultural and Consumer Services, Gainesville, FL, 88 pp.
FNAI - Florida Natural Areas Inventory; Matrix of habitats and distribution by county of rare/endangered species in Florida, published April, 1990/
Godfrey, R.K. 1988. Trees, shrubs, and woody vines of northern Florida, and adjacent Georgia and Alabama. Univ. Georgia Press. Athens, GA 734 pp.
Ward, D.B. (publ. data not listed). Volume five: plants in P.C.H. Pritchard (ed.), Rare and endangered biota of Florida. University Presses of Florida, Gainesville. 175 pp.
Wunderlin, R.P. 1982. Guide to the vascular plants of Florida. University Presses of Florida. Gainesville. 472 pp.
4. Likelihood of occurrence: Low, Moderate, or High based on best available data and selective field observations.

**TABLE 5-2
POTENTIALLY OCCURRING LISTED WILDLIFE SPECIES
I-75 PD&E STUDY - HILLSBOROUGH & MANATEE COUNTIES**

SPECIES	COMMON NAME	FFWCC¹	USFWS²	HABITAT³	PROBABILITY OF PRESENCE OR OCCURRENCE⁴
FISH					
<i>Rivulus marmoratus</i>	Mangrove rivulus	SSC (1)		Tidal marsh, tidal swamp, mangrove swamp, unconsolidated substrate	Moderate
AMPHIBIANS					
<i>Rana capito</i>	Gopher (crayfish) frog	SSC (1,2)		Associated w/ gopher tortoise burrows, high-dry sandy areas	High
REPTILES					
<i>Alligator mississippiensis</i>	American alligator	SSC (1,3)	T (S/A)	Tidal marsh, tidal swamp, lacustrine (lakes, ponds), palustrine, riverine	High
<i>Drymarchon corais couperi</i>	Eastern indigo snake	T	T	Hydric hammock, palustrine, sandhill, scrub, upland pine forest, mangrove swamp	High
<i>Gopherus polyphemus</i>	Gopher tortoise	T		Old field, sandhill, scrub, xeric hammock, ruderal, dry prairie, pine flatwood	Present
<i>Pituophis melanoleucus mugitus</i>	Florida pine snake	SSC (2)		Sandhill, scrubby flatwoods, xeric hammock, pine flatwoods, ruderal	Moderate
<i>Pseudemys concinna suwanniensis</i>	Suwannee cooter	SSC (1,2)		Alluvial stream, blackwater stream, spring fed stream	High
<i>Stilosoma extenuatum</i>	Short-tailed snake	T		Sandhill, scrub, xeric hammock, longleaf pine-turkey oak, upland hammock	Low
BIRDS					
<i>Platalea ajaja</i> (= <i>Ajaia ajaja</i>)	Roseate spoonbill	SSC (1,4)		Coastal marsh, tidal ponds, sloughs, fresh water marsh, mudflats, tidal swamps	High
<i>Aphelocoma coerulescens</i>	Florida scrub-jay	T	T	Scrub, scrubby flatwoods	Low
<i>Aramus guarana</i>	Limpkin	SSC (1)		Floodplain swamp, floodplain marsh, rivers, streams, sloughs, lakes	Low
<i>Egretta caerulea</i>	Little blue heron	SSC (1,4)		Estuarine, lacustrine, riverine, tidal marsh, tidal swamp	Present
<i>Egretta rufescens</i>	Reddish egret	SSC (1,4)		Tidal Marsh, unconsolidated substrate, mangrove island, barren sands, mudflats, estuarine	High
<i>Egretta thula</i>	Snowy egret	SSC (1)		Estuarine, lacustrine, riverine, tidal marsh, tidal swamp	High
<i>Egretta tricolor</i>	Tricolored (=Louisiana) heron	SSC (1,4)		Estuarine, lacustrine, riverine, tidal marsh, tidal swamp	High

Table 5-2 (Continued)

SPECIES	COMMON NAME	FFWCC ¹	USFWS ²	HABITAT ³	PROBABILITY OF PRESENCE OR OCCURRENCE ⁴
<i>Eudocimus albus</i>	White ibis	SSC (2)		Estuarine, lacustrine, riverine, tidal marsh, tidal swamp	Present
<i>Falco peregrinus</i>	Arctic peregrine falcon	E		Basin marsh, tidal marsh, marl prairie, swale, coastal ponds, lake margins	Moderate
<i>Falco sparverius paulus</i>	Southeastern American kestrel	T		Sandhill, mesic flatwoods, ruderal, dry prairie	Moderate
<i>Grus canadensis pratensis</i>	Florida sandhill crane	T		Basin marsh, depression marsh, dry prairie, marl prairie, pastures	High
<i>Haematopus palliatus</i>	American oystercatcher	SSC (1,2)		Beach dune, exposed marine and estuarine substrate, mudflat, beach, sandbar	High
<i>Haliaeetus leucocephalus</i>	Bald eagle		*	Estuarine, lacustrine, riverine, tidal marsh, tidal swamp	Present
<i>Mycteria americana</i>	Wood stork	E	E	Estuarine tidal swamps/marshes, lacustrine, seepage stream, ditches, ruderal	High
<i>Pelecanus occidentalis</i>	Brown pelican	SSC (1)		Unconsolidated substrate, tidal marsh, tidal swamp, open water, mangrove	High
<i>Polyborus plancus aubudonii</i> (=Caracara cheriway)	Audubon's crested caracara	T	T	Dry prairie, wet prairie, ruderal, prairie hammock, open xeric and mesic	None
<i>Rynchops niger</i>	Black skimmer	SSC (1)		Beach dune, tidal marsh, beaches, sand dunes, large lakes in Central & South FL	High
<i>Athene cunicularia</i> (=Speotyto cunicularia)	Burrowing owl	SSC (1)		Dry prairie, sandhill, pastures, golf courses, ruderal, athletic fields	Low
<i>Sterna antillarum</i>	Least tern	T		Beach dune, coastal grassland, tidal marsh, lacustrine, sandy beaches	High
MAMMALS					
<i>Blarina carolinensis shermani</i>	Sherman's short-tailed shrew	SSC (2)		Hydric hammock, prairie hammock, ruderal, moist forests	Low
<i>Podomys floridanus</i>	Florida mouse	SSC (1)		Sandhill, scrub, scrubby flatwoods, upland hammock,	High
<i>Sciurus niger shermani</i>	Sherman's fox squirrel	SSC (1.2)		Sandhill, scrub, scrubby flatwoods, upland hammock,	Low
<i>Trichechus manatus</i> (<i>Trichechus manatus latirostris</i>)	West Indian (=Florida) Manatee	E	E	Alluvial stream, blackwater stream, spring fed stream, estuarine, marine	Present
<i>Ursus americanus floridanus</i>	Florida black bear	T ³		Palustrine, terrestrial, pine flatwoods, sand pine scrub, cypress swamps	Moderate

Table 5-2 (Continued)

1. USFWS - U.S. Fish and Wildlife Service status, Official lists of Threatened and Endangered species updated through the USFWS web site last updated on 10/14/08. [ranking: **E** - endangered, **T** - threatened]
- * The Bald Eagle is afforded federal protection through the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA).
2. FFWCC - Florida Fish and Wildlife Conservation Commission; Official Lists of Florida's Endangered Species, Threatened Species, and Species of Special Concern, published November 2007. [FFWCC - Florida Game and Fresh Water Fish Commission status, **USFWS** - U.S. Fish and Wildlife Service status] [ranking: **E** - endangered, **T** - threatened, **SSC** - species of special concern]

Notations:

- (1) has a significant vulnerability to habitat modification, environmental alteration, human disturbance, or human exploitation which, in the foreseeable future, may result in its becoming a threatened species unless appropriate protective or management techniques are initiated or maintained;
- (2) may already meet certain criteria for designation as a threatened species but for which conclusive data are limited or lacking;
- (3) may occupy such an unusually vital or essential ecological niche that should it decline significantly in numbers or distribution other species would be adversely affected to a significant degree;
- (4) has not sufficiently recovered from past population depletion, and
- (5) occurs as a population either intentionally introduced or being experimentally managed to attain specific objectives, and the species of special concern prohibitions in Rule 68A-27.002, F.A.C., shall provided that the intentional killing, attempting to kill, possession not apply to species so designated, or sale of such species is prohibited.

¹ Lower keys population only.

² Monroe County population only.

³ Other than those found in Baker and Columbia Counties or in Apalachicola National Forest.

3. Habitats described by:

Hall, D and Newman, C. 1998. TESS 2.0: Threatened and Endangered Species Software, Professional Version. Envirotools, Inc. Gainesville, FL.

4. Likelihood of occurrence: Low, Moderate, or High based on best available data and selective field observations.

5.2 Agency Coordination

A meeting with Mr. Todd Mecklenborg of the USFWS was held on Wednesday, October 15, 2008 at the USFWS office in St. Petersburg, Florida. The purpose of the meeting was to discuss the likelihood of occurrence of federally protected species on the I-75 project corridor, and survey methods for determining potential impacts. Meeting minutes from that meeting are provided in **Appendix F**. A letter of request (also included in **Appendix F**) initiating formal consultation with the USFWS was submitted in March 2010. This request was submitted to address potential impacts to the Florida golden aster and also seeks concurrence for affect determinations. A biological opinion (BO) will be written by USFWS staff and provide a determination of affect for the Florida golden aster. Once the USFWS completes the BO and provides concurrence on the affect determinations this information will be incorporated into the final document.

5.3 General Corridor Survey Results

The project corridor traverses a mix of primarily rural and moderate density residential areas. Agricultural lands provide habitat to many wildlife and plant species, some of which are protected, while the residential areas provide limited habitat value to flora and fauna. Descriptions are provided below for those species which are present along the project corridor, have been identified on the historic listed species occurrence, or have high potential to occur within habitats identified on the corridor.

5.4 Federally Protected Species

5.4.1 Federally Protected Fauna Species

Federally protected fauna species which have been identified in the vicinity of the corridor or have high potential to occur are the American alligator (*Alligator mississippiensis*), eastern indigo snake (*Drymarchon corais couperi*), wood stork, and West Indian manatee (*Trichechus manatus*). The Florida scrub-jay

(*Aphelocoma coerulescens*) was also addressed due to the potential occurrence on adjacent lands. All of these species are also afforded state protection.

5.4.1.1 Florida Scrub-Jay

Florida scrub-jays are primarily associated with xeric or scrub habitat. Scrub-jays require open areas within scrub for foraging and caching food. Overgrown scrub is undesirable and results in the movement of scrub-jays to appropriate habitat. Florida scrub-jays are listed as threatened by both the USFWS and the FFWCC.

Scrub or other upland habitats deemed suitable for scrub-jay occupation within 3.2 kilometers east and west of the project corridor will need to be surveyed in the future, once pond siting and floodplain compensation areas have been identified. Surveys of these areas will be conducted in accordance with USFWS guidelines, preferably between March and June, or if that timeframe cannot be met surveys may take place between July and August. Coordination with Hillsborough County staff to inquire about scrub restoration that may have recently taken place within the project area should also be conducted.

Scrub habitat within the existing ROW does not support scrub-jay populations at this time. The recommended alternative provides for widening to the inside of existing lanes which will not affect scrub habitat. Interchange improvements will likely impact scrub habitats located within the existing interchange formations, however these habitats are too small, fragmented, and overgrown to support scrub-jays. Future impacts which may occur from pond siting and floodplain compensation may have to address impacts to scrub-jay habitat and require mitigation. Habitat impacts associated with the recommended alternative will have no affect on the Florida scrub-jay.

5.4.1.2 American Alligator

American alligators reach reproductive maturity at 8 to 13 years of age. Females construct nests comprised of vegetation, sticks, leaves, and mud in a location near a regularly inundated water source. The female lays 20-50 eggs and remains near the nest during the 65-day incubation period. The alligator is an opportunistic feeder that will consume almost anything, but primarily eats fish, turtles and snails.

The American alligator is protected by the USFWS as a federally threatened species based upon “similarity of appearance” to the endangered American crocodile (*Crocodylus acutus*), and is listed by the FFWCC as a species of special concern. No individuals of this species were observed during the field surveys, however habitats utilized by the American alligator such as rivers, saltwater marshes, and other surface water ponds are found within and adjacent to the project corridor, therefore the probability of occurrence for this species within the corridor is high.

Impacts proposed for these habitat types are limited to 7.71 acres of jurisdictional wetlands and surface waters and 3.01 acres of other surface waters for the recommended alternative. Compensatory mitigation is proposed for all jurisdictional wetland and surface water impacts while the loss of other surface waters will be offset through installation of similar habitats in the final stormwater management plan design. Additionally this species is common in local habitats and long term viability of this species is not anticipated to be affected. The USFWS does not consult or make determinations of affect for this species due to its commonality, and listing is maintained primarily for law enforcement purposes. Due to the amount of impacts to these habitat types, offsetting compensatory mitigation, common occurrence, and future installation of stormwater management areas, this project will not affect the American alligator.

5.4.1.3 Eastern Indigo Snake

Eastern indigo snakes are large, black, non-venomous snakes which are distributed throughout the southeastern United States. Occurrence of this species has been documented on the historic observations (**Figure 5-1**). The eastern indigo snake occurs in a wide variety of habitats, including forested uplands and wetlands as well as wet and dry prairies. This species feeds on snakes, frogs, salamanders, toads, small mammals, birds and young turtles. Eastern indigo snakes are listed as threatened by both the USFWS and FFWCC.

No individuals were observed during the field surveys, however, areas of suitable habitat for this species occurs within and adjacent to the project corridor. The probability of occurrence for this species within the corridor is therefore high.

To assure the protection of this species during construction, when it is most likely to be affected, the FDOT will require that the standard construction precautions for the eastern indigo snake be implemented, and these construction guidelines will be a part of the final project design. Current construction guidelines (dated February 12, 2004) for the protection of the eastern indigo snake are provided in **Appendix G**. The most current guidelines will be obtained and followed at the time the project proceeds to permitting and construction phases. Since standard protection guidelines will be incorporated in the final project design and implemented during construction, this project may affect, but is not likely to adversely affect the eastern indigo snake.

5.4.1.4 Wood Stork

Wood storks utilize freshwater and estuarine habitats for nesting, foraging, and roosting. Wood storks typically are colonial nesters and construct their nests in medium to tall trees located within wetlands or on islands. Wood storks are listed as endangered by both the USFWS and FFWCC.

No rookeries were observed during field surveys. Six (6) wood stork rookeries are documented within 15.0 miles (Wood Stork CFA radius for Central Florida populations) of the project corridor. The location of the wood stork rookeries is provided in **Figure 5-2**. Suitable foraging habitat (SFH) types have been identified during the UMAM process (**Section 4.4**). Detailed calculations of CFA biomass may be required during future permitting phases of the project if foraging habitat is lost and the USFWS continues to utilize these calculations to determine mitigation. As defined by the USFWS, SFH includes wetlands and surface waters which have areas of water that are relatively calm, uncluttered by dense thickets of aquatic vegetation, and have permanent or seasonal water depth between 2 and 15 inches. Wetlands and surface waters that meet the criteria of SFH generally include herbaceous and saltwater marshes and herbaceous ditches/swales, ponds, and riverine systems. Wet prairie/pastures may provide foraging habitat during periods of high rainfall. SFH within the project corridor will be re-evaluated during final permitting of the project as vegetative structure of wetlands will change over time and due to maintenance activities associated with the other surface water systems.

Impacts to potential SFH for wood storks along the corridor is limited to 8.23 acres of jurisdictional surface waters and wetlands and 4.96 acres of other surface waters for the recommended alternative. Unavoidable wetland impacts will be mitigated as appropriate. Impacts to other surface water features will be compensated for in the future design of the stormwater management plan. The project may affect, but is not likely to adversely affect the wood stork.

5.4.1.5 West Indian Manatee

West Indian manatees utilize estuarine habitats and have been documented in both the Alafia and Little Manatee Rivers. Aerial surveys and mortality locations were downloaded from <http://ocean.floridamarine.org> and are provided in **Figure 5-1**. “*Standard Manatee Conditions for In-Water Work*” will be implemented and these guidelines will be a part of the final project design. Current provisions (dated July 2005) are provided in **Appendix H**, and when the project proceeds to permitting and construction phase, the most current provisions will be obtained and followed. West Indian manatees are listed as endangered by both the USFWS and FFWCC.

Impacts over estuarine habitats are limited to 5.39 acres in both the Alafia and Little Manatee Rivers. Impacts will be temporary in nature and may limit some activity during construction. Movement and foraging within the two rivers will not be limited by increasing the bridge size as lanes will be added to the inner portions of the two existing bridges. Since the “*Standard Manatee Conditions for In-Water Work*” will be incorporated during construction and impacts will be temporary in nature, this project may effect, but not likely to adversely affect, and have no adverse modification of critical habitat for the West Indian manatee.

5.4.2 Federally Protected Flora Species

One (1) federally protected plant species, Florida golden aster, has been recorded along the project corridor. FDOT staff, William Moriarty, documented this species at two (2) separate locations in January 2008. Copies of the species occurrence reports submitted to the FNAI are provided in **Appendix I**. Staff ecologists also surveyed for and documented this species at the same two (2) locations on November 13, 2008. Details of the surveys and results are provided below. This species is listed as endangered by both the USFWS and FDACS-DPI.

Cursory surveys were conducted at the two (2) previously identified locations in addition to appropriate habitat identified elsewhere along the corridor. This species was only located at the two original sites identified by William Moriarty, identified as Sites 1 and 2. Photographs of the two sites and of the plants in flower are also provided in **Appendix I**.

Site 1 supported approximately 40± plants with many observed in flower. These plants appeared healthy and robust, although sand live oaks and saw palmetto are encroaching into the open habitat required by this plant. This area has been provided protection from roadside maintenance by the installation of metal stakes.

Site 2 supported approximately 20± plants which were not yet in bloom but there were a few individuals with flower buds. Although this area has been provided protection with steel stakes, there appeared to have been some mowing or possibly weed trimming activity which has cut many of the plants short.

More detailed surveys will need to be conducted to confirm the continued presence and number of individuals during future permitting phases of the project. Mapping of species locations will allow for potential transplant of the individuals, by FNAI, to surrounding preservation tracts or allow for seed collection by organizations such as the Florida Native Plant Society (FNPS). Potential recipient sites exist in the surrounding community and include the Golden Aster Scrub Nature Preserve which is operated by Hillsborough County's ELAPP.

Interchange improvements for the recommended alternative will likely impact both populations of this species that were confirmed during field surveys. Formal consultation for this species has been initiated in March 2010. The BO for this species is being written by USFWS and will be included in the final document for this project. Although this species is found in the surrounding region and the FDOT commits to pursuing preservation through collection of seed and/or transplant, the project may affect the Florida golden aster.

5.4.3 Non-Listed, Federally Protected Species

Although the bald eagle is no longer afforded protection by the ESA, protection for the species is afforded through the Migratory Birds Program per the Migratory Bird Treaty Act (MBTA) and Bald and Golden Eagle Protection Act (BGEPA). The USFWS will still regulate activities if an active eagle nest is within 660 feet of a proposed activity. Bald eagles are also no longer listed by the FFWCC.

5.4.3.1 Bald Eagle

Bald eagles have been observed along the project corridor. Two (2) nest sites located within 660 feet of the project corridor have been documented by the FFWC. Nest ID #s, developed by the FFWCC, for these two (2) nests are HL005 and HL008. The location of these nests is provided on **Figure 5-1**, which also includes additional nests located within 1 mile of the project corridor. Staff ecologists initially conducted surveys for the two (2) nests, which are located within ~750 ft of the roadway corridor, on November 12, 2008. During the nest inspections the air temperature was in the low 80s, winds were east to northeast at 2 – 5 miles per hour and the skies were sunny. Eagle Nest HL005 was inspected between 9:30 - 10:00 a.m., and Eagle Nest HL008 was inspected between 11:00 – 11:15 a.m. High powered binoculars were used to help identify any nests or eagles that may be present. Prior to conducting the field inspections and to assist in locating the nest area in the field, the Geographic Information System (GIS) eagle nest data points were overlaid on 2007 color aerials to create a field map.

Eagle Nest HL005 was last documented as being active in 2001, and is reported to be located approximately 500 feet east of the I-75 ROW, and on the east side of a large borrow pit one mile south of Symmes Road. Eagle Nest HL008 was last documented as being active in 1999, and is reported to be located approximately 1500 feet north of Lightfoot Road and is within 500 feet of the I-75 ROW. Both nest locations are reported to be in Hillsborough County.

No nest was observed at the HL005 site although not all potential nest trees were fully visible from the Bullfrog Creek ROW, and it is recommended that access to the private property be requested to inspect all potential nest trees during the nesting season prior to construction. A bald eagle was observed flying over I-75 on October 28, 2008 in the vicinity of HL005. Flight was from west to east over I-75. No nest or possible nest tree was located at the HL008 site.

During land use mapping in December 2009 a nest was documented on a cell phone tower in the vicinity of the HL005 nest site. The cell phone tower is on the west side of I-75 near mile marker 235, south of the Hillsborough County Rest Area. A follow-up survey was conducted on December 9, 2009 at 10 AM to confirm the nest activity. Survey results identified an adult eagle on the cell phone tower perched above the nest. This cell phone tower was previously reviewed as a potential nest site with no indications of a nest, so it is likely this is a new nest site for the 2009-2010 breeding season. This nest site is located within 660 ft of the I-75 corridor.

The USFWS has recently determined that construction activities within 1500 feet of bald eagle nests have no documented negative effects that would halt construction activities during the nesting season. Monitoring of construction and nesting activities is therefore no longer warranted for projects involving construction beyond 660 feet of an active bald eagle nest during nesting season. Additionally the USFWS has an online activity sheet (<http://www.fws.gov/southeast/es/baldeagle/index.html>) to assist in determining if the proposed activity is likely to disturb nesting bald eagles for projects that are located near an eagle nest.

Current project conditions were assessed and a determination of unlikely to disturb can only be concluded if the USFWS's recommendations are followed. These include the restriction of all clearing, external construction, and landscaping activities to outside the nesting season. This non-nesting timeframe has been determined by the USFWS to be August through mid-January.

Recommendation for the creation of additional landscape buffers is not feasible for this location, due to the height of the eagle's nest on the cell phone tower.

Commitment to re-survey this nest site and any other new nests during the permitting and design stage of the project will be provided. In addition the FDOT will abide by the USFWS recommendations to avoid nest disturbance or contact the USFWS for further assistance during the permitting and design stage to assess alternative measures. The project therefore may affect, but is not likely to adversely affect the bald eagle.

5.5 State Protected Species

5.5.1 State Protected Fauna Species

Fauna species which have been identified in the vicinity of the corridor or have moderate to high potential to occur are the gopher tortoise, gopher frog (*Rana capito*), Florida mouse (*Podomys floridanus*), Suwannee cooter (*Pseudemys concinna suwanniensis*) and a variety of wetland dependent avian species. State protected species which are also protected by the USFWS are discussed above and include the American alligator, eastern indigo snake, West Indian manatee, and wood stork.

