

Overpass Road PD&E Study

From Old Pasco Road to US 301
FPID No: 432734-1



Wetland Evaluation and Biological Assessment Report

September 2016



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ACRONYMS AND ABBREVIATIONS

BCC	Board of County Commissioners
CFA	Core Foraging Area
CFR	Code of Federal Regulations
CIP	Capital Improvement Plan
CR	County Road
CWA	Clean Water Act
EA	Environmental Assessment
ERP	Environmental Resource Permit
F.S.	Florida Statutes
FDACS	Florida Department of Agriculture & Consumer Services
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FHWA	Federal Highway Administration
FLUCFCS	Florida Land Use, Cover and Forms Classification System
FNAI	Florida Natural Areas Inventory
FWC	Florida Fish and Wildlife Conservation Commission
FWS	U.S. Fish and Wildlife Service
FY	Fiscal Year
HRDB	Hillsborough River Drainage Basin
HRMB	Hillsborough River Mitigation Bank
I-75	Interstate 75
L RTP	Long Range Transportation Plan
mph	Miles Per Hour
MPO	Metropolitan Planning Organization
MPUD	Master Planned Unit Development
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NTMB	North Tampa Mitigation Bank
PD&E	Project Development & Environment
PIJR	Preliminary Interchange Justification Report
Route Study	Final Overpass Road Route Study
ROW	Right-Of-Way
SIS	Strategic Intermodal System
SLOPES	Standard Local Operating Procedures for Endangered Species
SR	State Road
STIP	State Transportation Improvement Program
SWFWMD	Southwest Florida Water Management District
SWPPP	Stormwater Pollution Prevention Plan
TIP	Transportation Improvement Program
U.S.C.	United States Code
UMAM	Uniform Mitigation Assessment Methodology

US 301 United States Highway 301
USACE U.S. Army Corps of Engineers
USDOT United States Department of Transportation
USEPA U.S. Environmental Protection Agency
vpd Vehicles Per Day
WEBAR Wetland Evaluation and Biological Assessment Report

Section 1.0

DESCRIPTION OF PROPOSED ACTION

1.1 PROJECT DESCRIPTION

This proposed roadway improvement project in Pasco County involves the widening of existing segments of Overpass Road (Old Pasco Road to 0.86 miles east of Boyette Road, 0.49 miles west of Curley Road to 1.45 miles east of Curley Road) and Kossik Road (Coolwood Drive/Ghost Train Lane to United States Highway 301 [US 301]); the addition of an interchange at Overpass Road and Interstate 75 (I-75); and the connection of existing segments of Overpass Road and Kossik Road on new alignment (0.86 miles east of Boyette Road to 0.49 miles west of Curley Road and 1.45 miles east of Curley Road to Coolwood Drive/Ghost Train Lane). The proposed improvements for Overpass Road include the following:

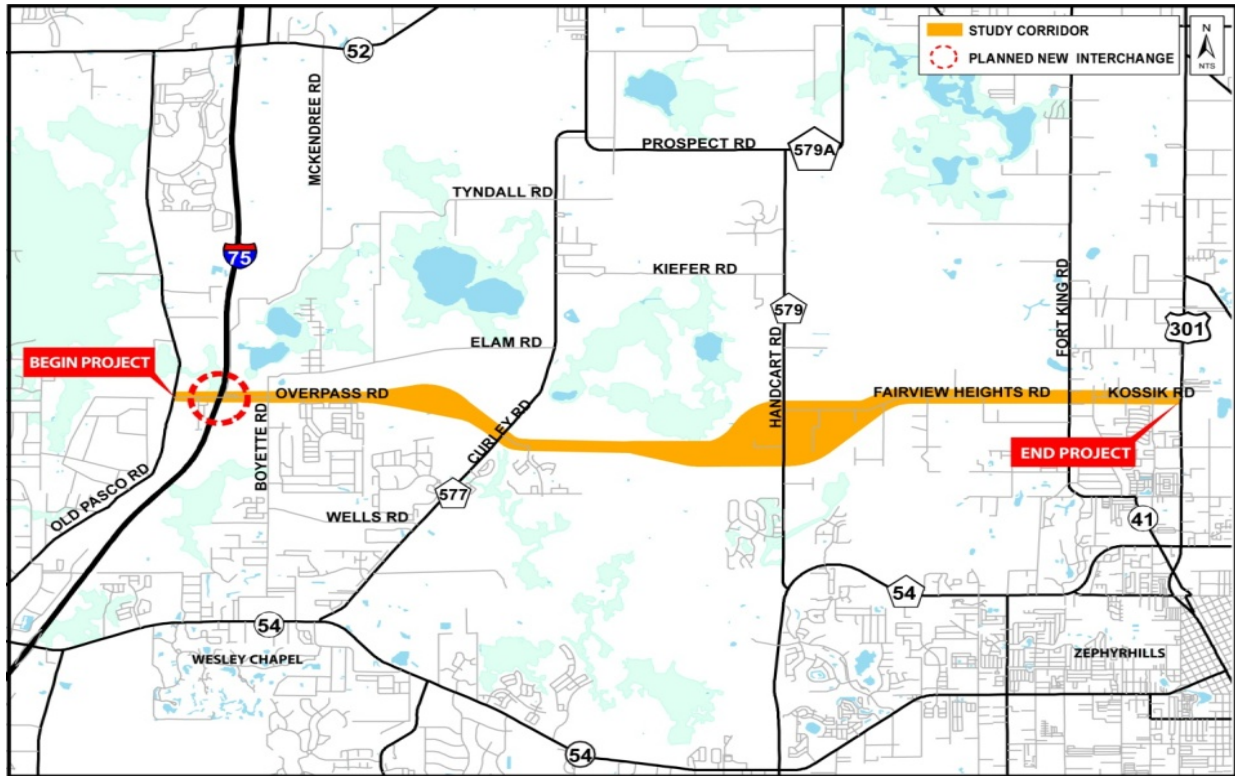
- Four lanes from Old Pasco Road to I-75
- A new interchange at I-75 and Overpass Road
- Six lanes plus two auxiliary lanes from I-75 to Boyette Road
- Six lanes from Boyette Road to US 301