5.5.1.1 Gopher Tortoise

Gopher tortoises reach reproductive maturity at 16-21 years of age. Gopher tortoises nest in late April to mid-July. Preferred habitats include xeric areas with sandy soils and open canopy with low groundcover. The gopher tortoise feeds primarily on new shoots of grasses and broad-leaf herbs, but may also consume mushrooms, fleshy fruits and some animal matter.

The gopher tortoise is listed by the FFWCC as threatened. Several active and inactive gopher tortoise burrows are located within the project ROW and presented on **Figure 5-4**. Additionally any areas which appeared to be potential gopher tortoise habitat are also mapped on this figure.

The recommended alternative appears to impact the location of at least five existing active gopher tortoise burrows. These impacts occur within the interchange improvement areas. Comprehensive surveys for tortoises and their burrows will need to be conducted during the final design phase of the project. Tortoise burrows that are identified within the project limits will require coordination between the FDOT and the FFWCC in order to apply for a relocation permit during future permitting phases of this project. Since the gopher tortoise populations will be resurveyed prior to construction and current rules require the relocation of the species, the project may affect, but is not likely to adversely affect the gopher tortoise.

5.5.1.2 Gopher Frog

Gopher frogs occupy xeric habitats and commonly utilize gopher tortoise burrows. Several active and inactive gopher tortoise burrows are located within the project corridor. When present, gopher frogs can be seen sitting at the mouth of gopher tortoise burrows. Presence may also be confirmed through frog vocalizations. Gopher frogs are winter-spring breeders, but vocalizations may be heard during the summer, after evening rain showers. Gopher frogs are listed as a species of special concern by the FFWCC.

Relocation efforts associated with the gopher tortoise will include the relocation of any associate species and should offset any potential affects to the gopher frog. Since the gopher tortoise populations will be resurveyed prior to construction and current rules require the relocation of the species and associate species, the project may affect, but is not likely to adversely affect the gopher frog.

5.5.1.3 Florida Mouse

The Florida mouse is one of many associate species of the gopher tortoise. Active and inactive gopher tortoise burrows are located within the project limits in sandy xeric habitat that is suitable habitat for the Florida mouse. The Florida mouse is listed as a species of special concern by the FFWCC.

Relocation efforts associated with the gopher tortoise will include the relocation of any associate species and should offset any potential effects to the Florida mouse. Therefore, the project may affect, but is not likely to adversely affect the Florida mouse.

5.5.1.4 Suwannee Cooter

The Suwannee cooter is found in both Hillsborough and Manatee Counties. This species has a high likelihood of occurrence in both the Alafia and Little Manatee Rivers. The Suwannee cooter is listed as a species of special concern by the FFWCC.

Adherence to FDOT's "*Standard Specifications for Road and Bridge Construction*" in addition to following BMPs during construction of bridge structures should minimize any impacts to this species. Impacts to suitable habitats are limited to 5.39 acres in both the Alafia and Little Manatee Rivers. Impacts will be temporary in nature and may limit some activity during construction. Movement and foraging within the two rivers will not be limited by increasing the bridge size as lanes will be added to the inner portions of the existing bridges. Since BMPs and adherence to the "*Standard Specifications for Road and Bridge Construction*" will be followed during construction and impacts will be temporary in nature, this project may affect, but is not likely to adversely affect the Suwannee cooter.

5.5.1.5 Wetland Dependent Avian Species

This category includes all wetland dependent avian species that have a potential to occur on the project corridor. This includes the American oystercatcher (*Haematopus palliatus*), black skimmer (*Rynchops niger*), brown pelican (*Pelecanus occidentalis*), Florida sandhill crane, least tern (*Sterna antillarum*), little blue heron, reddish egret (*Egretta rufescens*), roseate spoonbill (*Ajaia ajaia*), snowy egret (*E. thula*), tricolored heron (*E. tricolor*), white ibis, and wood stork. Of these, only the wood stork is federally protected. The wood stork is listed as endangered by both the USFWS and FFWCC and discussed in greater detail in **Section 5.5.1.4**. The Florida sandhill crane and least tern are listed as threatened by the FFWCC. The remaining species are all listed as species of special concern by the FFWCC.

Several wetland dependent bird species were observed during field surveys, with locations provided on **Figure 5-4**. A mixed wading bird rookery identified in the Florida Atlas of Breeding Sites for Herons and their Allies (Atlas #615336) was documented within one mile of the project corridor along the Little Manatee River (**Figure 5-3**). The Atlas was last updated in 1999 and identified the rookery as active. No rookeries were identified during field surveys.

Wetlands and surface waters that provide foraging potential for these species include herbaceous and saltwater marshes and herbaceous ditches/swales, ponds, and riverine systems. Impacts are limited to potential foraging habitat for the recommended alternative and include 8.23 acres of jurisdictional surface waters and wetlands and 4.96 acres of other surface waters for the recommended alternative. Unavoidable wetland impacts will be mitigated as appropriate. Impacts to other surface water features will be compensated for in the future design of the stormwater management plan. The project may affect, but is not likely to adversely affect these wetland dependent avian species.

5.5.2 State Protected Flora Species

Several state protected flora species are present along the project corridor. Giant leather fern, nodding pinweed, pine pinweed, cinnamon fern, royal fern, and Simpson's zephyr lily are all present within the project limits. In addition to the federally protected Florida golden aster which is discussed above in **Section 5.5.2**. Locations for these species are provided on **Figure 5-4**. Giant leather fern, cinnamon fern, and royal fern are listed as commercially exploited (C) by the FDACS-DPI. Nodding pinweed and Simpson's zephyr lily are listed as threatened by the FDACS-DPI. Pine pinweed is listed as endangered by the FDACS-DPI. A variety of additional state protected plant species have high probability to occur within project limits. **Table 5-1** provides a complete list of those plant species.

Most habitats on the project corridor have been degraded for agricultural and urban use and do not provide optimal conditions for these species, however the recommended alternative will likely result in the removal of some individuals of each of these species. Habitat conditions range from overgrown and partially undisturbed native habitats to extremely degraded, with a high cover of nuisance/exotic species. Suitable habitats exist elsewhere in the project vicinity and it is unlikely that long term impacts to regional populations of these species would occur. Therefore, the proposed project may affect, but is not likely to adversely affect these species. Additionally, due to protection afforded to the wetland environments that some of these species exist in, and the compensatory mitigation that will be required to offset impacts to preferred habitats, the proposed project may affect, but is not likely to adversely affect the wetland dependent plant species.

5.6 Critical Habitat (CH)

The project corridor was assessed for CH designated by Congress in 17 CFR 35.1532. Review of the USFWS's available GIS data for CH resulted in the identification of CH for the West Indian Manatee within the Little Manatee River. This CH was originally identified by the USFWS in September 1976 and based on knowledge of specific waterways in Florida which were known to be important to manatees at that time. A man-made industrial warm-water site (Tampa Electric Company's Big Bend Power Station), which is an important wintering ground for the manatees, is located about 6 miles to the north of mouth the Little Manatee River.

A petition to revise CH for the Florida Manatee (*Trichechus manatus latirostris*) was recently received by the USFWS in December 2008. The Florida manatee is a subspecies of the West Indian manatee. A 12-month petition finding was recently issued (January 2010 – <http://www.regulations.gov> Docket # FWS-R4ES-2009-0066) and essentially identifies that the revision to the CH is warranted but sufficient funds are not yet available to do so. It is recommended that revisions to CH be reviewed during the permitting and design phase to ensure that no changes have been made to this or other CH designations.

Potential impacts to this CH are limited to 1.84 acres on the interior of the existing bridge structure for the recommended build alternative. Impacts will be temporary in nature and may limit some manatee activity during construction. Movement and foraging within the river will not be limited in the long term by increasing the bridge size as lanes will be added to the inner portion of the existing bridge. As discussed above for the species protection "*Standard Manatee Conditions for In-Water Work*" will be implemented and these guidelines will be a part of the final project design. Current provisions (dated July 2005) are provided in **Appendix H**, and when the project proceeds to permitting and construction phase, the most current provisions will be obtained and followed. Since these standards will be incorporated during construction and impacts will

be temporary in nature, this project will have no adverse modification of CH for the West Indian manatee.

5.7 Essential Fish Habitat (EFH)

An initial meeting was held with Dr. David Rydene, the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) Gulf Coast representative, on August 15, 2008 to discuss EFH for this project. Meeting minutes are provided in **Appendix F**.

5.7.1 Magnuson-Stevens Act

Under the requirements of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) of 1996, an EFH Assessment is required for the proposed project. EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, and development to maturity. The MSFCMA created conservation and management standards established through Fishery Management Councils (FMCs) to implement the national standards in the Fishery Management Plans (FMP).

The 1996 amendments to the Magnuson-Stevens Act set forth a number of mandates for the NMFS, eight (8) regional FMCs, and other federal agencies to identify and protect important marine and anadromous fish habitat. The FMCs, with assistance from NMFS, are required to identify and delineate EFH for all managed species. Federal action agencies that fund, permit, or carry out activities that may adversely impact EFH are required to consult with NMFS regarding the potential effects of their actions on EFH and to respond in writing to the NMFS's recommendations.

5.7.2 EFH Involvement

The objective of the EFH Assessment is to describe how the actions associated with the proposed improvements to I-75 may affect EFH designated by the NMFS and Gulf Coast FMC for the Alafia and Little Manatee River systems, areas of influence of the project. Land development activities may adversely affect EFH either directly or indirectly (i.e. loss of prey items) and this activity, either site-specific or habitat wide, is to be identified and evaluated individually and cumulatively. In response to the EFH assessment, NMFS and the FMC may provide recommendations and/or comments to the responsible federal permitting agency. The information provided by NMFS is considered by the permitting agency, and may be included in the recommendations as part of the Section 404 permit conditions.

According to NOAA guidelines for EFH (1998), EFH assessments must include:

- A description of the proposed action.
- An analysis of the effects, including cumulative effects, of the action on EFH, the managed species, and associated species by life history stage.
- The federal agency's reviews regarding the effects of the action on EFH.
- Proposed mitigation, if applicable.

The sections below include the analysis of effects and the federal agency's reviews regarding those effects on the EFH.

5.7.3 Analysis of Effects on EFH

Interagency coordination between FDOT and NMFS resulted in a list of Major EFH categories for managed species in the Gulf of Mexico. As reported in the *ETDM Programming Screen Summary Report* of March 29, 2007, habitat within the Little Manatee River and the Alafia River has been identified as EFH. **Table 5-3** illustrates a list of the species considered to potentially utilize the study area.

**Table 5-3
Managed Fisheries Species Anticipated to Occur in Hillsborough County
& Potentially Occurring within the Study Area**

Management Plan	Scientific Name	Common Name
Red Drum Fishery Management Plan	<i>Sciaenops ocellatus</i>	Red Drum
Shrimp Fishery Management Plan	<i>Penaeus setiferus</i>	White Shrimp
Reef Fish Fishery Management Plan	<i>Mycteroperca microlepis</i>	Gag Grouper
Reef Fish Fishery Management Plan	<i>Lutjanus griseus</i>	Gray Snapper

Unconsolidated bottom portions of estuarine emergent wetlands, estuarine water column, and non-vegetated bottoms within the Alafia and Little Manatee River systems, are specific categories of EFH that may be impacted by the project. Furthermore, increased use of the I-75 to Moccasin Wallow corridor could result in an increase in the amount of stormwater runoff such as sediment, oil, grease, and other pollutants. These pollutants may reach downstream estuarine and marine habitats in Hillsborough Bay and Tampa Bay that are utilized by marine fishery resources.

Therefore, NMFS recommends that stormwater treatment systems be upgraded to prevent degraded water from reaching downstream habitats. BMPs should also be employed during the road construction to prevent sedimentation of estuarine and marine habitats. FDOT's "*Standard Specification for Road and Bridge Construction*" will be utilized as part of the BMPs for this project.

SECTION 6 CONCLUSIONS & COMMITMENTS

6.1 Wetlands

The recommended alternative for the I-75 corridor from Moccasin Wallow Road to south of U.S. 301 provides for widening to occur within the current ROW limits along the I-75 mainline and also includes roadway improvements at interchanges along the corridor. Minor amounts of ROW would be required for the proposed improvements to the Big Bend Road and Gibsonton Drive interchanges.

Wetlands and surface waters determined as jurisdictional by the permitting agencies consist of a variety of natural habitats and riverine systems. Other surface waters such as man-made ditches/swales and ponds are also present. These man-made systems are generally utilized for stormwater treatment. Natural habitats are generally moderately to highly impacted by past activities.

Impacts are proposed to both wetlands and other surface waters in the recommended alternative. A total of 50.51 acres are potentially affected by the recommended alternative, which includes 45.18 acres of jurisdictional surface waters and wetlands and 5.33 acres of other surface waters. The Big Bend Road interchange improvements account for 10.94 acres of wetlands and 0.38 acres of other surface waters. Gibsonton Drive interchange improvements account for 0.33 acres of wetland impacts and 3.19 acres of impacts to other surface waters. SR 674 interchange improvements account for 17.08 acres of wetland impacts and 1.73 acres of other surface waters. Mainline improvements account for the remaining 16.83 acres of wetland impacts and 0.03 acres of other surface water impacts. These jurisdictional areas and other surface waters are located within the existing ROW.

Storage and drainage provided by impacted man-made surface water features will likely be replaced with new surface water facilities during future design of pond and floodplain compensation sites. Any functional loss associated with these impacted man-made surface waters would therefore be replaced by new surface water features.

The FDOT is committed to following standard operating measures to address wetland impacts for this project.

6.2 Protected Species & Habitat

The project may affect federally and state protected flora and fauna species. Review of literature for documented occurrences and listing of possible protected species was conducted in addition to field surveys for potential species.

Federally protected species which may be affected by the project include the eastern indigo snake, Florida golden aster, West Indian manatee, and wood stork. The current scope of this project will have no affect on the American alligator and Florida scrub-jay. The bald eagle is also afforded federal protection through the MBTA and BGEPA. The USFWS regulates activities if an active eagle nest is within 660 feet of a proposed activity. Multiple avenues of protection will be employed to negate and minimize any potential affects to these species. Some of the measures employed will include BMPs during construction, adherence to FDOT's "*Standard Specification for Road and Bridge Construction*", and utilization of special provisions for the eastern indigo snake and West Indian manatee (**Appendix G and H**).

State protected species which may be affected by the project include all of the above mentioned species. Additional state species include the American oystercatcher, black skimmer, brown pelican, Florida mouse, Florida sandhill crane, gopher frog, gopher tortoise, least tern, little blue heron, reddish egret, roseate spoonbill, snowy egret, Suwannee cooter, tricolored heron, and white ibis.

In order to assure that adverse impacts to protected species within the vicinity of the project corridor will not occur, the FDOT will abide by standard protection measures in addition to the following commitments:

- To assure the protection of the eastern indigo snake during construction, the FDOT will incorporate the most current USFWS guideline “*Standard Protection Measures for the Eastern Indigo Snake*” if it is determined that the project’s construction limits would involve this species habitat. **Appendix G** provides an example of the currently approved construction guidelines.
- To assure the protection of the West Indian Manatee during construction, the FDOT will incorporate the most current USFWS guideline “*Standard Manatee Conditions for In-Water Work*” into the final project design and will require the construction contractor to abide strictly to the guidelines during construction. **Appendix H** provides an example of the currently approved construction guidelines.
- FDOT commits to following the results of the ongoing Section 7 consultation with the USFWS for the Florida golden aster. These results will be provided in the BO and incorporated into the final report.
- Future surveys for the Florida scrub-jay will be conducted after locations of floodplain compensation and stormwater treatment locations have been determined. This report does not address floodplain compensation and stormwater treatment locations.

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APPENDIX A

Existing FLUCFCS, Wetlands and Surface Waters within the Project Area

APPENDIX B

Representative Wetland Photographs



I-75 PD& E (Moccasin Wallow Road to Hwy 301) – Representative Photograph
Saltwater Marsh (FLUCFCS – 642 / NWI - E2EM)



I-75 PD& E (Moccasin Wallow Road to Hwy 301) – Representative Photograph
Wet Prairie (FLUCFCS – 643 / NWI - PEM)



I-75 PD& E (Moccasin Wallow Road to Hwy 301) – Representative Photograph
Shrubby Wetland (FLUCFCS – 631 / NWI - PSS)



I-75 PD& E (Moccasin Wallow Road to Hwy 301) – Representative Photograph
Wetland Hardwood Forest (FLUCFCS 610 / NWI - PFO)



I-75 PD& E (Moccasin Wallow Road to Hwy 301) – Representative Photograph
Mixed Wetland Hardwoods (FLUCFCS 617 / NWI - PFO)



I-75 PD& E (Moccasin Wallow Road to Hwy 301) – Representative Photograph
Cypress (FLUCFCS 621 / NWI - PFO)



I-75 PD& E (Moccasin Wallow Road to Hwy 301) – Representative Photograph
Riverine - Little Manatee River (FLUCFCS – 510 / NWI – E1OW).



I-75 PD& E (Moccasin Wallow Road to Hwy 301) – Representative Photograph
Riverine - Alafia River (FLUCFCS – 510 / NWI – E1OW).



I-75 PD& E (Moccasin Wallow Road to Hwy 301) – Representative Photograph
Riverine - Curiosity Creek (FLUCFCS - 510 / NWI - ROW).



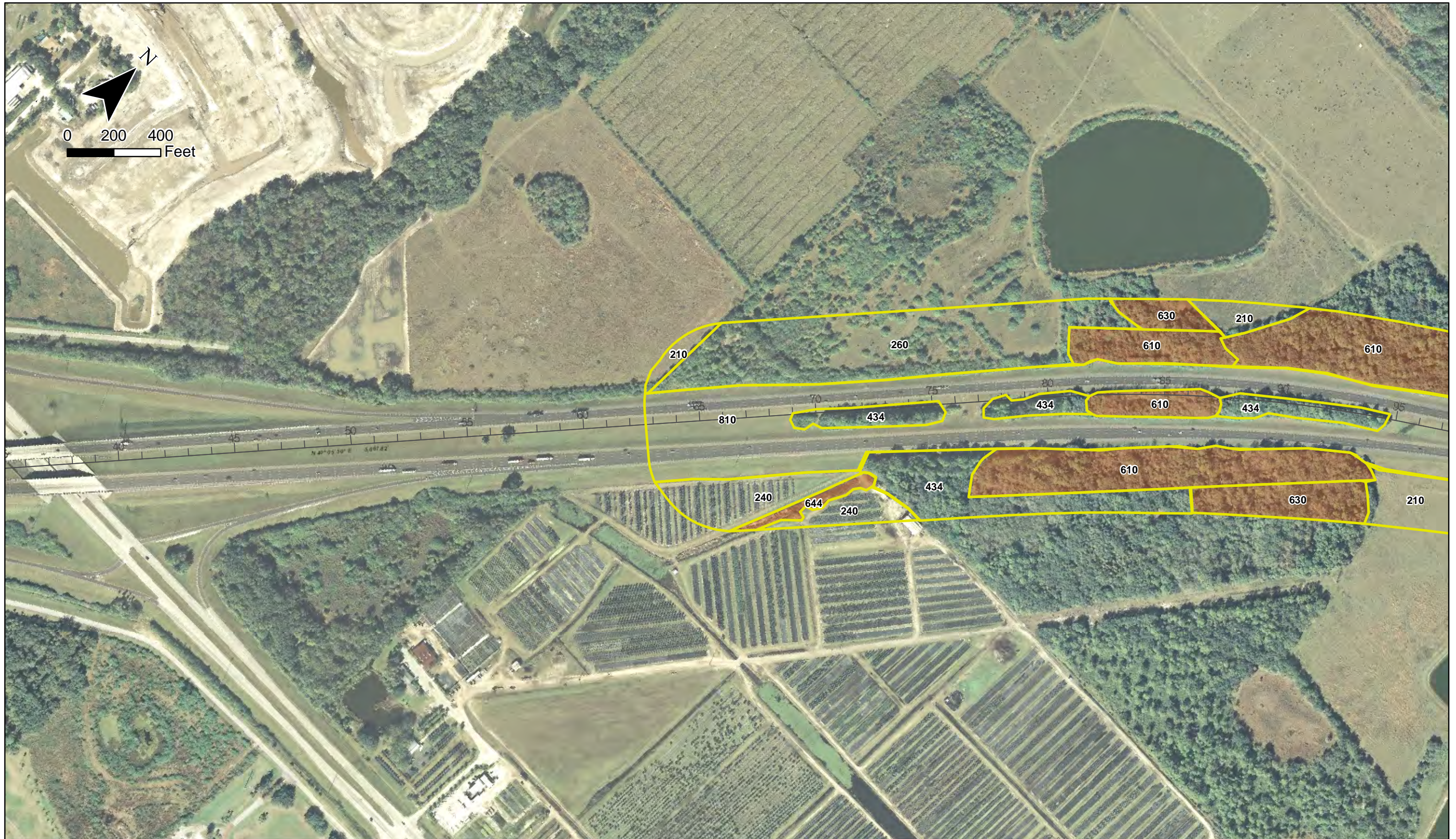
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Manmade - Herbaceous Ditch (FLUCFCS 641x / NWI - PEMx)



I-75 PD& E (Moccasin Wallow Road to Hwy 301) – Representative Photograph
Manmade -Shrubby Ditch (FLUCFCS 631x / NWI - PSSx)

APPENDIX C





Conceptual Design Plans



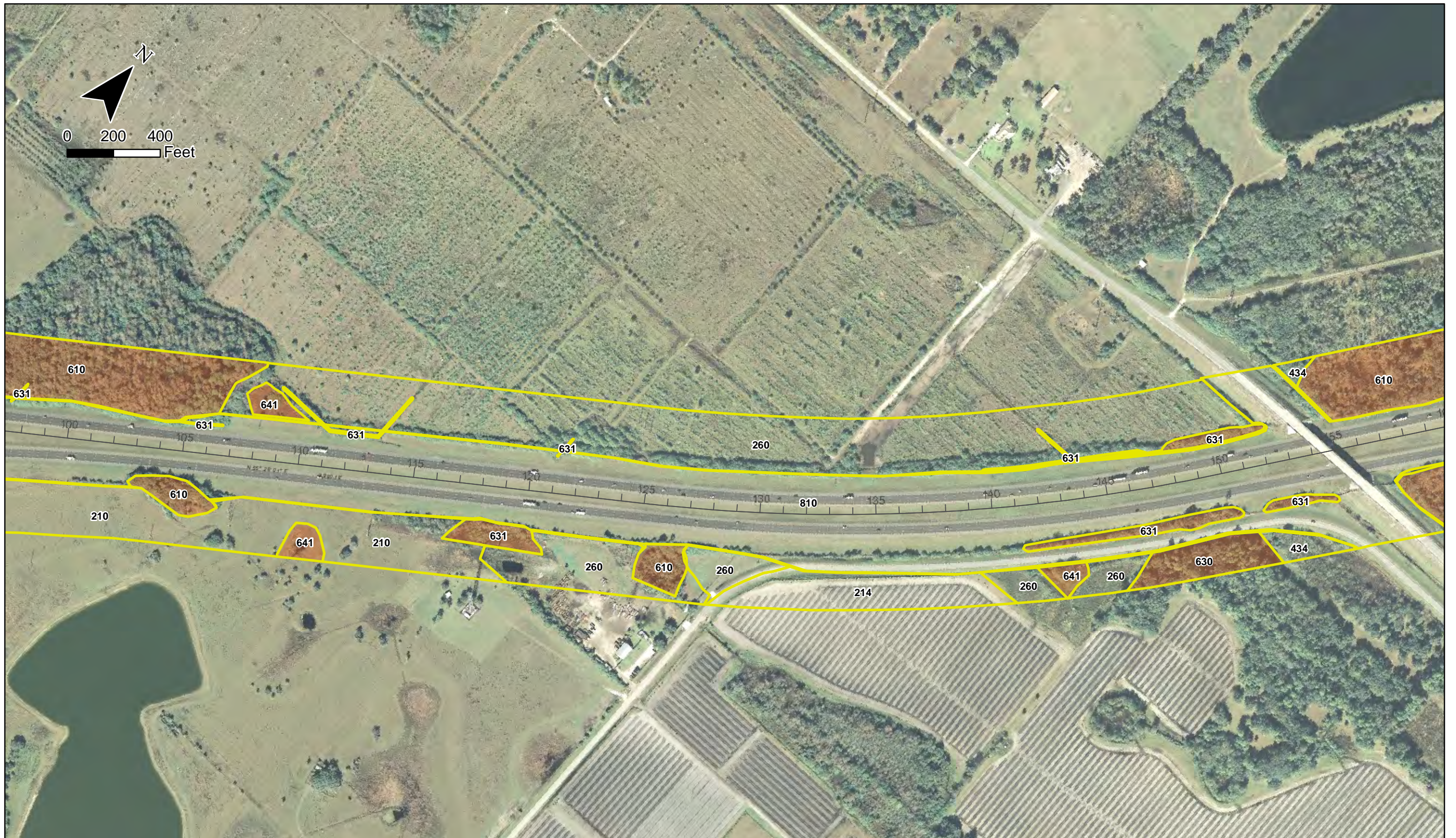
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 WPI Segment No.: 419235-2
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Existing Land Use and Land Cover, Wetlands and Surface Waters Within Project Area

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-  FLUCCS
-  Surface Waters
-  Wetlands
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


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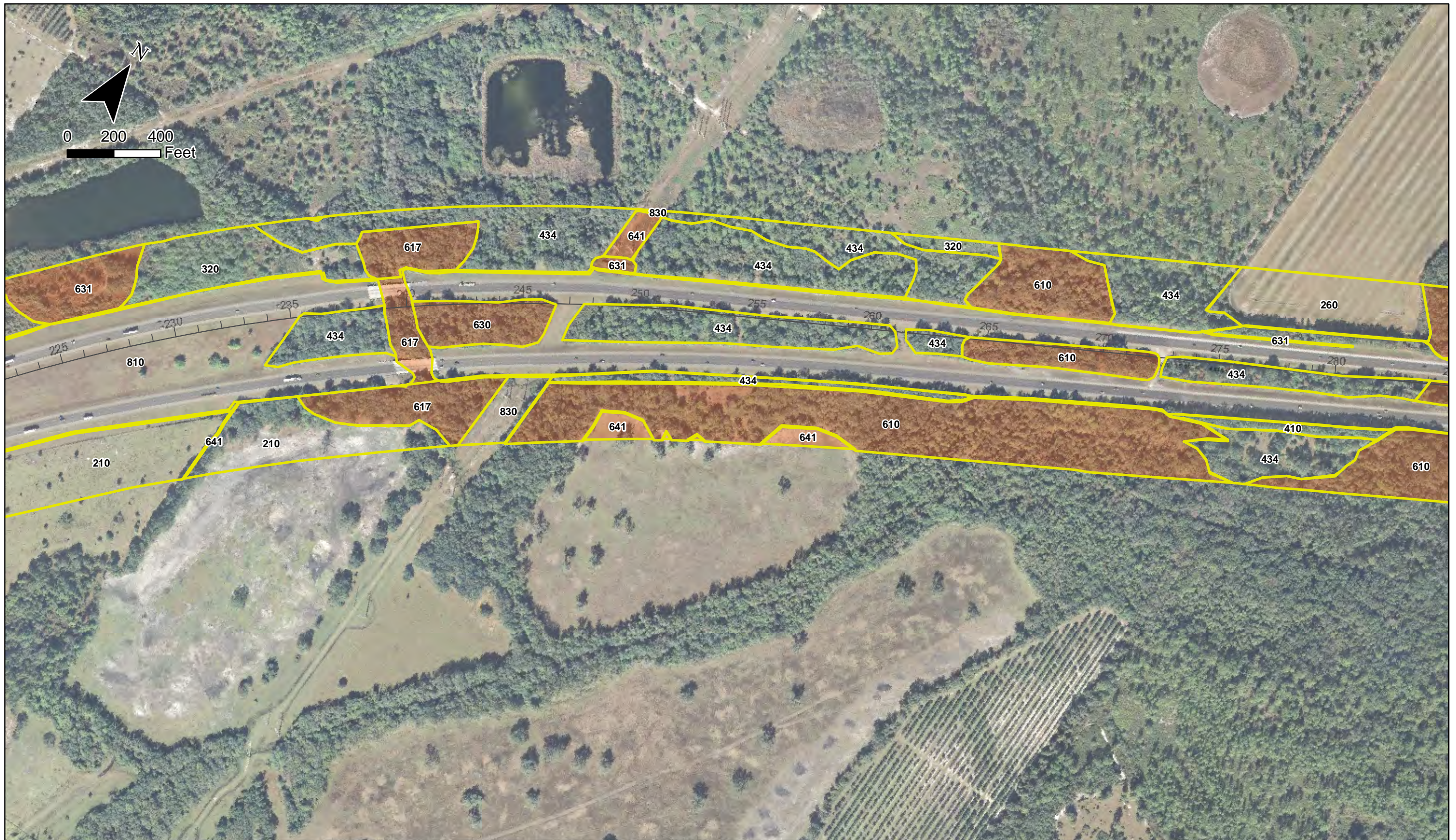
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
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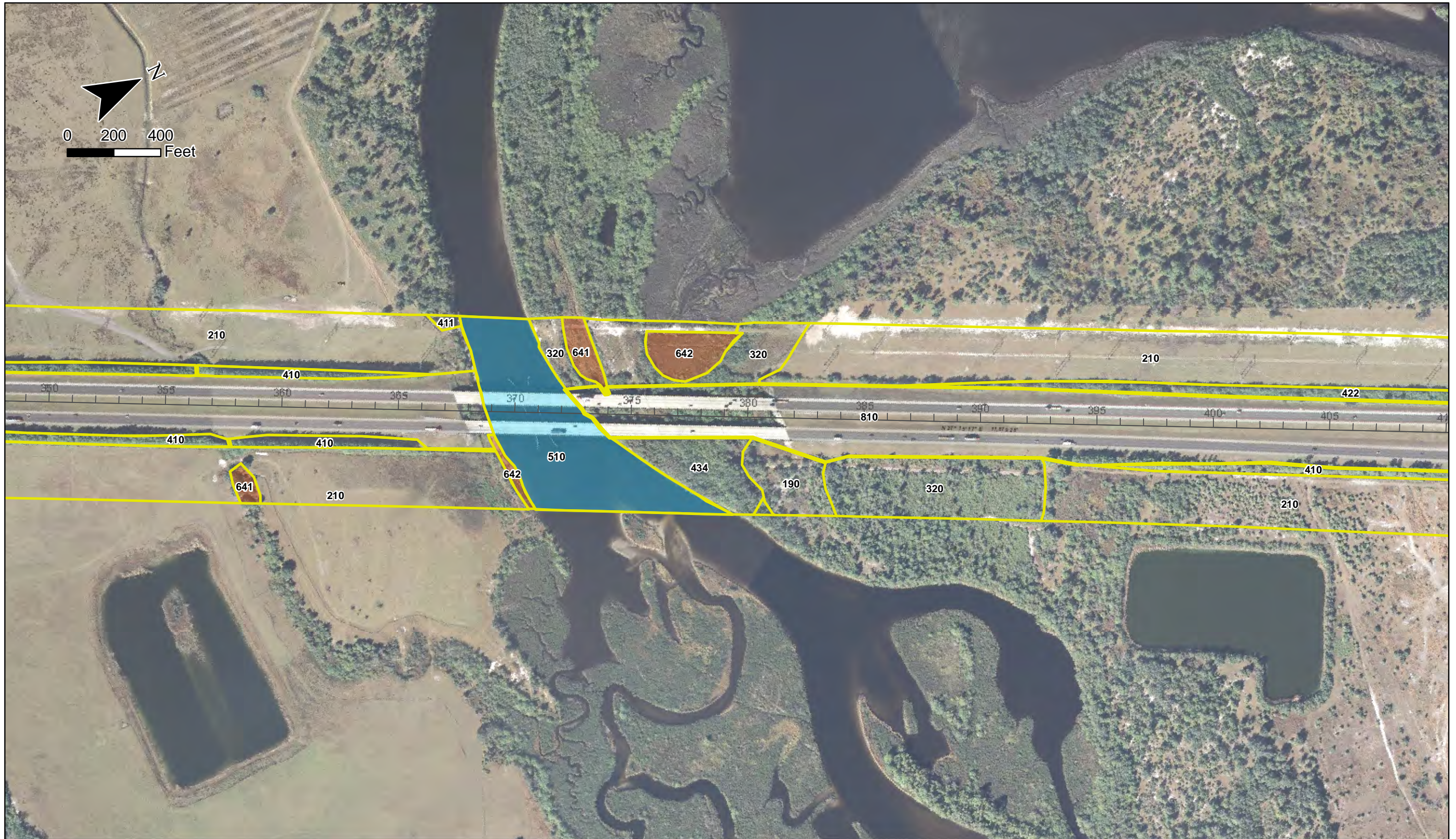


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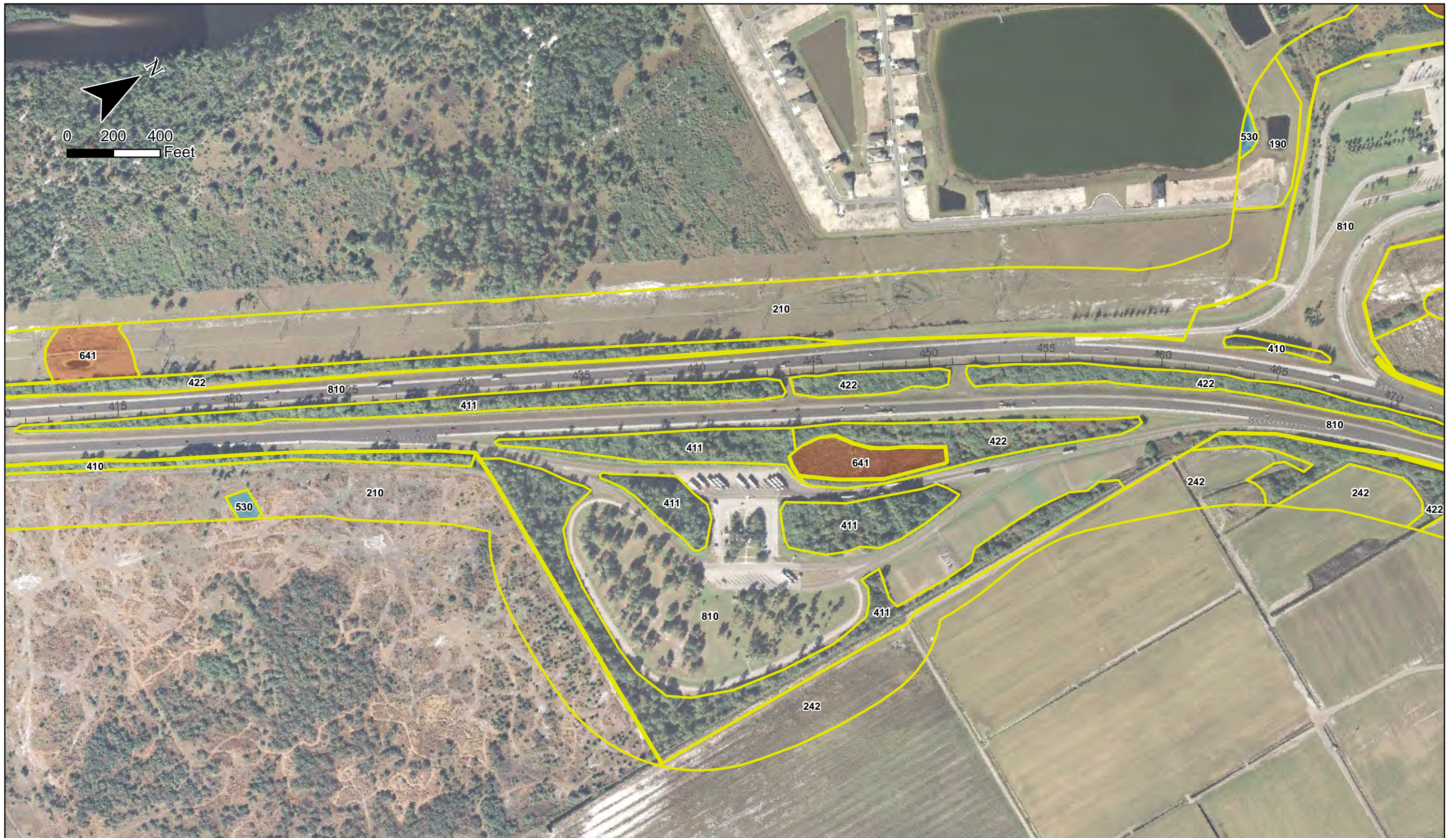
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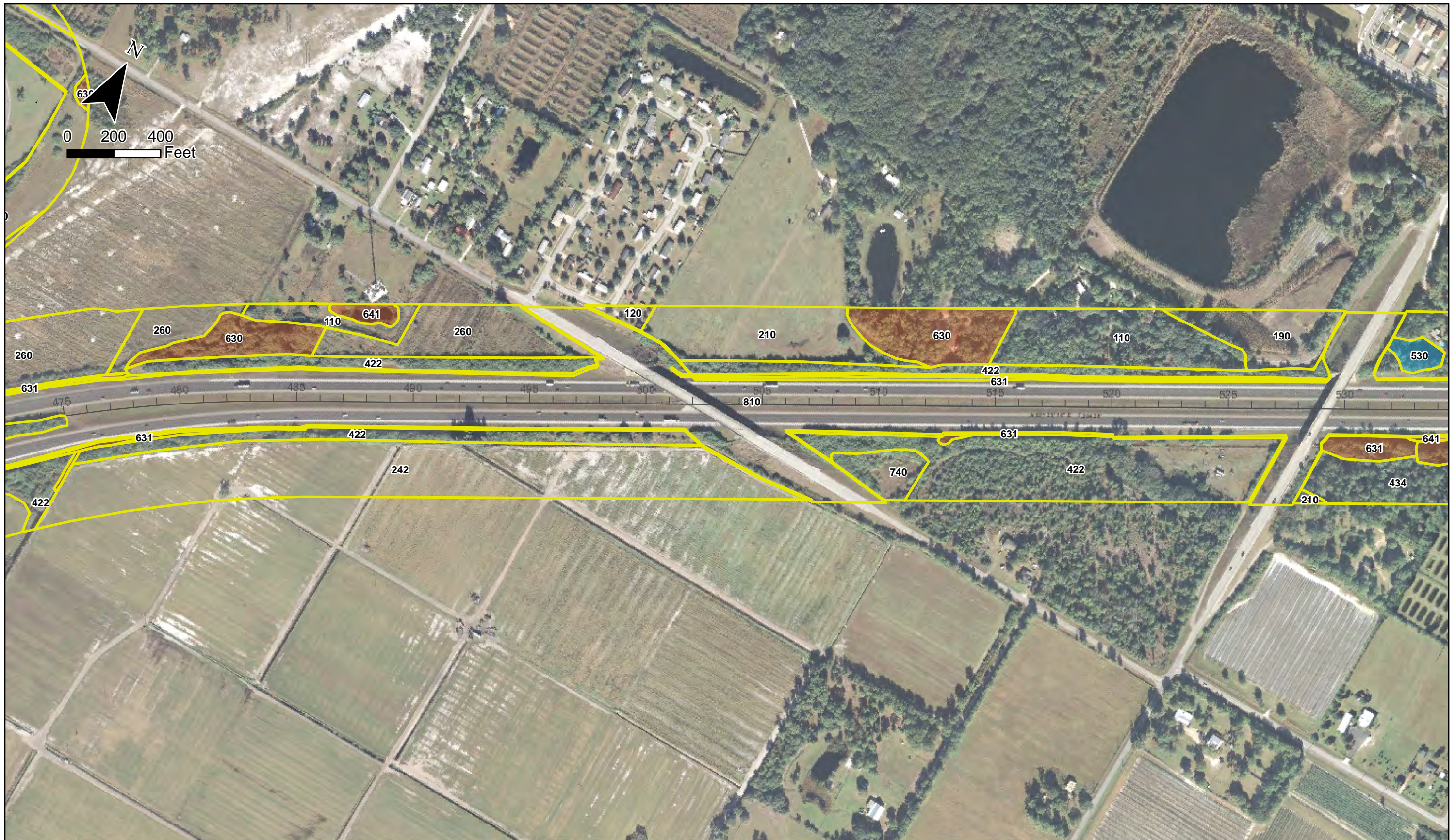
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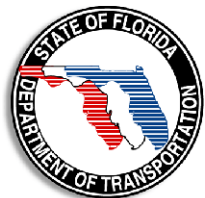
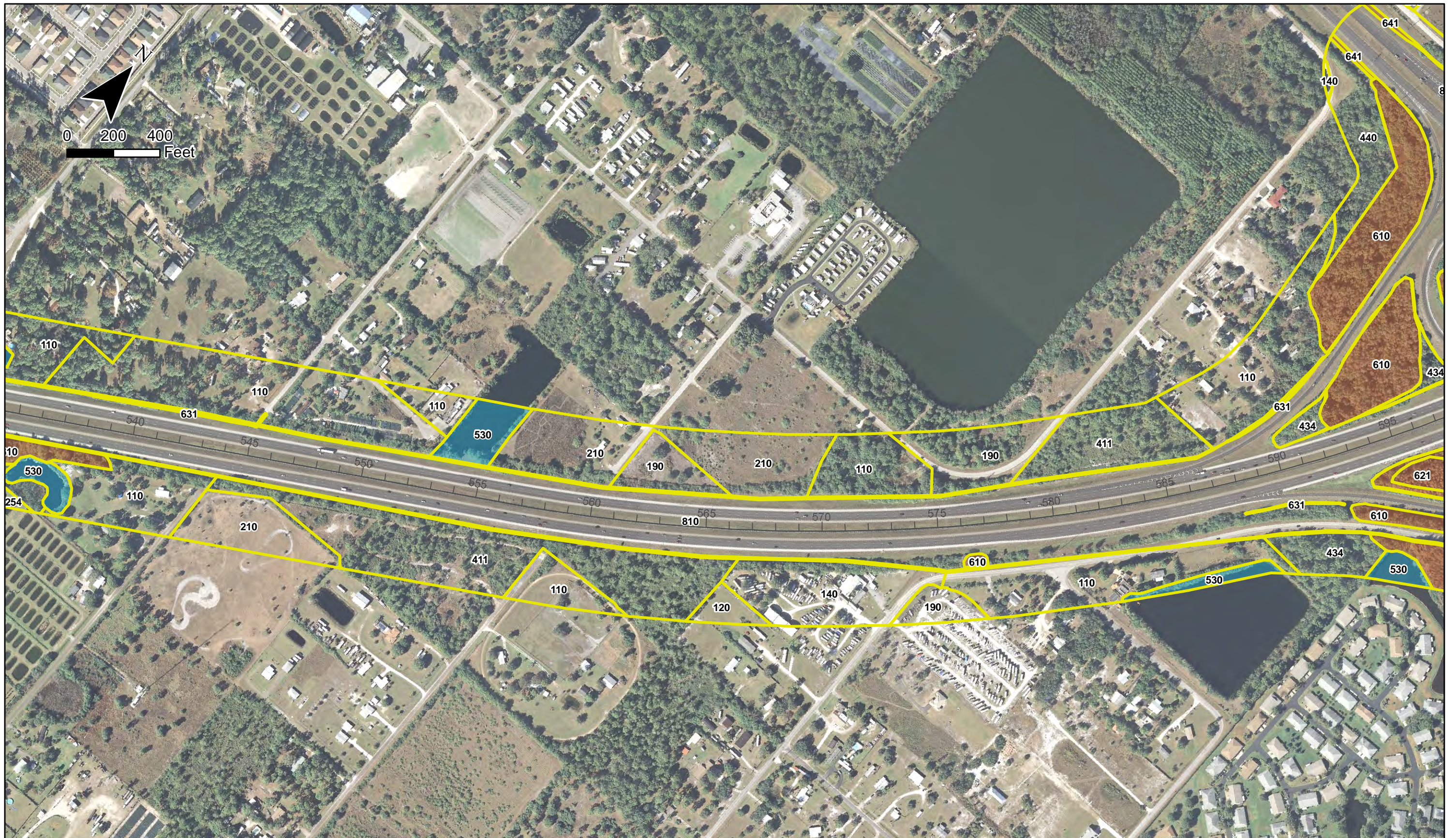
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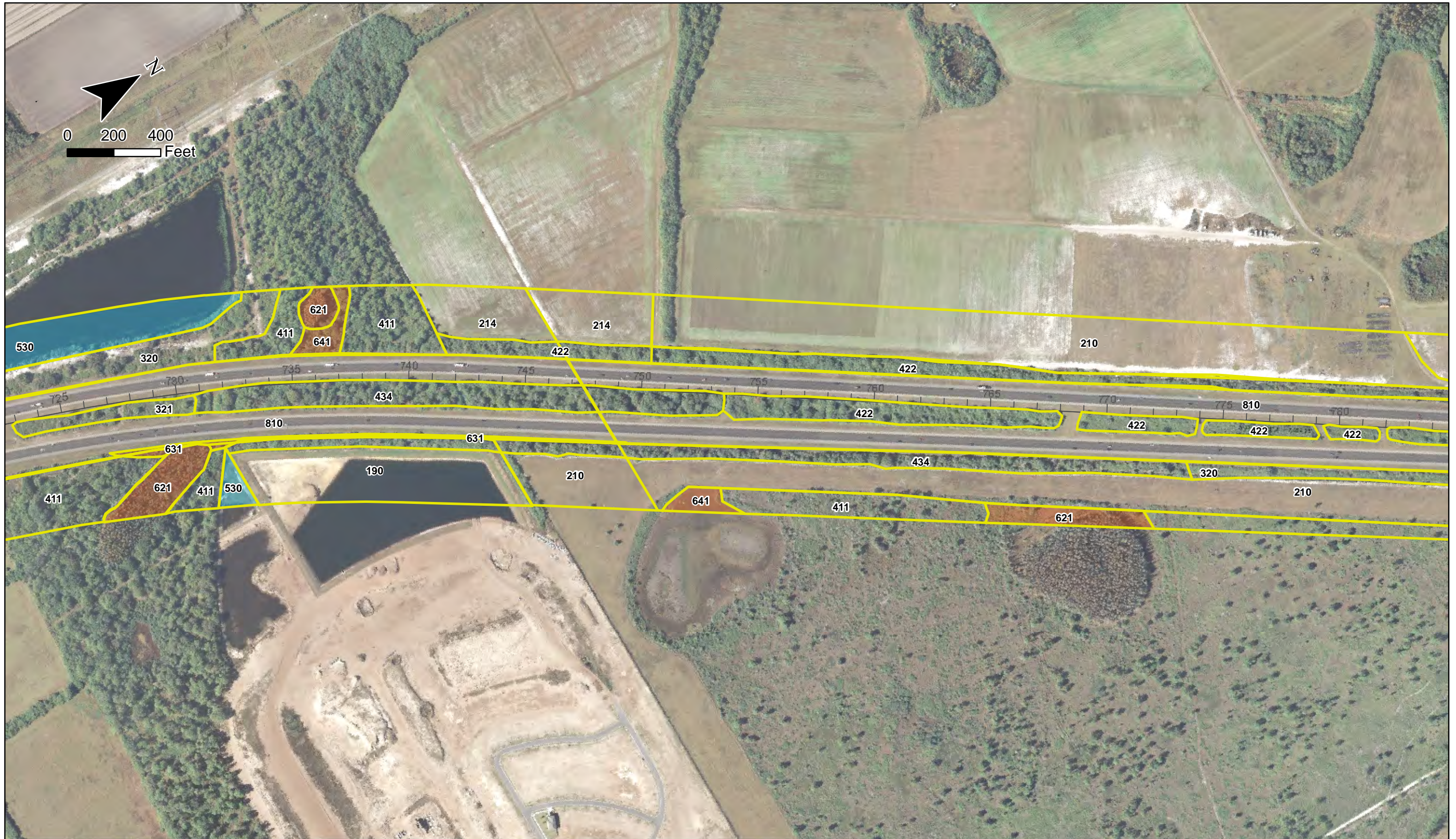
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