In addition to these improvements, several access modifications will be required. The existing Blair Drive access to Overpass Road will be closed and a new two-lane paved roadway will be constructed with a connection to Old Pasco Road. The existing McKendree Road access at Overpass Road will also be relocated to an alternate location on Boyette Road (north of Overpass Road). At the Wesley Chapel District Park, vehicular access will be eliminated at the existing secondary entrance located on Overpass Road (approximately 1,000 feet east of I-75). The park entrance will be reconfigured to enhance access for alternative modes of transportation, including pedestrians and bicyclists, during the design phase of the project.

While the Project Development & Environment (PD&E) Study including the Environmental Assessment (EA) and supporting technical documents required under the National Environmental Policy Act (NEPA) project development process will further evaluate and seek Location Design Concept Acceptance (LDCA) for the ultimate interchange concept (Flyover Ramp Alternative), actual construction of the interchange may occur in two phases. The first phase would construct a diamond interchange with dual westbound-to-southbound left-turn lanes in the Opening Year (2022); the second phase would construct the westbound-to-southbound Flyover Ramp when warranted by future traffic conditions. Note that the footprint of the diamond interchange falls within the proposed right-of-way (ROW) of the ultimate improvements. Therefore, any impacts associated with the diamond interchange would be less than ultimately approved through the NEPA process.

The project limits extend from Old Pasco Road on the west to US 301 on the east, for a total length of approximately 9.0 miles. The study corridor is shown on **Figure 1-1**.

**FIGURE 1-1
PROJECT LOCATION MAP**



Overpass Road is currently an east-west County roadway that is comprised of two unconnected segments. The first segment exists from Old Pasco Road to approximately 0.86 miles east of Boyette Road, while the second segment exists from 0.49 miles west of Curley Road to 1.45 miles east of Curley Road. It is located south of State Road (SR) 52 and north of County Road (CR) 54/SR 54 and traverses over I-75 without ramp connections to the interstate. The existing segments of Overpass Road serve mostly local trips and are classified as collector roadways. The existing number of lanes for each segment is as follows:

- Old Pasco Road to Boyette Road (two-lanes undivided)
- Boyette Road to 0.86 miles east of Boyette Road (four-lanes divided)
- 0.49 miles west of Curley Road to Curley Road (two- and four-lanes divided)
- Curley Road to Angelstem Boulevard (four-lanes divided)
- Angelstem Boulevard to 1.45 miles east of Curley Road (two-lanes divided)

The posted speed limit is 30 miles per hour (mph) between Old Pasco Road and Boyette Road and 45 mph east of Boyette Road.

Kossik Road currently exists as a two-lane undivided roadway from the intersection of Coolwood Drive/Ghost Train Lane east to the intersection with Green Slope Drive, where it transitions to a four-lane divided paved section and terminates at the intersection of US 301. Throughout a major portion of the two-lane segment, the roadway is unpaved. The posted speed limit ranges from 25 mph to 35 mph from Coolwood Drive to US 301.

Blair Drive is currently a two-lane north-south roadway that intersects Overpass Road just west of I-75. As a privately-maintained facility, it provides residents of the Williams Acres subdivision with direct access to Overpass Road. While there is no posted speed limit along Blair Drive, Florida law states that any residential roadway speed limit is 30 mph unless otherwise posted.