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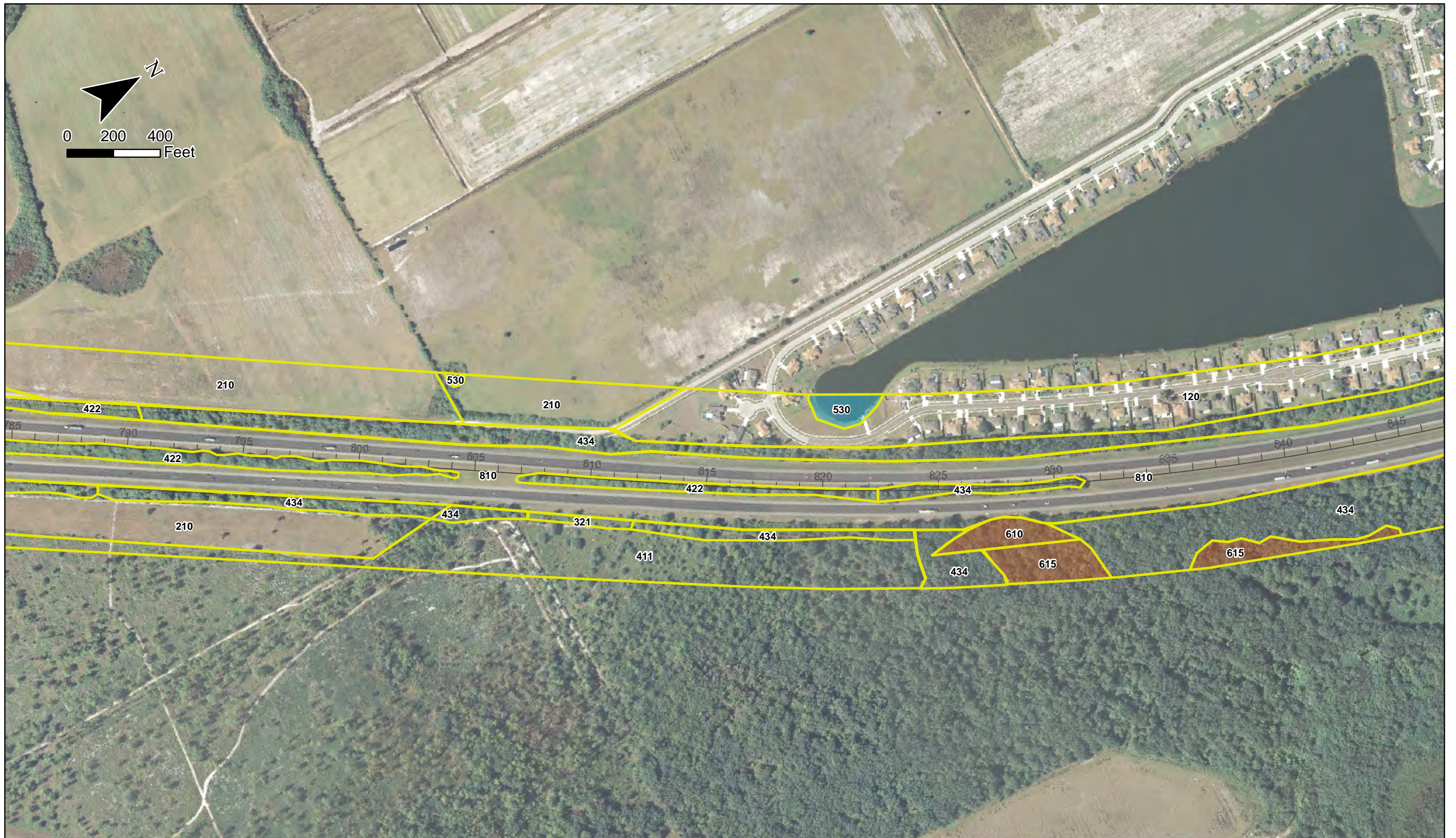
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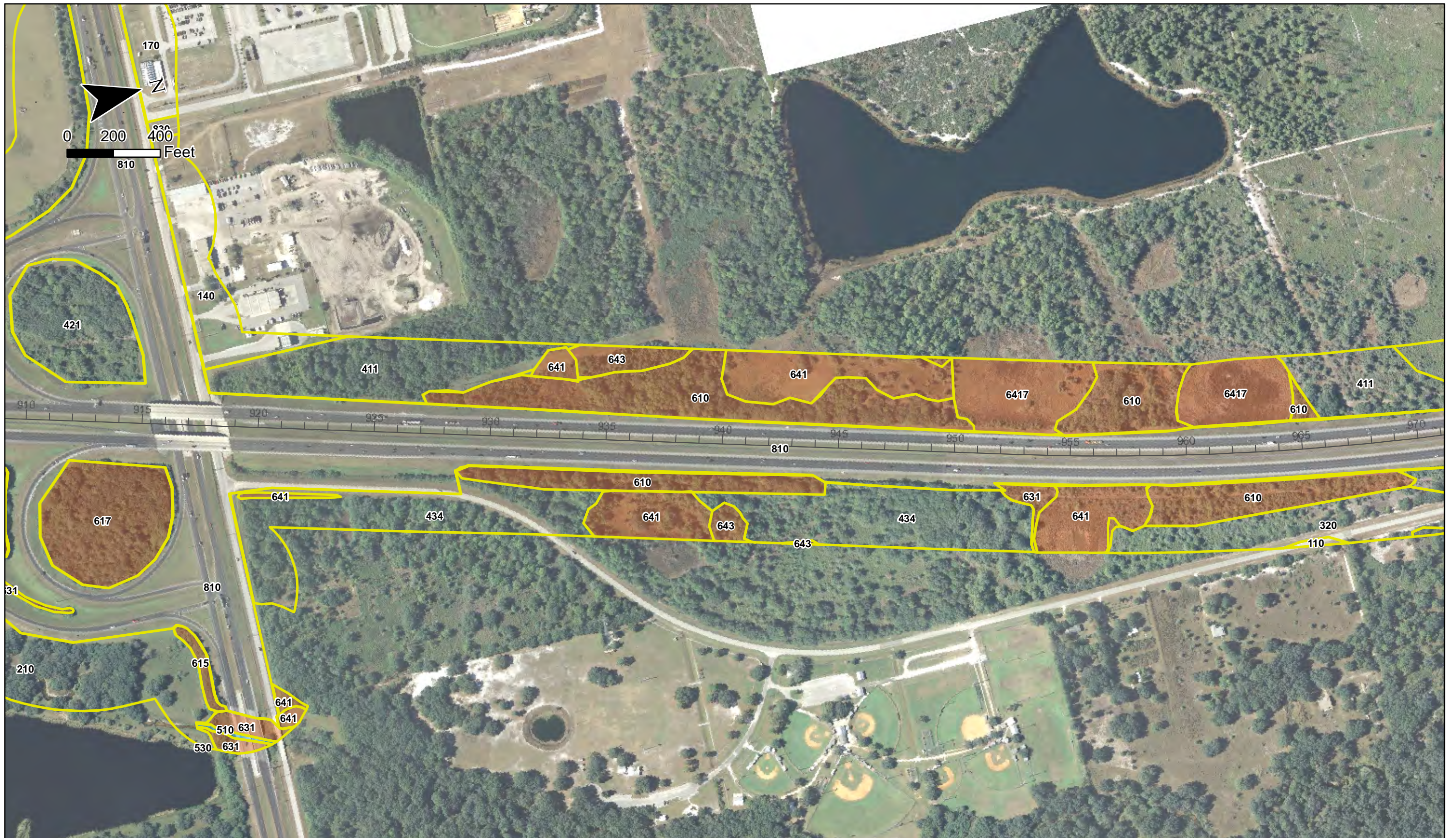
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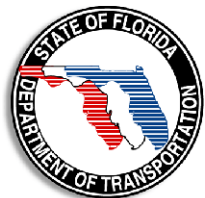
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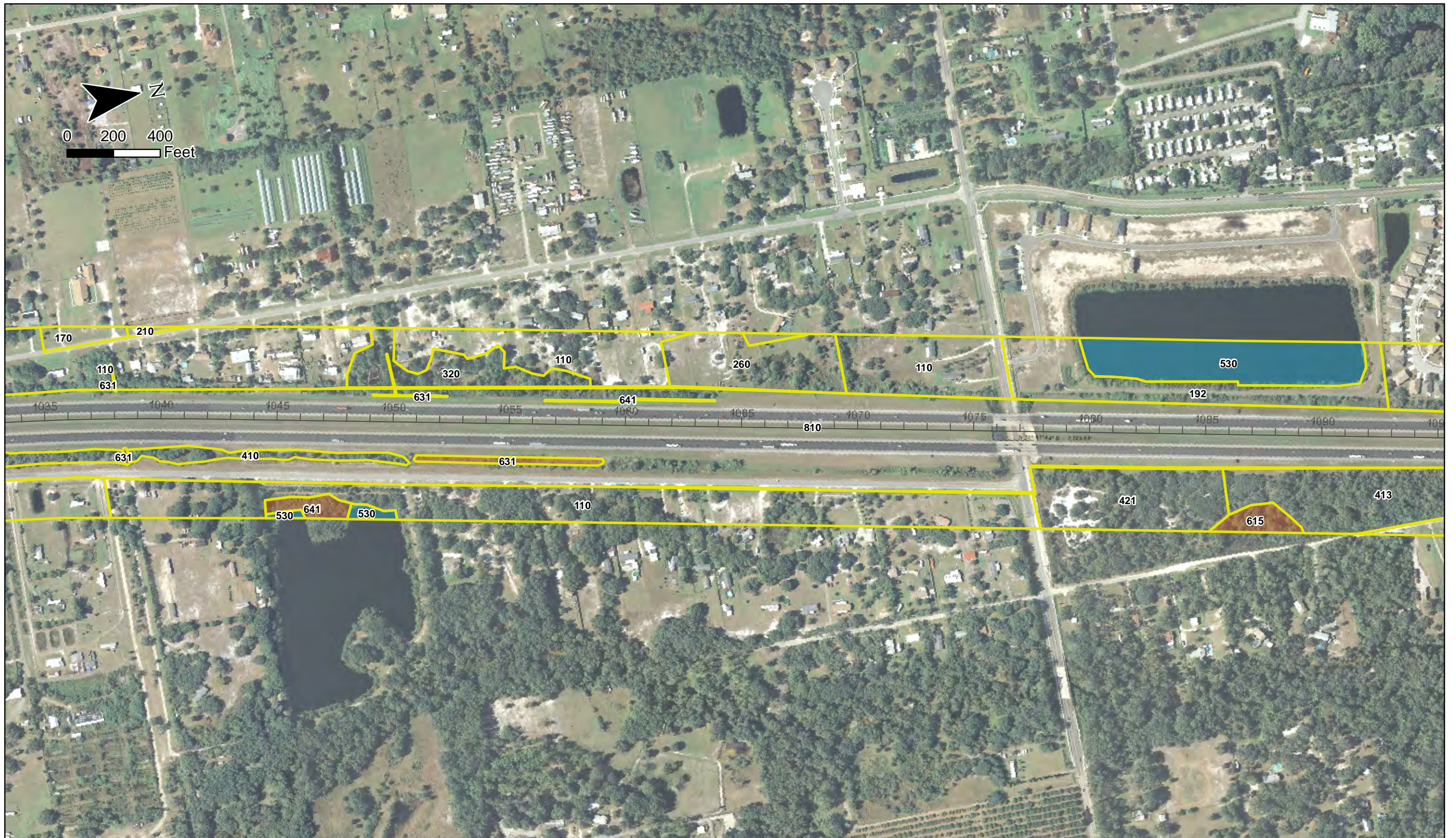
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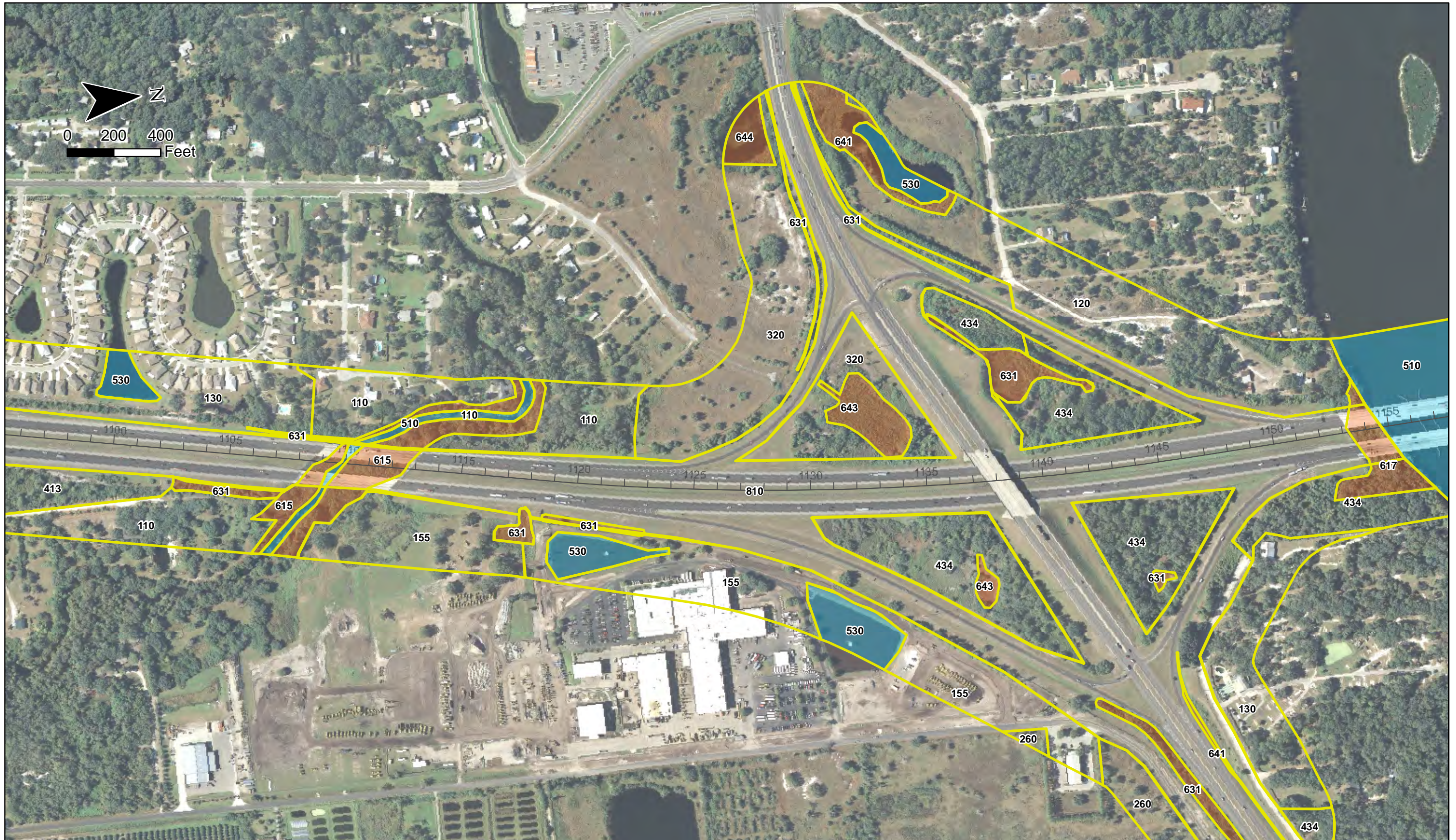
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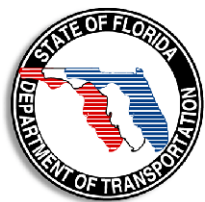
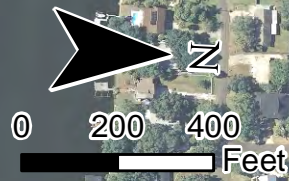
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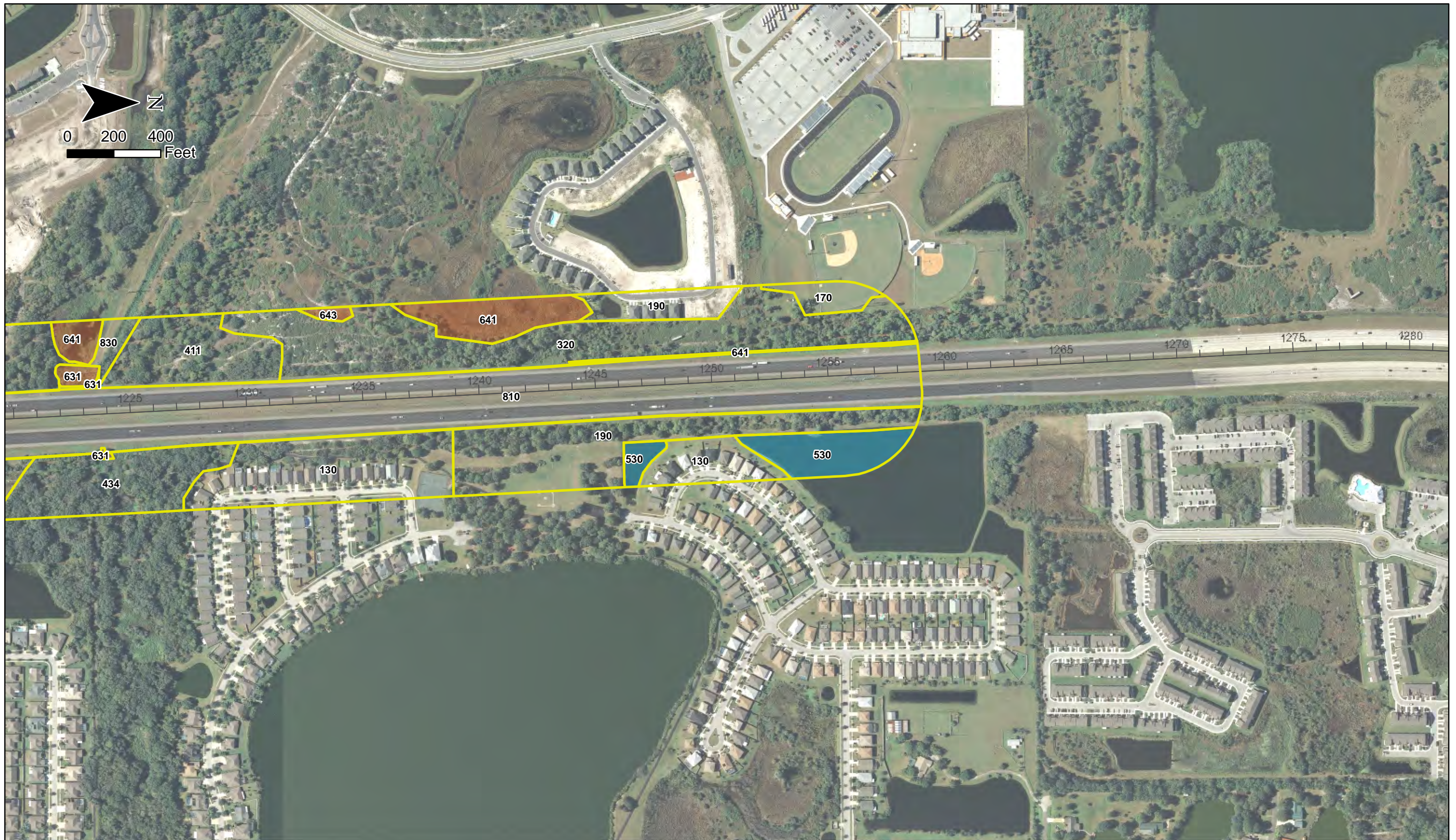
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APPENDIX D

Wetland & Other Surface Water Details by Number

NWI	Wetland ID	FLUCFCS	Prefered Alternative Impacts	Total ROW Acreage
Palustrine				
PEM1	182+00LT	643	0.33	0.33
	192+00LT	641	0.19	0.19
	210+50LT	641	0.00	2.42
	267+00LT	641	0.00	0.02
	286+50LT	641	0.00	0.12
	939+20LT	641	0.00	0.42
	957+00LT	643	0.00	0.33
	965+10LT	641	0.00	0.10
PSS1	269+00RT	6417	0.00	0.62
	284+50RT	6417	0.00	0.62
PSS1/3	104+60RT	631	0.00	0.21
	1109+40RT	631	0.00	0.05
	1111+00RT	631	0.00	0.01
	1154+00RT	631	0.00	0.01
	118+20RT	631	0.00	0.18
	1223+70RT	631	0.00	0.21
	126+00RT	631	0.00	0.06
	146+00RT	631	0.00	0.13
	153+00RT	631	0.00	0.15
	161+00RT	631	0.00	0.70
	173+80RT	631	0.34	0.34
	176+50RT	631	0.00	0.23
	240+00RT	631	0.00	0.18
	473+40RT	631	0.00	0.02
	474+70RT	631	0.00	0.15
	576+50RT	631	0.00	0.23
	58+70RT	631	0.42	0.42
	602+20RT	631	0.00	0.04
	613+80RT	631	0.00	0.01
	690+40RT	631	0.00	0.36
	729+40RT	631	0.00	0.16
	85+00RT	631	0.00	0.07
	902+20RT	631	0.00	0.10
918+20RT	631	0.00	0.47	
919+60RT	631	0.00	0.05	
953+40RT	631	0.00	0.36	
PFO1/3	1038+00LT	615	0.00	0.16
	1050+00LT	615	0.00	0.07
	1050+70LT	615	0.00	0.43
	514+00LT	615	1.01	1.01
	522+80LT	615	0.30	0.30
	541+50LT	615	0.00	0.23
	545+20LT	615	0.00	0.28
	866+40LT	615	0.00	0.06

NWI	Wetland ID	FLUCFCS	Prefered Alternative Impacts	Total ROW Acreage
Palustrine				
PFO1/4	106+00LT	610	0.00	0.74
	1107+40LT	617	0.00	0.40
	112+00LT	610	0.00	1.07
	1131+50LT	610	0.00	0.42
	1144+70RT	610	2.05	2.05
	1145+30RT	617	0.00	0.39
	1148+00RT	610	1.44	1.44
	1164+80RT	610	0.00	0.15
	1165+00RT	610	0.00	0.30
	1200+00RT	610	0.57	0.57
	121+10LT	610	0.00	0.19
	1210+20RT	610	3.43	3.43
	179+30LT	610	0.00	0.77
	184+00LT	610	0.00	0.25
	200+60LT	610	0.00	0.61
	212+70LT	610	0.00	0.61
	230+50RT	610	1.00	1.00
	277+50LT	610	0.00	3.83
	357+70RT	610	0.97	0.97
	369+20RT	610	0.00	0.86
	430+60LT	610	0.00	0.72
	447+50RT	610	0.00	0.36
	472+80LT	610	0.00	0.13
	505+00LT	610	0.00	0.52
	53+00RT	610	0.00	2.03
	533+80RT	617	0.00	1.47
	58+30RT	617	1.16	1.16
	590+70LT	617	0.00	0.18
	609+90LT	610	0.00	1.20
	612+10RT	610	1.29	1.29
	613+10RT	610	0.00	0.06
	613+40RT	610	0.00	0.96
	614+20RT	617	0.00	0.47
	615+50RT	610	1.17	1.17
	64+50LT	610	0.00	0.71
	730+00RT	617	5.60	5.60
	746+80RT	617	0.71	0.71
	827+80RT	610	5.41	5.41
	937+50RT	617	4.49	4.49
	956+50RT	610	0.00	0.55
	963+90RT	610	4.33	4.33
97+50LT	610	0.00	0.61	
999+60RT	610	0.00	2.11	
SW1110+00RT	610	0.00	1.15	
SW1155+60RT	610	0.00	2.00	
SW1165+00RT	610	0.00	0.69	
SW370+00RT	610	0.00	0.29	
PFO2	334+00RT	621	1.26	1.26
	536+50RT	621	0.00	0.03
Total Palustrine			37.47	74.32

NWI	Wetland ID	FLUCFCS	Prefered Alternative Impacts	Total ROW Acreage
Estuarine				
E1OW	1165+00LT	510	0.00	0.94
	196+50LT	510	1.84	1.84
	373+60LT	510	0.06	0.06
	377+20LT	510	0.00	1.35
	598+20LT	510	3.49	3.49
	SW1111+00LT	510	0.00	0.07
	SW1155+60LT	510	0.00	1.61
	SW370+00LT	510	0.00	0.73
E2EM	1003+80LT	642	2.08	2.08
	1019+50LT	642	0.00	0.21
	1060+10LT	642	0.00	0.05
	1255+50LT	642	0.00	1.00
	356+30LT	642	0.00	0.55
	601+00LT	642	0.00	0.06
Total Estuarine			7.47	14.04
Riverine				
R2OW	1144+50RT	510	0.00	0.05
	909+90RT	510	0.15	0.15
	920+00RT	510	0.00	0.15
	SW 920+00RT	510	0.09	0.09
Total Riverine			0.24	0.44
Total Jurisdictional Wetlands & Surface Waters			45.18	88.80
Other Surface Waters				
PEM1x	102+20LT	641x	0.00	0.27
	105+20LT	641x	0.19	0.19
	1109+40LT	641x	0.00	0.03
	1111+00LT	641x	0.00	0.09
	1154+00LT	510x	0.00	0.03
	1222+70LT	641x	0.00	0.14
	1223+60LT	641x	1.45	1.45
	143+00LT	641x	0.03	0.03
	144+00LT	641x	0.00	0.13
	150+00LT	641x	0.00	0.01
	158+30LT	641x	0.00	0.37
	170+10LT	641x	0.00	0.36
	226+50LT	641x	0.00	0.01
	240+00LT	641x	0.00	0.01
	249+00LT	641x	0.28	0.28
	333+50LT	641x	0.00	0.06
	336+20LT	641x	0.00	0.11
	477+00LT	641x	0.00	0.02
	511+30LT	641x	0.00	0.07
	515+30LT	641x	0.00	0.01
	597+80LT	641x	0.00	0.08
	691+00LT	641x	0.00	0.01
	84+00LT	641x	0.00	0.09
	952+40LT	641x	0.00	0.37
962+00LT	641x	0.00	0.86	

NWI	Wetland ID	FLUCFCS	Prefered Alternative Impacts	Total ROW Acreage
Other Surface Waters				
PSS1/3x	1004+00RT	631x	0.00	0.19
	1038+40RT	631x	0.00	0.02
	1055+00RT	631x	0.00	0.13
	1104+60RT	631x	0.00	0.08
	1109+40M	631x	0.00	0.20
	1111+00M	631x	0.00	0.51
	1117+70RT	631x	0.00	0.01
	1120+90RT	631x	0.00	0.01
	1129+00LT	631x	0.00	0.01
	1132+20LT	631x	0.00	0.01
	1137+20RT	631x	0.00	0.02
	1138+80LT	631x	0.00	0.06
	1145+00RT	631x	0.00	0.01
	1154+00M	631x	0.00	0.25
	1165+00M	631x	0.00	0.05
	167+20M	631x	0.00	0.55
	168+90RT	631x	0.00	0.08
	173+80M	631x	0.00	0.04
	211+20RT	631x	0.00	0.01
	234+50M	631x	0.00	0.04
	240+00M	631x	0.00	0.27
	268+20M	631x	0.00	0.37
	286+00M	631x	0.00	1.24
	480+00RT	631x	0.00	0.01
	516+00RT	631x	0.00	0.04
	531+00RT	631x	0.00	0.01
	590+00RT	631x	0.00	0.04
	595+50LT	631x	0.00	0.05
	597+00RT	631x	0.12	0.12
	598+50RT	631x	0.00	0.05
	600+60LT	631x	0.00	0.04
	605+60RT	631x	1.23	1.23
	607+90RT	631x	0.00	0.01
	609+90RT	631x	0.00	0.21
	611+50RT	631x	0.00	0.05
	612+40RT	631x	0.00	0.02
	614+10RT	631x	0.00	0.29
	73+00RT	631x	0.00	0.03
	738+30RT	631x	0.00	0.19
	84+50M	631x	0.00	0.05
906+50RT	631x	0.18	0.18	
913+40RT	631x	1.66	1.66	
920+20RT	631x	0.19	0.19	
921+10RT	631x	0.00	0.13	
SW1110+00M	631x	0.00	0.16	
SW1155+60M	631x	0.00	0.17	
SW1165+00M	631x	0.00	0.01	
SW370+00M	631x	0.00	0.34	
PFO3x	301+80RT	610x	0.00	0.09
Total Other Surface Waters			5.33	14.61
Total Jurisdictional & Other Surface Waters			50.51	103.41

APPENDIX E

UMAM Data Sheets

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

Site/Project Name I-75 Moccasin Wallow Rd to Hwy 301		Application Number		Assessment Area Name or Number E2EM1 - Saltwater Marsh	
FLUCCs code 642		Further classification (optional)		Impact or Mitigation Site? Impact	
Assessment Area Size ± 3.95 acres		Basin/Watershed Name/Number Alafia River, Tampa Bay and Coastal Areas, & Little Manatee		Affected Waterbody (Class)	
Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Little Manatee River is an OFW and located in the vicinity of the identified wetlands		Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands These saltwater marshes are located within the I-75 R-O-W corridor adjacent to the Alafia and Little Manatee Rivers. These systems are influenced tidally and create buffers between the open water portions of the rivers and adjacent uplands.			
Assessment area description This assessment area incorporates the saltwater marshes associated with the Alafia and Little Manatee Rivers. All wetlands have been impacted to some degree by previous roadway installation and surrounding development.					
Significant nearby features The Little Manatee River and Alafia River are most significant hydrologic features in the area.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Saltwater marshes along the Alafia and Little Manatee Rivers are the most unique herbaceous wetlands found along this corridor but they remain relatively common on the river landscape.		
Functions These herbaceous wetlands may provide some function as part of the surface water treatment of runoff prior to entering the rivers and they also provide moderate quality wildlife habitat.			Mitigation for previous permit/other historic use Portions of these herbaceous wetlands have been incorporated into the I-75 R-O-W stormwater system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Small amphibians and reptiles such as frogs, lizards, turtles, and snakes, avian species including passerine birds and some hawks, small mammals such as armadillos, rodents, and raccoons. Wading bird species may utilize the herbaceous ditches and ponds for foraging when water is present.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) State Listed Species: - American Alligator (SSC), wading bird species: Little Blue Heron (SSC), Roseate Spoonbill (SSC), Sandhill Crane (T), Snowy Egret (SSC), Tricolored Heron (SSC), White Ibis (SSC), and Wood Stork (E). Foraging may occur but maybe limited due to location within the R-O-W and moderate habitat quality. Federally Listed Species: American Alligator (T S/A) and Wood Stork (E) - same as above		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Evidence of passerine avian species, frogs, wading bird species, and raccoons were all recorded.					
Additional relevant factors:					
Assessment conducted by: Laura Morris			Assessment date(s): 10/13/2008		

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

Site/Project Name I-75 Moccasin Wallow Rd to Hwy 301	Application Number	Assessment Area Name or Number E2EM1 - Saltwater Marsh
Impact or Mitigation Impact	Assessment conducted by: Laura Morris - Quest	Assessment date: 10/13/2008

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

.500(6)(a) Location and Landscape Support w/o pres or current <input type="checkbox"/> 7 <input type="checkbox"/> with	These saltwater marshes are located along the perimeter of the Alafia and Little Manatee Rivers. Nuisance / exotic species were found w/in the wetlands and located in the adjacent uplands and wetland landscape. Wildlife access is somewhat limited by I-75, R-O-W fencing, and area developments. Agricultural lands which are also adjacent provide minimal support for wildlife and allow for exposure to predation over open fields. Numerous small boat dock facilities located along the river corridor bisect and fragment the saltwater marsh habitats.
.500(6)(b) Water Environment (n/a for uplands) w/o pres or current <input type="checkbox"/> 7 <input type="checkbox"/> with	Water quality within the adjacent river systems has been degraded by surrounding residential and agricultural development. Removal of native plant material associated with these types of developments often provides increased soil erosion and runoff, in addition to the introduction of fertilizers and herbicides required to maintain non-native vegetation / landscaping. Cattle activity along the river corridor causes increased soil erosion along the river bank and increased introduction of waste products which carry bacteria and increase nutrient loads. Untreated runoff from impervious surfaces which dot the surrounding landscape also create additional impacts to the rivers' water quality. The Alafia River is also utilized as a water source for Tampa Bay Water (a regional water authority) which decreases water levels and flows within the River.
.500(6)(c) Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <input type="checkbox"/> 7 <input type="checkbox"/> with	Moderate occurrence of the nuisance / exotic species Brazilian pepper (<i>Schinus terebinthifolius</i>) and cattail (<i>Typha</i> spp.) exists for most of the wetlands.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres <input type="checkbox"/> 0.70 <input type="checkbox"/> with

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

For impact assessment areas
FL = delta x acres = 2.08

Delta = [with-current]

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

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

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

Site/Project Name I-75 Moccasin Wallow Rd to Hwy 301		Application Number		Assessment Area Name or Number R2OW - Freshwater Creeks	
FLUCCs code 510		Further classification (optional)		Impact or Mitigation Site? Impact	Assessment Area Size ± 0.44 acres
Basin/Watershed Name/Number Alafia River, Tampa Bay and Coastal Areas, & Little Manatee	Affected Waterbody (Class) III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Little Manatee River is an OFW and located in the vicinity of the identified creeks		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Two freshwater creeks, Bullfrog Creek and Curiosity Creek are found along the corridor. Both creeks ultimately drain into Tampa Bay. Stormwater management facilities in the area likely are connected directly or indirectly to these creeks. Runoff from surrounding uplands (agricultural and residential) is likely intercepted by these creeks.					
Assessment area description Bullfrog and Curiosity Creeks are both relative small systems with shrubby to forested fringes. Nuisance and exotic species are prevalent both adjacent to and within the creek waters. Flow is intermittent and it is likely that the creeks may dry out during times of the year. Bullfrog Creek crosses the project area in two locations: on I-75 just north of Symmes Road and on Big Bend just east of the I-75 interchange. Curiosity Creek crosses the project about halfway between the Little Manatee River and the Moccasin Wallow Road interchange.					
Significant nearby features The Little Manatee and Alafia Rivers and Tampa Bay are most significant features in the area.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Small impacted creek systems are relatively common in the surrounding landscape.		
Functions Functions that are provided by both creeks include the following: flood control, moderate corridor for wildlife, riparian habitat for both plants and animals, creek flow increases dissolved oxygen, and introduces helpful and harmful sediments and nutrients into Tampa Bay,			Mitigation for previous permit/other historic use Unknown if the creeks have been utilized for mitigation in previous permits.		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Small amphibians and reptiles such as frogs, lizards, turtles, snakes, and alligators, avian species including passerine birds, small mammals such as armadillos, rodents, and raccoons. Wading bird species may utilize the portions of the open water for foraging when water and access is present.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) State Listed Species: - American Alligator (SSC), wading bird species: Little Blue Heron (SSC), Roseate Spoonbill (SSC), Sandhill Crane (T), Snowy Egret (SSC), Tricolored Heron (SSC), White Ibis (SSC), and Wood Stork (E). Foraging will be limited to portions of open water. Federally Listed Species: American Alligator (T S/A) and Wood Stork (E) - same as above		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Evidence of passerine avian species, frogs, and small fish were all recorded.					
Additional relevant factors:					
Assessment conducted by: Laura Morris			Assessment date(s): 10/13/2008		

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

Site/Project Name I-75 Moccasin Wallow Rd to Hwy 301	Application Number	Assessment Area Name or Number R2OW - Freshwater Creeks
Impact or Mitigation Impact	Assessment conducted by: Laura Morris - Quest	Assessment date: 10/13/2008

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

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

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current with</p> <p>5 <input type="checkbox"/></p>	<p>Creek systems which cross underneath I-75 and one interchange facility. Box culverts and bridges are in place to maintain flow and connection. Nuisance / exotic species were found in adjacent wetlands and uplands in addition to being present within the creek systems. Wildlife access is limited by I-75, R-O-W fencing, area developments, and overgrowth of creek vegetation. Agricultural lands which are also adjacent provide minimal support for wildlife and allow for exposure to predation over open fields.</p>
<p>.500(6)(b) Water Environment (n/a for uplands)</p> <p>w/o pres or current with</p> <p>5 <input type="checkbox"/></p>	<p>Water quality observations included high input of roadway run-off, algae observed in areas of standing water, and oil sheen. Plant species which are tolerant of degraded water quality and water level fluctuation were observed and prevalent in many of the shrub wetlands. Soil erosion observed along the banks of the creeks and various degrees of siltation were observed. Introduction of agricultural and road runoff into the creeks is likely high.</p>
<p>.500(6)(c) Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current with</p> <p>4 <input type="checkbox"/></p>	<p>High occurrence of the nuisance / exotic species primrose willow (<i>Ludwigia peruviana</i>), castor bean (<i>Ricinus communis</i>), Brazilian pepper (<i>Schinus terebinthifolius</i>), cattail (<i>Typha</i> spp.), and paragrass (<i>Urochloa mutica</i>) was observed within the creeks. Land management practices have introduced nuisance / exotic species and generally reduced the quantity and quality of the adjacent riparian habitat.</p>

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres with
0.47 <input type="checkbox"/>

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

For impact assessment areas
FL = delta x acres = 0.24

Delta = [with-current]

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

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

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

Site/Project Name I-75 Moccasin Wallow Rd to Hwy 301		Application Number	Assessment Area Name or Number PEM1 - Freshwater Herbaceous Wetlands	
FLUCCs code 641 & 643	Further classification (optional)		Impact or Mitigation Site? Impact	Assessment Area Size ± 3.93 acres
Basin/Watershed Name/Number Alafia River, Tampa Bay and Coastal Areas, & Little Manatee	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Little Manatee River is an OFW and located in the vicinity of the identified wetlands		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands These herbaceous wetlands are located within the I-75 R-O-W corridor between Moccasin Wallow Rd north to Hwy 301. Connectivity of these wetlands ranges from apparent isolation within interchange cloverleafs to being part of the stormwater system for I-75. There are a few herbaceous wetlands which extend offsite and are part of larger wetland systems.				
Assessment area description This assessment area incorporates small herbaceous wetlands, herbaceous wetland swales (wetland vegetated swales located within hydric soil mapping units), and isolated wet prairies. All wetlands have been impacted to some degree by previous roadway installation and surrounding development.				
Significant nearby features The Little Manatee River and Alafia River are most significant hydrologic features in the area.		Uniqueness (considering the relative rarity in relation to the regional landscape.) Impacted freshwater wetlands are relatively common in the surrounding landscape.		
Functions These herbaceous wetlands do provide some function as part of the surface water treatment system for I-75 and they also provide moderate quality wildlife habitat.		Mitigation for previous permit/other historic use Portions of these herbaceous wetlands have been incorporated into the I-75 R-O-W stormwater system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Small amphibians and reptiles such as frogs, lizards, turtles, and snakes, avian species including passerine birds and some hawks, small mammals such as armadillos, rodents, and raccoons. Wading bird species may utilize the herbaceous ditches and ponds for foraging when water is present.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) State Listed Species: - American Alligator (SSC), wading bird species: Little Blue Heron (SSC), Roseate Spoonbill (SSC), Sandhill Crane (T), Snowy Egret (SSC), Tricolored Heron (SSC), White Ibis (SSC), and Wood Stork (E). Foraging may occur but maybe limited due to location within the R-O-W and moderate habitat quality. Federally Listed Species: American Alligator (T S/A) and Wood Stork (E) - same as above		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Evidence of passerine avian species, frogs, wading bird species, and raccoons were all recorded.				
Additional relevant factors:				
Assessment conducted by: Laura Morris		Assessment date(s): 10/13/2008		

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

Site/Project Name I-75 Moccasin Wallow Rd to Hwy 301	Application Number	Assessment Area Name or Number PEM1 - Freshwater Herbaceous Wetlands
Impact or Mitigation Impact	Assessment conducted by: Laura Morris - Quest	Assessment date: 10/13/2008

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

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

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current with</p> <p>3 </p>	<p>Herbaceous wetlands located w/in R-O-W, many are maintained periodically through mowing, most are part of the stormwater management facilities. Nuisance / exotic species were found w/in the wetlands and located in the adjacent uplands and wetland landscape. Wildlife access is limited by I-75, R-O-W fencing, and area developments. Agricultural lands which are also adjacent provide minimal support for wildlife and allow for exposure to predation over open fields. Several wet prairies have been isolated by location w/in interchange clover leaf.</p>
<p>.500(6)(b) Water Environment (n/a for uplands)</p> <p>w/o pres or current with</p> <p>3 </p>	<p>Water quality observations included high input of roadway run-off, algae (green and rust colored types) observed in areas of standing water, and oil sheen. Plant species which are tolerant of degraded water quality and water level fluctuation were observed in most of the herbaceous wetlands. Soil erosion observed in many of the wetland swales and rutting of soils from mowing.</p>
<p>.500(6)(c) Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current with</p> <p>3 </p>	<p>High occurrence of the nuisance / exotic species primrose willow (<i>Ludwigia peruviana</i>), torpedo grass (<i>Panicum repens</i>), Brazilian pepper (<i>Schinus terebinthifolius</i>), cattail (<i>Typha</i> spp.), and paragrass (<i>Urochloa mutica</i>) exists for most of the wetlands. Land management practices have greatly limited vegetation diversity and cover within most of the herbaceous wetlands.</p>

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres with
0.30

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

For impact assessment areas
FL = delta x acres = 0.52

Delta = [with-current]

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

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

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

Site/Project Name I-75 Moccasin Wallow Rd to Hwy 301		Application Number	Assessment Area Name or Number PFO1/3, PFO1/4, & PFO2 - Forested Wetlands	
FLUCCs code 610, 615, 617, & 621		Further classification (optional)	Impact or Mitigation Site? Impact	Assessment Area Size ± 64.25 acres
Basin/Watershed Name/Number Alafia River, Tampa Bay and Coastal Areas, & Little Manatee	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Little Manatee River is an OFW		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands These forested wetlands are located within the I-75 R-O-W corridor between Moccasin Wallow Rd north to Hwy 301. Connectivity of these wetlands ranges from apparent isolation within interchange cloverleaves to being part of the stormwater system for I-75. There are a few forested wetlands which extend offsite and are part of larger systems.				
Assessment area description Forested wetlands are located within the I-75 R-O-W corridor between Moccasin Wallow Rd north to Hwy 301. Systems range from forested ditches which are part of the surface water system, portions of larger forested systems which continue outside of the R-O-W, to forested systems isolated within the intersection cloverleaves. All systems have been impacted by previous roadway installation and surrounding development.				
Significant nearby features The Little Manatee River and Alafia River are most significant hydrologic features in the area.		Uniqueness (considering the relative rarity in relation to the regional landscape.) Forested ditch systems are very common in the area. Other forested systems with impacts such as those observed on this corridor are also common.		
Functions These forested wetlands are functioning as part of the surface water treatment system for I-75 and they provide isolated and fragmented pieces of wildlife habitat.		Mitigation for previous permit/other historic use Portions of the forested wetlands have developed as part of the I-75 R-O-W stormwater system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Small amphibians and reptiles such as frogs, lizards, turtles, and snakes, avian species including passerine birds and some hawks, small mammals such as armadillos, rodents, and raccoons		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) State Listed Species: - Eastern Indigo Snake (T) & Sherman's Fox Squirrel (SSC) possibly use the areas for foraging and or habitation. Utilization would be highly limited due to the fragmentation of habitat and location within the R-O-W. Federally Listed Species: Eastern Indigo (T) - same as above		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Evidence of passerine avian species, red shouldered hawks, gray squirrels, frogs, and raccoons were all recorded.				
Additional relevant factors:				
Assessment conducted by: Laura Morris		Assessment date(s): 10/13/2008		

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

Site/Project Name I-75 Moccasin Wallow Rd to Hwy 301	Application Number	Assessment Area Name or Number PFO1/3, PFO1/4, & PFO2 - Forested Wetlands
Impact or Mitigation Impact	Assessment conducted by: Laura Morris - Quest	Assessment date: 10/13/2008

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

.500(6)(a) Location and Landscape Support	Forested wetlands located w/in I-75 R-O-W, edges are maintained periodically through aggressive edge trimming, many are part of stormwater management system, nuisance / exotic species are located w/in and adjacent to most wetlands, wildlife access is limited by R-O-W fences and adjacent development. Agricultural lands which are also adjacent provide minimal support for wildlife and allow for exposure to predation over open fields. Several forested systems have also been isolated by location w/in interchange clover leaves.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>3</td> <td></td> </tr> </table>	w/o pres or current	with	3		
w/o pres or current	with				
3					
.500(6)(b) Water Environment (n/a for uplands)	Water levels w/in ditched forested systems lower than appropriate. Water levels w/in non-ditched systems is slightly higher than appropriate. Fern hummocks and some tree buttressing observed. Flow through systems has been altered in ditched systems. Some vegetative species that are tolerant of water quality degradation and water quantity alterations are present in the wetlands.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>7</td> <td></td> </tr> </table>	w/o pres or current	with	7		
w/o pres or current	with				
7					
.500(6)(c) Community structure	High occurrence of the nuisance / exotic species primrose willow (<i>Ludwigia peruviana</i>) and Brazilian pepper (<i>Schinus terebinthifolius</i>) exists for the wetlands. These species are generally limited to the fringe of the wetlands for larger systems and persist throughout in smaller systems. Canopy species are mature in the larger forested systems with canopy cover at or approaching 100%. Smaller ditches systems have mature (at least 4 in dbh) but younger canopy species.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>6</td> <td></td> </tr> </table>	w/o pres or current	with	6		
w/o pres or current	with				
6					

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.53	

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

For impact assessment areas
FL = delta x acres = 36.19

Delta = [with-current]

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

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

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

Site/Project Name I-75 Moccasin Wallow Rd to Hwy 301		Application Number		Assessment Area Name or Number PSS1 & PSS1/3 - Shrub Wetlands	
FLUCCs code 6417 & 631		Further classification (optional)		Impact or Mitigation Site? Impact	Assessment Area Size ± 6.14 acres
Basin/Watershed Name/Number Alafia River, Tampa Bay and Coastal Areas, & Little Manatee	Affected Waterbody (Class)		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Little Manatee River is an OFW and located in the vicinity of the identified wetlands		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands These shrub wetlands are located within the I-75 R-O-W corridor between Moccasin Wallow Rd north to Hwy 301. Connectivity of these wetlands ranges from apparent isolation within interchange cloverleaves to being part of the stormwater system for I-75. There are a few shrub wetlands which extend offsite and are part of larger wetland systems.					
Assessment area description This wetland type incorporate small shrub wetlands and shrubby wetland swales (wetland vegetated swales located within hydric soil mapping units). All wetlands have been impacted to some degree by previous roadway installation and surrounding development.					
Significant nearby features The Little Manatee River and Alafia River are most significant hydrologic features in the area.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Shrubby ditched wetlands are very common in the area. Other shrub wetlands with impacts such as those observed on this corridor are also common.		
Functions These shrub wetlands do provide some function as part of the surface water treatment system for I-75 and they also provide low to moderate quality wildlife habitat.			Mitigation for previous permit/other historic use A large extent of these shrub wetlands has been incorporated into the I-75 R-O-W stormwater system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Small amphibians and reptiles such as frogs, lizards, turtles, and snakes, avian species including passerine birds, small mammals such as armadillos, rodents, and racoons. Wading bird species may utilize the small portions of the shrubby wetlands for foraging when water and access is present.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) State Listed Species: - Wading bird species: Little Blue Heron (SSC), Roseate Spoonbill (SSC), Sandhill Crane (T), Snowy Egret (SSC), Tricolored Heron (SSC), White Ibis (SSC), and Wood Stork (E). Foraging will be limited to small accessible areas and also limited due to location within the R-O-W and low to moderate habitat quality. Federally Listed Species: Wood Stork (E) - same as above		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Evidence of passerine avian species, frogs, and racoons were all recorded.					
Additional relevant factors:					
Assessment conducted by: Laura Morris			Assessment date(s): 10/13/2008		

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

Site/Project Name I-75 Moccasin Wallow Rd to Hwy 301		Application Number		Assessment Area Name or Number E1OW - Riverine	
FLUCCs code 510		Further classification (optional)		Impact or Mitigation Site? Impact	
Assessment Area Size ± 10.09 acres					
Basin/Watershed Name/Number Alafia River, Tampa Bay and Coastal Areas, & Little Manatee		Affected Waterbody (Class) III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Little Manatee River is an OFW	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands The Alafia and Little Manatee Rivers are major tributaries within Hillsborough and Manatee Counties. Numerous smaller creek systems, swamps, and wetlands drain into these rivers which ultimately drain into Tampa Bay. Tampa Bay is a significant regional resource.					
Assessment area description Both rivers pass underneath the I-75 corridor which maintains elevated bridge structures above the system. Saltwater marshes are adjacent to the rivers and are also spanned by the bridge structures. Large bridge pylons are located within the river beds to support the bridges.					
Significant nearby features Tampa Bay is a significant regional natural resource which is directly connected to both the Alafia and Little Manatee Rivers.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Although both rivers are significant natural resources in the region they are not uncommon or unique.		
Functions These river systems provide major corridors for wildlife movement, transport of water, habitat for freshwater and saltwater dependent species, and recreation value.			Mitigation for previous permit/other historic use It is unlikely that open water portions of the rivers have been utilized for mitigation uses. At least one Consumptive Use Permit (CUP) has been issued for the Alafia River.		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Numerous amphibians and reptiles such as alligators, frogs, lizards, turtles, and snakes, wetland dependent avian species, mammals such as armadillos, bears, bobcats, manatees, pigs, rodents, and raccoons.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) State Listed Species: - American Alligator (SSC), American Oystercatcher (SSC), Artic Peregrine Falcon (E), Bald Eagle (T), Brown Pelican (SSC), Little Blue Heron (SSC), Roseate Spoonbill (SSC), Sandhill Crane (T), Reddish Egret (SSC), Snowy Egret (SSC), Suwannee Cooter (SSC), Tricolored Heron (SSC), White Ibis (SSC), and Wood Stork (E). Federally Listed Species: American Alligator (T (S/A)), West Indian Manatee (E), and Wood Stork (E). Most utilization near I-75 would be limited to foraging.		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Wetland dependent avian species were observed within the vicinity of the bridge but none were observed within the project limits.					
Additional relevant factors:					
Assessment conducted by: Laura Morris			Assessment date(s): 10/13/2008		

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

Site/Project Name I-75 Moccasin Wallow Rd to Hwy 301	Application Number	Assessment Area Name or Number E1OW - Riverine
Impact or Mitigation Impact	Assessment conducted by: Laura Morris - Quest	Assessment date: 10/13/2008

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

.500(6)(a) Location and Landscape Support w/o pres or current <input type="checkbox"/> 8 <input type="checkbox"/> with	Two river systems (Alafia and the Little Manatee) pass underneath existing bridge structures on the I-75 corridor. Low density residential development and agricultural lands are located along both river systems upstream and downstream of the bridge structures. Numerous small dock structures associated with residential lots dot the landscape of both rivers. Nuisance / exotic species were located within the adjacent river areas in low to moderate coverage. Wildlife access is somewhat limited by development and agriculture that is present along much of the river corridor. Agricultural lands provide less than optimal support for wildlife and allow for exposure to predation over open fields. Introduction of agricultural and residential runoff into the river systems provide less than optimal conditions downstream. Both river systems empty into Tampa Bay which is a significant natural resource in this area.
.500(6)(b) Water Environment (n/a for uplands) w/o pres or current <input type="checkbox"/> 7 <input type="checkbox"/> with	Water quality within the river systems has been degraded by surrounding residential and agricultural development. Removal of native plant material associated with these types of developments often provides increased soil erosion and runoff, in addition to the introduction of fertilizers and herbicides required to maintain non-native vegetation / landscaping. Cattle activity along the river corridor causes increased soil erosion along the river bank and increased introduction of waste products which carry bacteria and increase nutrient loads. Untreated runoff from impervious surfaces which dot the surrounding landscape also create additional impacts to the rivers' water quality. The Alafia River is also utilized as a water source for Tampa Bay Water (a regional water authority) which decreases water levels and flows within the River.
.500(6)(c) Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <input type="checkbox"/> 8 <input type="checkbox"/> with	Very little vegetation is located within the open water portions of the river. Some sea grasses may be located within these river areas but due to the tannic nature of the rivers density and coverage of these species would be low if present. Generally these portions of the river would consist of unconsolidated mud bottoms and provide some habitat for benthic species. Soil, silt, and pollution runoff can decrease the viability of these areas for benthic species and wildlife.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres <input type="checkbox"/> 0.77 <input type="checkbox"/> with

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

For impact assessment areas
FL = delta x acres = 5.39

Delta = [with-current]

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

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

APPENDIX F

Agency Coordination

MEMORANDUM



QUEST
ecology

TO: Project File

FROM: Quest Ecology

SUBJECT: I-75 PD&E Study from Moccasin Wallow Rd. to U.S. 301)
Essential Fish Habitat (EFH)/NMFS Meeting 8-15-08

DATE: August 22, 2008

CC: Meeting Attendees

A meeting with Dr. David Rydene, the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) Gulf Coast representative, was held on Friday, August 15, 2008 at the Quest Ecology Inc. office in Wimauma, Florida. In attendance were Chris Salico and Corey Carter of American Consulting Engineers of Florida LLC (ACE); Roberto Gonzalez of the Florida Department of Transportation (FDOT) District 7; and Mike Pshar, Vivienne Handy, and Laura Morris of Quest Ecology Inc. (Quest). The purpose of the meeting was to discuss Essential Fish Habitat (EFH) issues and potential locations of concern within the corridor. EFH is defined as those waters and substrate necessary for fish to spawn, breed, feed, or grow to maturity.

In preparation for the meeting, Quest prepared several aeriels of the corridor that detailed water ways that were in question of meeting EFH status. Dr. Rydene confirmed two of the waterways as EFH, the Little Manatee River and the Alafia River. Other waterways identified on the corridor are not considered EFH because they are not tidally influenced systems. An EFH assessment will be required for the Little Manatee and Alafia river systems.

Fish species that would potentially be impacted within these river systems was also discussed. As reported in the ETDM Summary Report of March 29, 2007, habitat within the Little Manatee River and the Alafia River has been identified as EFH for juvenile red drum and sub-adult penaeid shrimp by the Gulf of Mexico Fishery Management Council. Dr. Rydene confirmed this and also stated that these waterways are not suitable habitat for gray snapper or gag grouper and neither the Little Manatee nor the Alafia River systems are categorized as habitat areas of particular concern (HAPC).

MEMORANDUM



TO: Project File

FROM: Quest Ecology

SUBJECT: I-75 PD&E Study (from Moccasin Wallow Rd. to U.S. 301)
Federally Listed Species Meeting /USFWS Meeting 10-15-08

QUEST
ecology

DATE: October 16, 2008

CC: Meeting Attendees

A meeting with Mr. Todd Mecklenborg of the US Fish and Wildlife Service (USFWS) was held on Wednesday, October 15, 2008 at the USFWS office in St. Petersburg, Florida. In attendance were Jai Ramkissoon of American Consulting Engineers of Florida LLC (ACE) and David Gordon and Laura Morris both of Quest Ecology Inc. (Quest). The purpose of the meeting was to discuss the likelihood of occurrence of federally listed species on the I-75 project corridor, and survey methods for determining potential impacts. Federally listed species that were discussed include Florida scrub-jay (*Aphelocoma coerulescens*), West Indian manatee (*Trichechus manatus latirostris*), eastern indigo snake (*Drymarchon corais couperi*), wood stork (*Mycteria americana*), Audubon's crested caracara (*Polyborus plancus aubudonii*), and the listed plant species Florida goldenaster (*Chrysopsis floridana*). Although bald eagles (*Haliaeetus leucocephalus*) are no longer a federally listed species, brief discussion of this species occurred due to its protection under the Migratory Bird Treaty Act.

In preparation for the meeting, Quest prepared aerials depicting mapped scrub habitat (over 25 acres in size), documented bald eagle nest locations, and known wood stork rookeries in the vicinity of the corridor. Mr. Mecklenborg provided a great deal of information and direction on all of the identified species. Results are summarized below.

Impacts to Florida scrub-jays may occur in association with proposed stormwater ponds. Scrub or other upland habitats deemed suitable for scrub-jay occupation within 3.2 kilometers east and west of the project corridor will be surveyed by Quest biologists. Surveys will be conducted in accordance with USFWS guidelines and preferably be conducted between March and June 2009, or if that time frame cannot be met surveys may take place between July and August 2009. Mr. Mecklenborg suggested contacting Bernie Kasier with Hillsborough County to inquire about scrub restoration that may have taken place in the last several years within the project area. Based on known scrub-jay habitat availability and current knowledge of species presence in the region, Mr. Mecklenborg anticipated that an opinion of "may affect but not likely to adversely affect" will be the finding of USFWS.

West Indian manatees are known to occupy the Alafia and Little Manatee Rivers which are traversed by the project corridor. Mr. Mecklenborg provided a website link that documents results of aerial

surveys and mortality locations. Standard Provisions during construction were recommended to be included to address issues with the manatee. Again, Mr. Mecklenborg anticipated that an opinion of “may affect but not likely to adversely affect” will be the finding of the USFWS.

Nine wood stork rookeries are located within 15.0 miles (Wood Stork Core Foraging Area radius for Central Florida populations) of the project corridor. Suitable foraging habitat types will be identified during the Uniform Mitigation Assessment Method (UMAM) process. It was suggested by Mr. Mecklenborg that only the wetlands that are considered ‘foraging areas’ should be used in calculating the impact acreage of ‘foraging areas’ rather than the total acreage of all wetlands potentially affected by the project. Mr. Mecklenborg provided a copy of a letter that detailed which wetland types are defined as ‘foraging areas’. Detailed calculations of core foraging area biomass will be conducted during future permitting phases of the project and are not required at this phase. Again, Mr. Mecklenborg anticipated that an opinion of “may affect but not likely to adversely affect” will be the finding of the USFWS.

Audubon's crested caracara is known to occur in Manatee County, but the species has not been documented as far north and west as the project limits. It was determined that surveys for caracara would not need to be conducted. It was Mr. Mecklenborg's opinion the USFWS would issue a finding of “no affect” on this species.

Florida goldenaster has been identified along the project corridor. Mr. Mecklenborg verified that the location(s) of this species within the project corridor and potential pond sites will need to be determined. Surveys will be conducted to identify populations and the approximate number of individuals. Mapping of species locations will allow for potential transplant of the individuals, by Florida Natural Areas Inventory (FNAI), to surrounding preservation tracts or allow for seed collection by organizations such as the Native Plant Society. Any data collected will be utilized for upcoming consultation on this species. Mr. Mecklenborg provided Quest with a 2006 Florida Goldenaster Report from FNAI detailing locations of Florida goldenaster within the project area.

Mr. Mecklenborg directed Quest to address bald eagle issues through the Bald and Golden Eagle Protection Act (BGEPA), but not to request a ‘findings opinion’ from the USFWS, as they are no longer issuing ‘findings opinions’ for the bald eagle.



Florida Department of Transportation

CHARLIE CRIST
GOVERNOR

11201 N. McKinley Drive
Tampa, FL 33612-6456

STEPHANIE C. KOPELOUSOS
SECRETARY

March 16, 2010

Fish & Wildlife Biologist
U.S. Fish and Wildlife Service
600 Fourth Street South
Saint Petersburg, Florida 33701

Re: I-75 PD&E Study (From Moccasin Wallow Road to US 301)
WPI Segment No. 419235-2
Request for Formal Consultation

Dear Todd Mecklenborg:

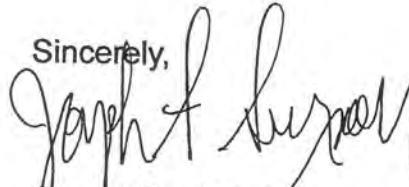
The Florida Department of Transportation (FDOT) District 7, on behalf of the Federal Highway Administration (FHWA) is requesting initiation of formal consultation with the United States Fish and Wildlife Service (USFWS) for this Project Development and Environment Study (PD&E) of Interstate 75 (I-75). We have attached information regarding the potentially affected federally listed species as required to initiate consultation.

The project is located along approximately 25 miles of I-75 (State Road (SR) 93A) from Moccasin Wallow Road in Manatee County to south of US 301 (SR 43) in Hillsborough County, Florida (**Figure 1-1**, provided in the Attachment). The preferred roadway improvement alignment for I-75 will be constructed within the existing right of way (ROW), specifically within the median of the existing lane alignment. A minimal amount of ROW acquisition, however, will be required at the Big Bend Road and Gibsonton Drive interchanges. The possibility of impacts outside of the current ROW for pond and floodplain compensation sites is not included in this analysis and will be evaluated in future project phases as those sites are defined. Submittal of the draft Wetlands Evaluation and Biological Assessment Report (WEBAR) to the USFWS is forthcoming.

Thank you for your prompt attention to this request and your continued assistance with the project.

Fish & Wildlife Biologist
Page 2
March 16, 2010

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph Severson". The signature is written in a cursive style with a large, looping initial "J".

Joseph Severson
Environmental Specialist

Enclosure
cc: File
Roberto Gonzalez, EA
Manuel Santos, PM

ATTACHMENT

**Request for Formal Consultation
I-75 PD&E Study (from Moccasin Wallow Rd. to U.S. 301)
WPI Segment No.: 419235-2**

The following provides a summary of the information provided in the forthcoming draft WEBAR regarding potentially affected federally listed species and habitat.

Fauna

Federally protected fauna species which have been identified in the vicinity of the corridor or have high potential to occur are the American alligator (*Alligator mississippiensis*), eastern indigo snake (*Drymarchon corais couperi*), wood stork (*Myceteria americana*), and West Indian manatee (*Trichechus manatus*). The Florida scrub-jay (*Aphelocoma coerulescens*) was also addressed due to the potential occurrence on adjacent lands.

Florida Scrub-Jay

Scrub or other upland habitats deemed suitable for scrub-jay occupation within 3.2 kilometers east and west of the project corridor will need to be surveyed in the future, once pond siting and floodplain compensation areas have been identified. Surveys of these areas will be conducted in accordance with USFWS guidelines, preferably between March and June, or if that timeframe cannot be met surveys may take place between July and August. Coordination with Hillsborough County staff to inquire about scrub restoration that may have recently taken place within the project area should also be conducted.

Scrub habitat within the existing ROW does not support scrub-jay populations at this time. The preferred alternative provides for widening to the inside of existing lanes which will not affect scrub habitat. Interchange improvements will likely impact scrub habitats located within the existing interchange formations, however these habitats are too small, fragmented, and overgrown to support scrub-jays. Impacts to scrub-jay habitat which may occur from pond siting and floodplain compensation areas may require mitigation and will need to be addressed in future phases. Habitat impacts associated with the preferred alternative may affect, but is not likely to adversely affect the Florida scrub-jay.

American Alligator

It is understood that the USFWS does not consult or make determinations of affect for this species due to its commonality, and the listing is maintained primarily for law enforcement purposes.

The American alligator is protected by the USFWS as a federally threatened species based upon "similarity of appearance" to the endangered American crocodile (*Crocodylus acutus*), and is listed by the FFWCC as a species of special concern. No individuals of this species were observed during the field surveys, however habitats utilized by the American alligator such as rivers, saltwater marshes, and other surface water ponds are found within and adjacent to the project corridor, therefore the probability of occurrence for this species within the corridor is high.

Impacts proposed for these habitat types are limited to 7.71 acres of jurisdictional wetlands and surface waters and 3.01 acres of other surface waters for the preferred alternative. Compensatory mitigation is proposed for all jurisdictional wetland and surface water impacts while the loss of other surface waters will be offset through installation of similar habitats in the final stormwater management plan design. Additionally, this species is common in local habitats and long term viability of this species is not anticipated to be affected. Due to the amount of impacts to these habitat types, offsetting compensatory mitigation, common occurrence, and future installation of stormwater management areas, this project will not affect the American alligator.

Eastern Indigo Snake

Occurrence of this species has been documented on the historic observations provided in **Figure 5-1**. The eastern indigo snake is listed as threatened by both the USFWS and FFWCC.

No individuals were observed during the field surveys, however, areas of suitable habitat for this species occurs within and adjacent to the project corridor. The probability of occurrence for this species within the corridor is therefore high.

To assure the protection of this species during construction, when it is most likely to be affected, the FDOT will require that the standard construction precautions for the eastern indigo snake be implemented, and these construction guidelines will be a part of the final project design. Current construction guidelines (dated February 12, 2004) for the protection of the eastern indigo snake are provided in **Appendix G** of the WEBAR. The most current guidelines will be obtained and followed at the time the project proceeds to permitting and construction phases. Since standard protection guidelines will be incorporated in the final project design and implemented during construction, this project may affect, but is not likely to adversely affect the eastern indigo snake.

Wood Stork

No rookeries were observed during field surveys. Six (6) wood stork rookeries are documented within 15.0 miles (Wood Stork Core Foraging Area (CFA) radius for Central Florida populations) of the project corridor. The location of the wood stork rookeries is provided in **Figure 5-2**. Suitable foraging habitat (SFH) types have been identified during the UMAM process (**Section 4.4** and **Appendix D** of the WEBAR). Detailed calculations of CFA biomass may be required during future permitting phases of the project if foraging habitat is lost and the USFWS continues to utilize these calculations to determine mitigation. As defined by the USFWS, SFH includes wetlands and surface waters which have areas of water that are relatively calm, uncluttered by dense thickets of aquatic vegetation, and have permanent or seasonal water depth between 2 and 15 inches. Wetlands and surface waters that meet the criteria of SFH for this project generally include

herbaceous and saltwater marshes and herbaceous ditches/swales, ponds, and riverine systems. Wet prairie/pastures may also provide foraging habitat during periods of high rainfall. SFH within the project corridor will be need to be re-evaluated during final permitting of the project as vegetative structure of wetlands will change over time and also due to maintenance activities associated with the other surface water systems. The wood storks is listed as endangered by both the USFWS and FFWCC.

Impacts to potential SFH for wood storks along the corridor is limited to 8.23 acres of jurisdictional surface waters and wetlands and 4.96 acres of other surface waters for the preferred alternative. Unavoidable wetland impacts will be mitigated as appropriate. Impacts to other surface water features will be compensated for in the future design of the stormwater management plan. The project may affect, but is not likely to adversely affect the wood stork.

West Indian Manatee

West Indian manatees utilize estuarine habitats and have been documented in both the Alafia and Little Manatee Rivers. Aerial surveys and mortality locations were downloaded from <http://ocean.floridamarine.org> and are provided in **Figure 5-1**. “*Standard Manatee Conditions for In-Water Work*” will be implemented and these guidelines will be a part of the final project design. Current provisions (dated July 2005) are provided in **Appendix H** of the WEBAR, and when the project proceeds to permitting and construction phase, the most current provisions will be obtained and followed. The West Indian manatee is listed as endangered by both the USFWS and FFWCC.

Impacts over estuarine habitats are limited to 5.39 acres in both the Alafia and Little Manatee Rivers. Impacts will be temporary in nature and may limit some activity during construction. Movement and foraging within the two rivers will not be limited by increasing the bridge size as lanes will only be added to the inner portions of the two existing bridges. Since the “*Standard Manatee Conditions for In-Water Work*” will be incorporated during construction and impacts will be temporary in nature, this project may affect, but is not likely to adversely affect the West Indian manatee.

Flora

Florida golden aster

One (1) federally protected plant species, Florida golden aster (*Chrysopsis floridana*), has been recorded along the project corridor. FDOT staff, William Moriaty, documented this species at two (2) separate locations in January 2008. Copies of the species occurrence reports submitted to the Florida Natural Areas Inventories (FNAI) are provided in **Appendix I** of the WEBAR. Ecologists with Quest Ecology Inc. also surveyed for and documented this species at the same two (2) locations on November 13, 2008. Details of the surveys and results are provided below. This species is listed as endangered by both the USFWS and Florida Department of Agriculture and Consumer Services - Division of Plant Industry (FDACS-DPI).

Cursory surveys were conducted at the two (2) previously identified locations in addition to appropriate habitat identified elsewhere along the corridor. This species was only located at the two original sites identified by William Moriaty, identified as Sites 1 and 2. Photographs of the two sites and of the plants in flower are provided in **Appendix I** of the WEBAR.

Site 1 supported approximately 40± plants with many observed in flower. These plants appeared healthy and robust, although sand live oaks and saw palmetto are encroaching into the open habitat required by this plant. This area has been provided protection from roadside maintenance by the installation of metal stakes.

Site 2 supported approximately 20± plants which were not yet in bloom but there were a few individuals with flower buds. Although this area has been provided protection with steel stakes, there appeared to have been some mowing or possibly weed trimming activity which has cut many of the plants short.

More detailed surveys will need to be conducted to confirm the continued presence and number of individuals during future permitting phases of the project. Mapping of species locations will allow for potential transplant of the individuals, by FNAI, to surrounding preservation tracts or allow for seed collection by organizations such as the Florida Native Plant Society (FNPS). Potential recipient sites exist in the surrounding community and include the Golden Aster Scrub Nature Preserve which is operated by Hillsborough County's Environmental Lands Acquisition and Protection Program (ELAPP).

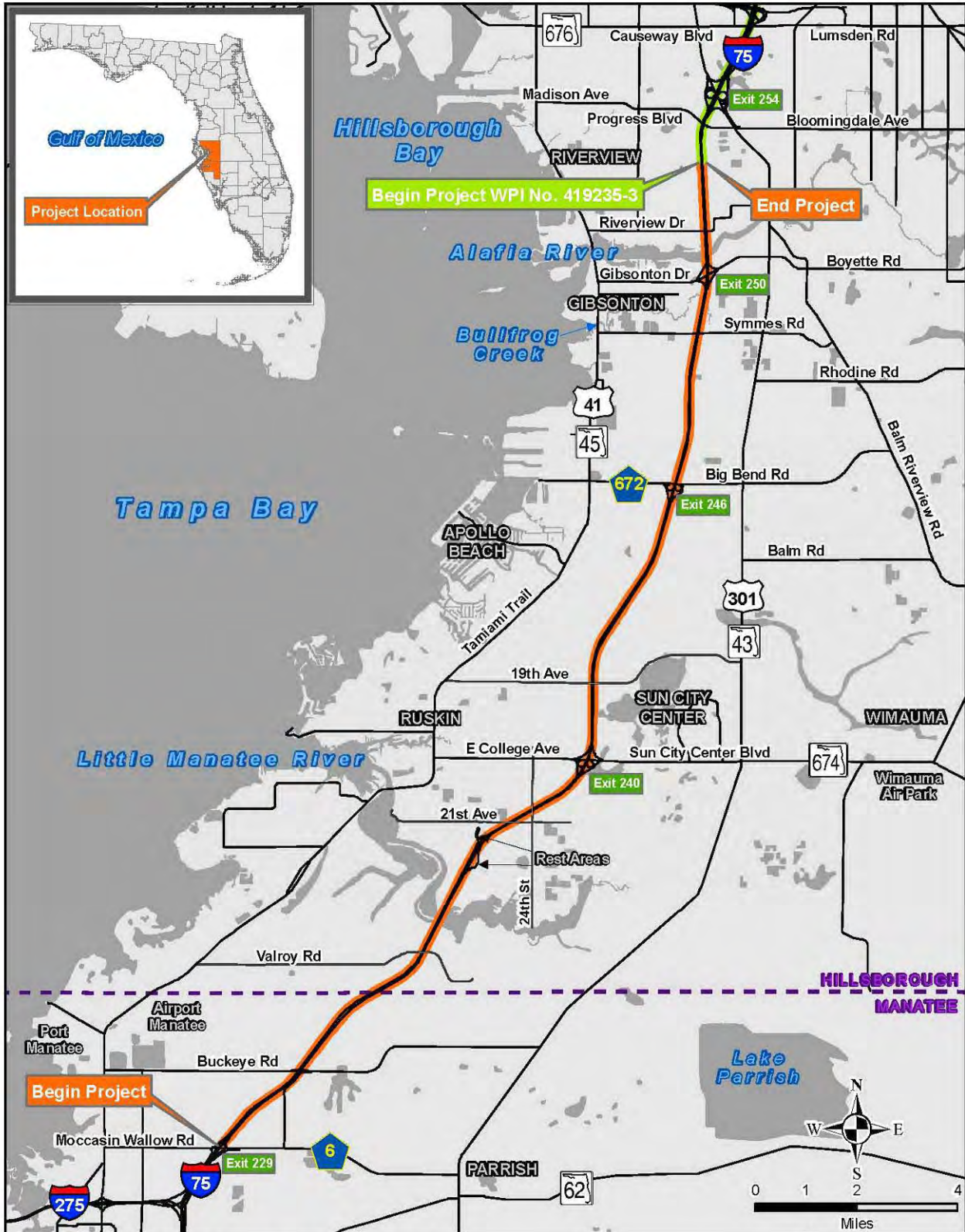
Interchange improvements for the preferred alternative will likely impact both populations of this species that were confirmed during field surveys. Since this species is found in the surrounding region and it is a viable candidate for preservation through collection of seed and/or transplant the project may affect but is not likely to adversely affect the Florida golden aster.


Critical Habitat (CH)

The project corridor was assessed for CH designated by Congress in 17 CFR 35.1532. Review of the USFWS's available GIS data for CH resulted in the identification of CH for the West Indian Manatee within the Little Manatee River. This CH was originally identified by the USFWS in September 1976 and based on knowledge of specific waterways in Florida which were known to be important to manatees at that time. A man-made industrial warm-water site (Tampa Electric Company's Big Bend Power Station), which is an important wintering ground for the manatees, is located about 6 miles to the north of mouth the Little Manatee River.

A petition to revise critical habitat for the Florida Manatee (*Trichechus manatus latirostris*) was recently received by the USFWS in December 2008. The Florida manatee is a subspecies of the West Indian manatee. A 12-month petition finding was recently issued (January 2010 – <http://www.regulations.gov> Docket # FWS-R4ES-2009-0066) and essentially identifies that the revision to the CH is warranted but sufficient funds are not yet available to do so. It is recommended that revisions to CH be reviewed during the permitting and design phase to ensure that no changes have been made to this or other CH designations.

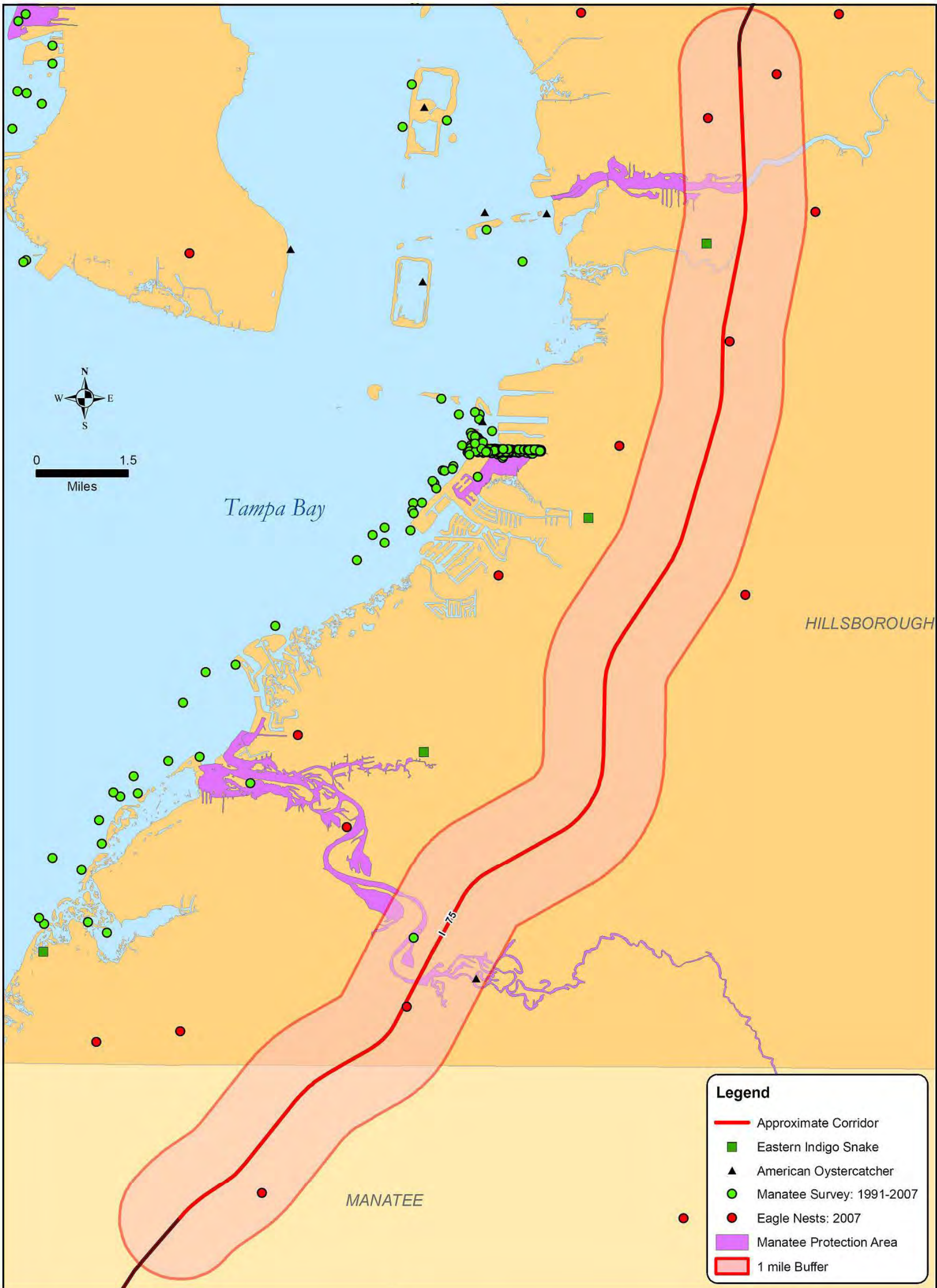
Potential impacts to this CH are limited to 1.84 acres on the interior of the existing bridge structure for the preferred build alternative. Impacts will be temporary in nature and may limit some manatee activity during construction. Movement and foraging within the river will not be limited in the long term by increasing the bridge size as lanes will be added to the inner portion of the existing bridge. As discussed above for the species protection "Standard Manatee Conditions for In-Water Work" will be implemented and these guidelines will be a part of the final project design. Current provisions (dated July 2005) are provided in **Appendix H** of the WEBAR, and when the project proceeds to permitting and construction phase, the most current provisions will be obtained and followed. Since these standards will be incorporated during construction and impacts will be temporary in nature, this project may affect, but is not likely to adversely affect the CH for the West Indian manatee.




I-75 (SR 93A) PD&E Study
Moccasin Wallow Road to US 301
 WPI Segment No.: 419235-2
 Hillsborough and Manatee Counties

Project Location Map

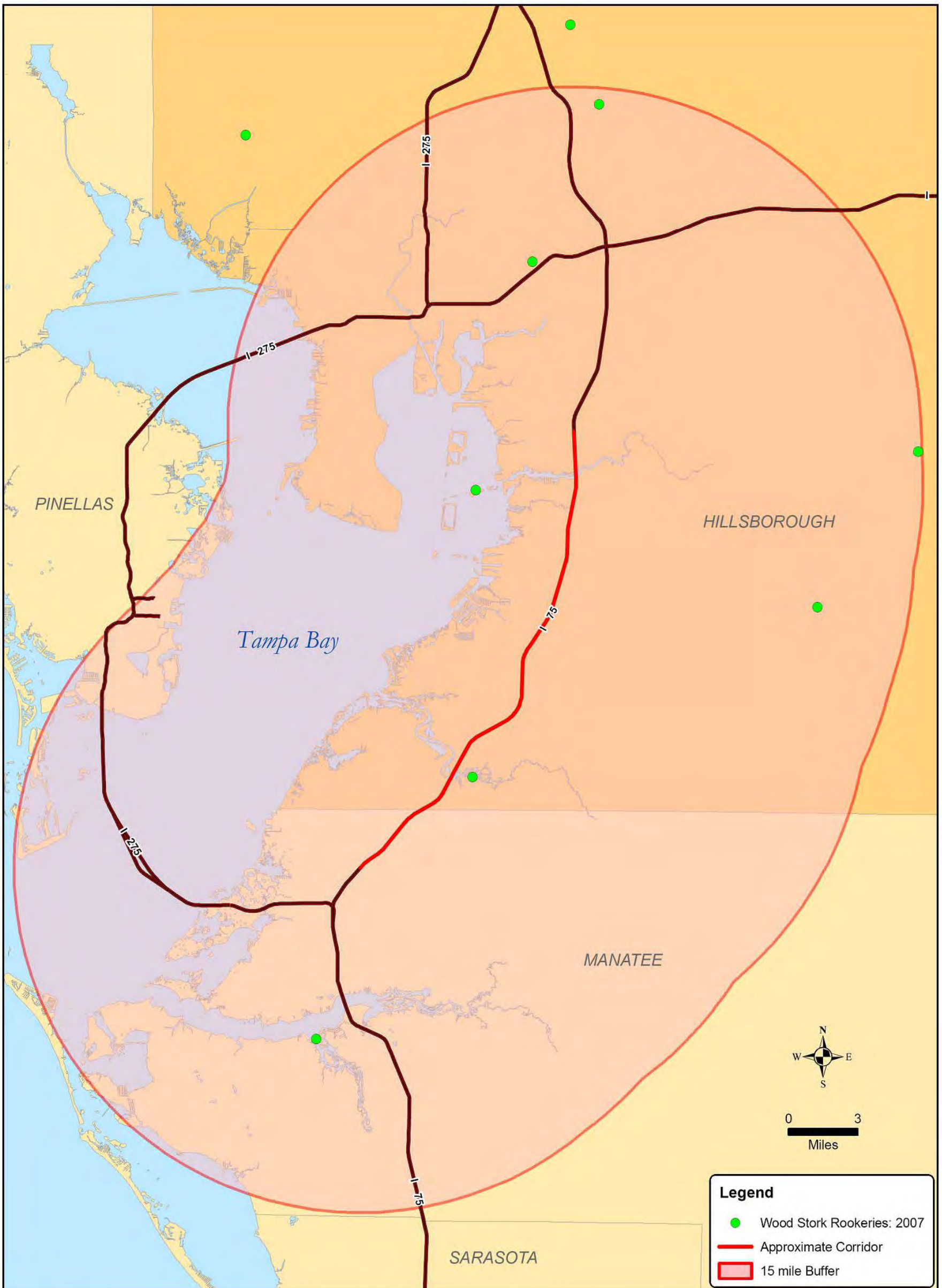
Figure 1-1



I-75 (SR-93) PD&E Study
Moccasin Wallow Road to US 301
 WPI Segment No.: 419235-2
 Hillsborough and Manatee Counties

**Historic Listed Species
 Observations Database
 Search Results**

Figure 5-1



I-75 (SR-93) PD&E Study
Moccasin Wallow Road to US 301
 WPI Segment No.: 419235-2
 Hillsborough and Manatee Counties

Wood Stork Rookeries

Figure 5-2

APPENDIX G

Standard Protection Measures for the Eastern Indigo Snake

STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE

1. An eastern indigo snake protection/education plan shall be developed by the applicant or requestor for all construction personnel to follow. The plan shall be provided to the Service for review and approval at least 30 days prior to any clearing activities. The educational materials for the plan may consist of a combination of posters, videos, pamphlets, and lectures (*e.g.*, an observer trained to identify eastern indigo snakes could use the protection/education plan to instruct construction personnel before any clearing activities occur). Informational signs should be posted throughout the construction site and along any proposed access road to contain the following information:
 - a. a description of the eastern indigo snake, its habits, and protection under Federal Law;
 - b. instructions not to injure, harm, harass or kill this species;
 - c. directions to cease clearing activities and allow the eastern indigo snake sufficient time to move away from the site on its own before resuming clearing; and,
 - d. telephone numbers of pertinent agencies to be contacted if a dead eastern indigo snake is encountered. The dead specimen should be thoroughly soaked in water and then frozen.

2. If not currently authorized through an Incidental Take Statement in association with a Biological Opinion, only individuals who have been either authorized by a section 10(a)(1)(A) permit issued by the Service, or by the State of Florida through the Florida Fish Wildlife Conservation Commission (FWC) for such activities, are permitted to come in contact with an eastern indigo snake.

3. An eastern indigo snake monitoring report must be submitted to the appropriate Florida Field Office within 60 days of the conclusion of clearing phases. The report should be submitted whether or not eastern indigo snakes are observed. The report should contain the following information:
 - a. any sightings of eastern indigo snakes and
 - b. other obligations required by the Florida Fish and Wildlife Conservation Commission, as stipulated in the permit.

Revised February 12, 2004

APPENDIX H

Standard Manatee Conditions for In-Water Work

STANDARD MANATEE CONDITIONS FOR IN-WATER WORK

July 2005

The permittee shall comply with the following conditions intended to protect manatees from direct project effects:

- a. All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.
- b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
- c. Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.
- d. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.
- e. Any collision with or injury to a manatee shall be reported immediately to the FWC Hotline at 1-888-404-FWCC. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-232-2580) for north Florida or Vero Beach (1-561-562-3909) for south Florida.
- f. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Awareness signs that have already been approved for this use by the Florida Fish and Wildlife Conservation Commission (FWC) must be used. One sign measuring at least 3 ft. by 4 ft. which reads *Caution: Manatee Area* must be posted. A second sign measuring at least 8 1/2" by 11" explaining the requirements for "Idle Speed/No Wake" and the shut down of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities.

FWC Approved Manatee Educational Sign Suppliers

ASAP Signs & Designs

624-B Pinellas Street
Clearwater, FL 33756
Phone: (727) 443-4878
Fax: (727) 442-7573

Wilderness Graphics, Inc.

P. O. Box 1635
Tallahassee, FL 32302
Phone: (850) 224-6414
Fax: (850) 561-3943
www.wildernessgraphics.com

Cape Coral Signs & Designs

1311 Del Prado Boulevard
Cape Coral, FL 33990
Phone: (239) 772-9992
Fax: (239) 772-3848

Municipal Supply & Sign Co.

1095 Fifth Avenue, North
P. O. Box 1765
Naples, FL 33939-1765
Phone: (800) 329-5366 or
(239) 262-4639
Fax: (239) 262-4645
www.municipalsigns.com

Vital Signs

104615 Overseas Highway
Key Largo, FL 33037
Phone: (305) 451-5133
Fax: (305) 451-5163

Universal Signs & Accessories

2912 Orange Avenue
Ft. Pierce, FL 34947
Phone: (800) 432-0331 or
(772) 461-0665
Fax: (772) 461-0669

New City Signs

1829 28th Street North
St. Petersburg, FL 33713
Phone: (727) 323-7897
Fax: (727) 323-1897

**United Rentals Highway
Technologies**

309 Angle Road
Ft. Pierce, FL 34947
Phone: (772) 489-8772
or (800) 489-8758 (FL only)
Fax: (772) 489-8757

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

Site/Project Name I-75 Moccasin Wallow Rd to Hwy 301	Application Number	Assessment Area Name or Number PSS1 & PSS1/3 - Shrub Wetlands
Impact or Mitigation Impact	Assessment conducted by: Laura Morris - Quest	Assessment date: 10/13/2008

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

.500(6)(a) Location and Landscape Support w/o pres or current <input type="checkbox"/> 3 <input type="checkbox"/> with	Shrub wetlands located w/in R-O-W, many are maintained periodically through mowing, most are part of the stormwater management facilities. Nuisance / exotic species were found w/in the wetlands and located in the adjacent uplands and wetland landscape. Wildlife access is limited by I-75, R-O-W fencing, and area developments. Agricultural lands which are also adjacent provide minimal support for wildlife and allow for exposure to predation over open fields. Several shrub wetlands have been further isolated by location w/in interchange clover leaves.
.500(6)(b) Water Environment (n/a for uplands) w/o pres or current <input type="checkbox"/> 3 <input type="checkbox"/> with	Water quality observations included high input of roadway run-off, algae (green and rust colored types) observed in areas of standing water, and oil sheen. Plant species which are tolerant of degraded water quality and water level fluctuation were observed and prevalent in many of the shrub wetlands. Soil erosion observed in many of the wetland swales and rutting of soils from mowing.
.500(6)(c) Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <input type="checkbox"/> 4 <input type="checkbox"/> with	High occurrence of the nuisance / exotic species primrose willow (<i>Ludwigia peruviana</i>), torpedo grass (<i>Panicum repens</i>), Brazilian pepper (<i>Schinus terebinthifolius</i>), cattail (<i>Typha</i> spp.), and paragrass (<i>Urochloa mutica</i>) exists for most of the wetlands. Land management practices have greatly limited vegetation diversity and cover is periodically removed through land management practices.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres <input type="checkbox"/> 0.33 <input type="checkbox"/> with

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

For impact assessment areas
FL = delta x acres = 0.76

Delta = [with-current]

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

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

CAUTION: MANATEE HABITAT

All project vessels

IDLE SPEED / NO WAKE

When a manatee is within 50 feet of work
all in-water activities must

SHUT DOWN

Report any collision or injury to:

1-888-404-FWCC (1-888-404-3922)

Florida Fish and Wildlife Conservation Commission

APPENDIX I

**FNAI Reports for
Florida Golden Aster & Photographs**



I-75 PD& E (Moccasin Wallow Road to Hwy 301) – Representative Photograph
Florida Goldenaster (*Chrysopsis floridana*) – Site #1



I-75 PD& E (Moccasin Wallow Road to Hwy 301) – Representative Photograph
Florida Goldenaster (*Chrysopsis floridana*) in Bloom – Site #1



I-75 PD& E (Moccasin Wallow Road to Hwy 301) – Representative Photograph
Florida Goldenaster (*Chrysopsis floridana*) – Site #2



I-75 PD& E (Moccasin Wallow Road to Hwy 301) – Representative Photograph
Florida Goldenaster (*Chrysopsis floridana*) Pre-Flowering Vegetative – Site #2



Florida Department of Transportation

CHARLIE CRIST
GOVERNOR

11201 N. McKinley Drive
Tampa, FL 33612-6456

STEPHANIE C. KOPELOUSOS
SECRETARY

February 11, 2008

Florida Natural Areas Inventory
1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303

RE: 2008 SURVEY OF STATE AND FEDERALLY ENDANGERED FLORIDA
GOLDEN-ASTER AT THE INTERSTATE 275/C.R. 672 INTERCHANGE,
HILLSBOROUGH COUNTY, FLORIDA: SECTION 10075, S.R. 93A

Attached is a survey taken of two sites in the Department of Transportation's Seventh District that contain the State and Federally Endangered Florida Golden-Aster (Chrysopsis Florida).

The survey was conducted on January 31, 2008 and is a part of the Department's on-going commitment to the management of such sites. Also attached is a copy of a Memorandum dated January 27, 1994 that first addressed this matter, as well as a copy of the most recent "District Seven District Vegetarian Management Plan" that further addresses this in Section I on pages 1 through 3.

If you have any questions, please call me at 1-800-226-7220, extension 27888, or e-mail me at william.moriaty@dot.state.fl.us.

Sincerely,

William D. Moriaty
District Maintenance Roadside Vegetation Coordinator

WDM/slk

Attachments

Certified Mail: 7007 2560 0001 2706 4605

cc: S. D. Nabong, P.E.
J. Beebe, P.E.
J. W. Simpson, R.L.A.
H. A. Hunt, P.E.
J. H. Caster, R.L.A. (M.S. 37)

Ref. Federally Endangered
Plant Site 2-of
Florida Golden-aster



FLORIDA NATURAL AREAS INVENTORY

Field Report Form for Occurrences of Rare Plants, Animals, and Natural Communities

This form should be used only for original field observations regarding a single species or community, at one location, and for (preferably) a single date. Please complete only those fields that are known to you. Use the back of the form or other sheets as necessary to report additional information, and if you have any questions or need assistance with the form, please call FNAI at 850-224-8207. Thanks for your help.

Your name: William Moriarty Phone: 800-226-7220 Ext. 27888 E-mail: William.moriarty@dot.state.fl.us
Address: Fla. Dept. of Transportation, 11201 N. McKinley Dr., Tampa, FL 33612 Date Submitted: _____
Name(s) of observers: William Moriarty

Do you want us to protect (i.e., prevent disclosure to the general public) the identification and location information you provide below?
Yes No If so, reason for sensitivity _____

IDENTIFICATION (enter common name only if the scientific name is unknown)

Scientific name: Chrysopsis Floridae Common name: Florida Golden-aster
Basis for identification: Personal knowledge Reference key Field guide Museum specimen Expert Other
Name of reference/guide/museum/expert: Official List in F.G.P.F.W.F.C. 06/01/94 Other _____
Did you take a photograph? Yes No (If possible, please attach a copy of the photo) Did you collect a specimen? Yes No If so, was a specimen deposited at a museum or herbarium? Yes No If so, collection # N/A
Do you think that your identification requires confirmation? Yes No Repository N/A

LOCATION

County: Hillsborough Site or managed area name, if known: Inner northwest infield of the I-75 (S.R. 93) / Big Bend Rd. interchange.

Precise directions to the occurrence that use a readily locatable and relatively permanent landmark on or near the site (such as a road intersection, bridge, or natural landform) as the starting point. Include distances and directions from landmarks, as appropriate. Please note - neither the directions nor the coordinate information will be provided to the general public if the data are to be considered sensitive, as indicated above.

Take Interstate 75 southbound to the off-ramp onto Big Bend Road (C.R. 672). Near the end of the ramp, slow down and pull off to the right and turn right immediately past the side drain. Proceed west immediately south of the ditch and off-ramp approximately 200'-300' to a series of 6 flex post delineators. Plants are located adjacent to the 3 westernmost delineators.

Latitude 27.79153 N Longitude -82.35849 W Datum: NAD27 WGS84/NAD83 Unknown

Source of latitude/longitude coordinates? GPS Other If other, describe Terra Server USA

If GPS: Make N/A model N/A accuracy N/A m DGPS? Yes No Unknown WAAS? Yes No Unknown

If possible, mark the site on a copy of a DOQQ photograph or a USGS 7.5' topographic map and attach to this form. Otherwise, using the back side of the form, please provide a sketch of the vicinity showing the occurrence in relation to towns, roads, landforms, water bodies, and other natural features, including ecological communities. Please include also an indication of scale and a North arrow.

OBSERVATION INFORMATION

Date of observation (m/d/yyyy): 1/31/2008 Time of day 12:00 P.M. Estimate of total area observed _____ m² or 0.0068 acres. Percent of this area actually occupied by the population or community: 5 %. Approximate dimensions of the area occupied: length 30' width 10'

How did you collect the data? (e. g., visually observed from road, trap or capture methods, walking a path through community, formal survey, etc.)

Formal survey

Is there other suitable habitat (unobserved) in the vicinity? Yes No Don't know Extent? (e.g., acres, miles) 0.0047 acres

Have you been to this location before? Yes No If so, when? 1994-2004

Did you previously observe this species or community? Yes No Did not look for it If you have previously seen the population or community, do you think there is now more? less? about the same amount as before? or no way to compare .

General description. Please provide a description or "word picture" of the area where this occurrence is located (i.e., the physical setting and ecological context), including habitat, dominant plant species, topography, hydrology, soils, adjacent communities, and surrounding land use.

The Golden-asters occur in a white sand scrub community (92+52) of excessively well drained sandy soil. Topography is level. It is xeric although a ditch to the north collects and retains moisture as evidenced by growth of Tickseed and Meadow Beauty. The uncleared portion immediately south consists of mature Sand live oak and Saw Palmetto.

For animals: Number of individuals (or nests, burrows, etc.) seen: _____ Age structure _____
 Estimated total no. of individuals in population: _____ Basis? _____
 Ecological & behavioral notes (e.g. reproductive stage, activity type [feeding, flying, nesting, etc.]): _____

For plants: Number of individuals (or clumps, etc.) seen within the observed area: Twenty-one (21)
 Flowering? Yes No Fruiting? Yes No In bud? Yes No In leaf? Yes No Dormant? Yes No

For communities: For each of three strata (tree, shrub, and ground layers), please list the dominant species comprising the stratum, together with an estimate of the height and percent cover for each stratum. (use the back of this form or another sheet, if necessary, to list additional species)

Stratum	height	% cover	Species
Tree	30'	65	Sand live Oak
Shrub	6'	70	Saw Palmetto, Dwarf Blueberry
Ground	3'	25	Narrowleaf Silkgrass, Gopher Apple, Pricklypear

Describe species dominance relationships, vegetation heterogeneity, succession stage/dynamics, and any other unique aspects of the community or additional noteworthy species (including animals).

Dominant species immediately south of the target area is dominated by Sand live Oak and Saw Palmetto. Dominant species within the target area is Narrowleaf Silkgrass.

MANAGEMENT

Owner of site (if known): State of Florida, Department of Transportation

Is the owner or manager protecting or managing the property for this species or community? Yes No Don't know

Are there disturbances or threats (e. g., urban development, agriculture, vehicle use, forestry, logging, fire suppression, ditching/drainage, impoundment, exotic species, and natural disturbance) in the vicinity of the site? Yes No Don't know

If so, please describe type and severity: *There is Cynagrace approximately 100-150' to the east although it does not appear to have spread over the years. Additional threats include encroachment from Sand live Oaks and Saw Palmettos. Urban development produced west of the site may have a detrimental effect.*

Is there evidence (e.g., fire breaks, scorching) of the use of fire at the site? Yes No Don't know Describe and give dates of recent fires, if known _____

Comments on management history or needs: *The first attempt at management was addressed in a Department Memorandum by this observer dated 01/27/94. It was then made a District Maintenance policy in the 1999 "District Seven Vegetation Management Plan"; and has been addressed as such each year thereafter. Copies of the OTHER Memorandum and current Management Plan are attached.*

Additional comments concerning the population or community, its ecological conditions, contact information for other knowledgeable people, etc.:

Population has varied between 15 and 24 over the years. Upon each monitoring by the observer since 1994 it has usually resulted in minimal clearing and thinning of competing vegetation by said observer in order to control competitive foliage from eliminating the target species. Also, this site was

Please send this completed this form to: *referred to as Site #3 in the Memorandum and is now Site 2-ct.*

DATE: 01/25/08; Map Pg. 1 of 2

Send To Printer Back To TerraServer Change to 11x17 Print Size Show Grid Lines Change to Landscape

USGS 27 km E of St. Petersburg, Florida, United States 13 May 2002



0 .5Km

0 .25Mi

Image courtesy of the U.S. Geological Survey

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FLORIDA GOLDEN-ASTER SITE 2-OF, HILLOBOROUGH, COUNTY, FLORIDA

DATE: 01/24/08: MAP PG. 2 OF 2

Send To Printer

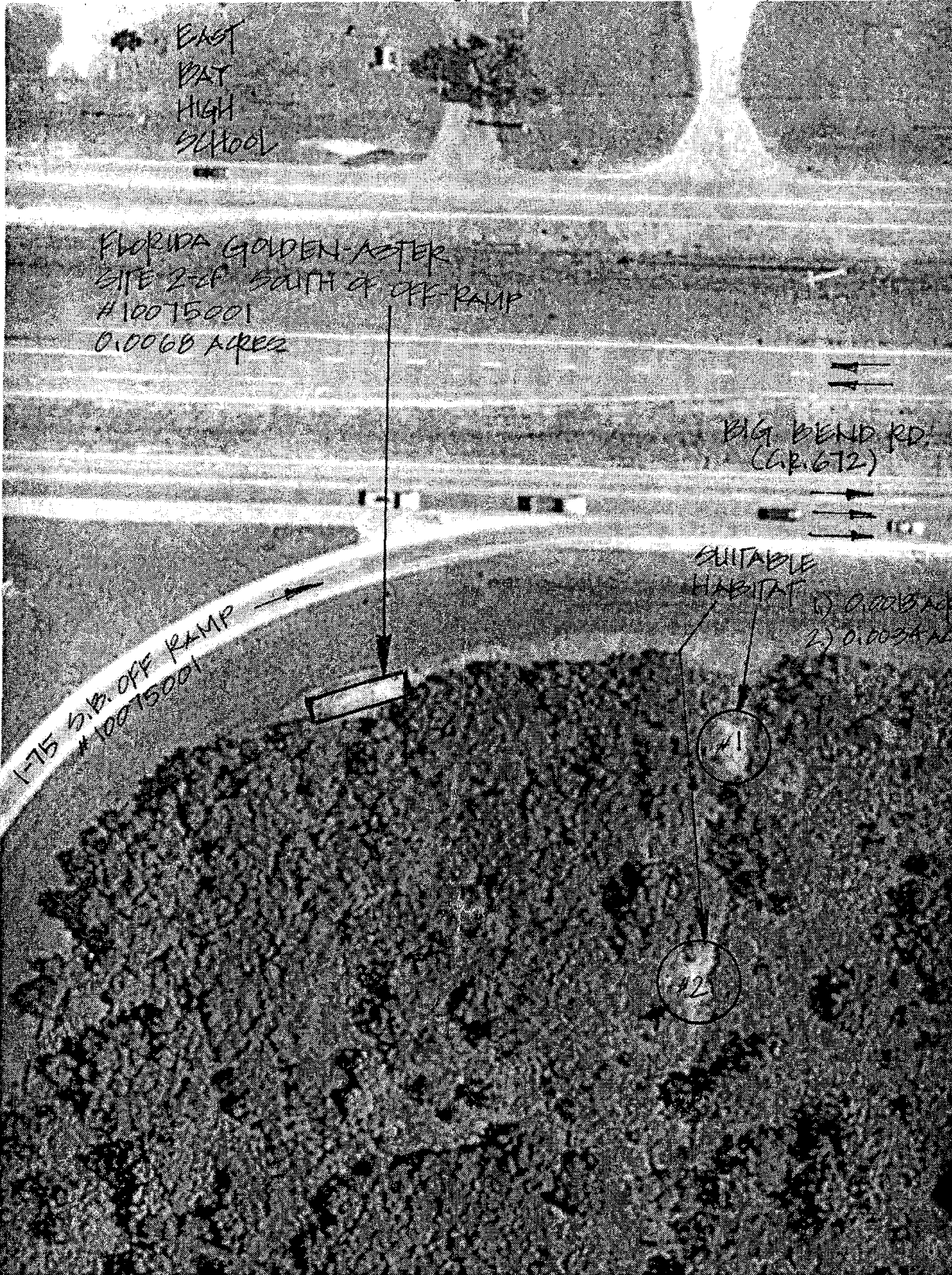
Back To TerraServer

Change to 11x17 Print Size

Show Grid Lines

Change to Landscape

USGS 27 km E of St. Petersburg, Florida, United States 13 May 2002



0 25 m

0 25 yd

Image courtesy of the U.S. Geological Survey

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FLORIDA GOLDEN-ASTER SITE 2-c. HILLSBOROUGH COUNTY, FLORIDA

Ref. Federally Endangered
Plant Site 1-cf
Florida Golden-aster



FLORIDA NATURAL AREAS INVENTORY

Field Report Form for Occurrences of Rare Plants, Animals, and Natural Communities

This form should be used only for original field observations regarding a single species or community, at one location, and for (preferably) a single date. Please complete only those fields that are known to you. Use the back of the form or other sheets as necessary to report additional information, and if you have any questions or need assistance with the form, please call FNAI at 850-224-8207. Thanks for your help.

Your name: William Meriaty Phone: 800-226-7220 Ext. 27000 E-mail: William.meriaty@dot.state.fl.us
Address: Fl. Dept. of Transportation, 11201 N. McKinley Dr., Tampa, Fl. 33612 Date Submitted: 02/05/00
Name(s) of observers: William Meriaty

Do you want us to protect (i.e., prevent disclosure to the general public) the identification and location information you provide below?
Yes No If so, reason for sensitivity _____

IDENTIFICATION (enter common name only if the scientific name is unknown)

Scientific name: Chrysopsis Floridae Common name: Florida Golden-aster
Basis for identification: Personal knowledge Reference key Field guide Museum specimen Expert Other
Name of reference/guide/museum/expert: Official Lists... F.G. + F.W.F.C. Delaney Other _____
Did you take a photograph? Yes No (If possible, please attach a copy of the photo) Did you collect a specimen? Yes No If so, was a specimen deposited at a museum or herbarium? Yes No If so, collection # N/A
Do you think that your identification requires confirmation? Yes No Repository N/A

LOCATION

County: Hillsborough Site or managed area name, if known: Southern portion of roadside west of the I-75 s.b. on-ramp from Big Bend Rd.

Precise directions to the occurrence that use a readily locatable and relatively permanent landmark on or near the site (such as a road intersection, bridge, or natural landform) as the starting point. Include distances and directions from landmarks, as appropriate. Please note - neither the directions nor the coordinate information will be provided to the general public if the data are to be considered sensitive, as indicated above.

Take Big Bend Rd. (C.R. 672) eastbound or westbound to the intersection at the southbound I-75 on-ramp. Take the I-75 on-ramp and look for a series of metal delineators with white reflective tops west of the ramp north of the merge onto Interstate 75.

Latitude 27.70791 N Longitude -82.35937 W Datum: NAD27 WGS84/NAD83 Unknown
Source of latitude/longitude coordinates? GPS Other If other, describe Terra Server USA
If GPS: Make N/A model N/A accuracy N/A m DGPS? Yes No Unknown WAAS? Yes No Unknown

If possible, mark the site on a copy of a DOQQ photograph or a USGS 7.5' topographic map and attach to this form. Otherwise, using the back side of the form, please provide a sketch of the vicinity showing the occurrence in relation to towns, roads, landforms, water bodies, and other natural features, including ecological communities. Please include also an indication of scale and a North arrow.

OBSERVATION INFORMATION

Date of observation (m/d/yyyy): 1/31/2000 Time of day 1:00 PM Estimate of total area observed _____ m² or 0.0860 acres. Percent of this area actually occupied by the population or community: 10 %. Approximate dimensions of the area occupied: length 250' width 15'

How did you collect the data? (e. g., visually observed from road, trap or capture methods, walking a path through community, formal survey, etc.)
Formal survey

Is there other suitable habitat (unobserved) in the vicinity? Yes No Don't know Extent? (e.g., acres, miles) * 1 acre
Have you been to this location before? Yes No If so, when? 1999-2004 *Note: Area is immediately west of private property slated for development.
Did you previously observe this species or community? Yes No Did not look for it If you have previously seen the population or community, do you think there is now more? less? about the same amount as before? or no way to compare .

General description. Please provide a description or "word picture" of the area where this occurrence is located (i.e., the physical setting and ecological context), including habitat, dominant plant species, topography, hydrology, soils, adjacent communities, and surrounding land use.

The Golden-asters occur in a white sand Scrub community (92+52) of excessively well drained soil. Topography is level. It is xeric, although a ditch to the east collects and retains moisture. The uncleared portion to the west consists of mature Sand live oak, Myrtle Oak, Chapman Oak and Saw Palmetto.

For animals: Number of individuals (or nests, burrows, etc.) seen: _____ Age structure _____

Estimated total no. of individuals in population: _____ Basis? _____

Ecological & behavioral notes (e.g. reproductive stage, activity type [feeding, flying, nesting, etc.]): _____

For plants: Number of individuals (or clumps, etc.) seen within the observed area: Seventy-nine (79)

Flowering? Yes No Fruiting? Yes No In bud? Yes No In leaf? Yes No Dormant? Yes No

For communities: For each of three strata (tree, shrub, and ground layers), please list the dominant species comprising the stratum, together with an estimate of the height and percent cover for each stratum. (use the back of this form or another sheet, if necessary, to list additional species)

Stratum	height	% cover	Species
Tree	30'	75	Sand live Oak, Myrtle Oak, Chapman Oak
Shrub	6'	60	Saw Palmetto
Ground	3'	20	Narrowleaf Silkgrass, Florida Pennyroyal, Wiregrass, Gopher Apple

Describe species dominance relationships, vegetation heterogeneity, succession stage/dynamics, and any other unique aspects of the community or additional noteworthy species (including animals).

Dominant species west of the target area is dominated by Sand live, Myrtle and Chapman Oaks. Species within the target area is a mix of Narrowleaf Silkgrass, Florida Pennyroyal, Gopher Apple and Wiregrass.

MANAGEMENT

Owner of site (if known): State of Florida, Department of Transportation

Is the owner or manager protecting or managing the property for this species or community? Yes No Don't know

Are there disturbances or threats (e. g., urban development, agriculture, vehicle use, forestry, logging, fire suppression, ditching/draining, impoundment, exotic species, and natural disturbance) in the vicinity of the site? Yes No Don't know

If so, please describe type and severity: The largest threat has been the expansion and growth of Oaks and Palmetto

to the west, resulting in the retreat of populations within the 10' maintenance easement east of the limited access chain link fence. Urban development is proposed immediately west of the site and may have an adverse effect

Is there evidence (e.g., fire breaks, scorching) of the use of fire at the site? Yes No Don't know Describe and give dates of recent fires, if known _____

Comments on management history or needs: The first attempt at management was addressed in a Department Memorandum by this observer dated 01/27/94. It was then made a District Maintenance policy in the 1999 "District Seven Vegetation Management Plan", and has been addressed as such each year thereafter. Copies of ?

OTHER Memorandum and current Management Plan are attached.

Additional comments concerning the population or community, its ecological conditions, contact information for other knowledgeable people, etc.:

As stated above, the population has dropped dramatically between the fence line and canopy (Qty. 170 in 1994, Qty. 3 in '008), but has been steeply in the eastern portion west of the ditch (Qty. 15 in 1994, Qty. 76 in 2008). This is attributed to expansion of the existing canopy into the easement to the west, and frequent control of competing vegetation west of the ditch through mowing. Sites 1 and 2 in the Memorandum were combined with the first "District Seven Vegetation Management Plan" in 1999 and renamed Site 1-c.

Please send this completed this form to: _____

DATE: 01/21/08: MAP Pg. 1 of 2

Send To Printer Back To TerraServer Change to 11x17 Print Size Show Grid Lines Change to Landscape

USGS 27 km E of St. Petersburg, Florida, United States 13 May 2002



0 0.5Km

0 0.25Mi

Image courtesy of the U.S. Geological Survey

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FLORIDA GOLDEN ASTER SITE 1 of, HILLSBOROUGH COUNTY, FLORIDA

DATE: 07/21/02: MAP Pg. 2 of 2

Send To Printer Back To TerraServer Change to 11x17 Print Size Show Grid Lines Change to Landscape

USGS 27 km E of St. Petersburg, Florida, United States 13 May 2002



FLORIDA GOLDEN-ASTER
 SITE #1 - 1/4 WEST OF
 ON-RAMP # 10075011
 0.0860 ACRES

ON-RAMP # 10075011

INTERSTATE 75 (SR 93A)

0 50 m 0 50 yd

Image courtesy of the U.S. Geological Survey
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FLORIDA GOLDEN-ASTER SITE #1 - HILLSBOROUGH COUNTY, FLORIDA