1.2 PURPOSE

Pasco County, in coordination with the Florida Department of Transportation (FDOT) and the Federal Highway Administration (FHWA), is conducting a PD&E Study for evaluating capacity improvements to the existing Overpass Road and Kossik Road segments, the connection of these segments on new alignment, and the addition of an interchange at Overpass Road with I-75 in Pasco County, Florida. The purpose of the study is to identify and evaluate potential locations, develop conceptual alignments, and identify impacts and mitigation measures for the proposed improvements.

Due to the concurrent request for new access at Overpass Road with I-75 (the federal action), and the fact that the majority of the project occurs on new alignment, the study is being developed as an EA in accordance with the FHWA NEPA project development process. A *Preliminary Interchange Justification Report* (PIJR) for the proposed interchange at I-75 and Overpass Road has been prepared concurrently with the Overpass Road PD&E Study and is available under separate cover; the PIJR received a *Determination of Engineering and Operational Acceptability* by the FHWA on May 27, 2014.

Pasco County is the applicant/project sponsor and is not seeking federal funds for the project improvements. Due to the federal action for the new interchange with I-75, FDOT serves as the liaison between Pasco County and FHWA. In future phases of project development, developers with vested rights along the project corridor will be donating land and/or constructing portions of the roadway through their property, consistent with the approved PD&E Study, their legally-binding Master Planned Unit Development (MPUD) Conditions of Approval, Development Agreements, the Pasco County Land Development Code, or other documents specifying improvements to Overpass Road. An Interlocal Agreement which clearly defines the responsibilities of Pasco County and FDOT will be developed at the appropriate stage in the project's implementation process.

The Overpass Road widening/extension and proposed interstate access are anticipated to play a significant role in the regional network in terms of enhancing connectivity, safety, and traffic circulation as the I-75 corridor serves as part of Florida's designated Strategic Intermodal System

(SIS) network. The proposed interchange is projected to divert traffic demand from future over-capacity conditions at the two adjacent interchanges at I-75/SR 52 and I-75/CR 54, which are currently experiencing congestion from the northbound off-ramps queuing onto the I-75 mainline. In addition, the proposed project will enhance incident management capabilities by providing additional detour route options; enhance emergency management capabilities by providing additional access to I-75; and aid emergency evacuation within the County, as Overpass Road runs parallel or connects to four primary state evacuation routes (SR 52, CR/SR 54, I-75, and US 301). Figure 1-1 provides the general vicinity of the proposed corridor; **Figure 1-2** provides the proposed interchange location and spacing between the existing adjacent interchanges.

Overall, the construction of a new interchange at I-75, as well as the extension and widening of Overpass Road to US 301, will be critical in accommodating anticipated travel demands and enhancing safety. These improvements will work to ensure that mobility is maintained on Florida's SIS and enhanced between existing/proposed developments along the roadway network in eastern Pasco County.

During the project's planning phase, the County previously developed and evaluated three Build Alternatives (O-1, O-2, and O-3) and a No-Build Alternative. The results of this effort are documented in the *Final Overpass Road Route Study* (Route Study) dated March 2005. Based upon engineering and environmental analyses, as well as comments received at the Public Workshop held on March 3, 2005, Alternative O-3 was established to be the Preferred Alternative during the planning phase. The Overpass Road PD&E Study has further refined and evaluated all proposed build alternatives from the Route Study and identified future improvements needed to alleviate existing transportation deficiencies and accommodate future population and employment growth. The proposed Build Alternatives have been developed to avoid or minimize impacts to sensitive features such as wetlands, existing structures, wildlife and habitat, contamination sites, and cultural resources.

Based upon the engineering and environmental analyses results, an alternatives comparison matrix has been developed and is provided in the *Preliminary Engineering Report* and the EA. The matrix identifies the effects of each alternative on the social, economic, cultural, natural, and physical environment.

**FIGURE 1-2
PROPOSED INTERCHANGE SPACING**



1.3 TRANSPORTATION PLAN CONSISTENCY

The Overpass Road project is consistent with locally adopted plans. The *Pasco County Fiscal Year (FY) 2016-2020 Capital Improvement Plan* (CIP) identifies full funding through construction (FY 2020/2021) for the first phase of the new interchange proposed at I-75 and Overpass Road and the widening of Overpass Road from Old Pasco Road to I-75 (two to four lanes) and I-75 to Boyette Road (two to six lanes plus two auxiliary lanes) [CIP 5020] and the PD&E Study for Overpass Road from I-75 to US 301 [CIP 5025]. The Design phase for the proposed interchange is fully funded in FY 2016/2017. Construction of a new interchange at I-75 and Overpass Road and the widening of the roadway from Curley Road to east of River Glen Drive to a four-lane divided facility is identified in the Pasco County Metropolitan Planning Organization (MPO) *2040 Cost Affordable Long Range Transportation Plan* (LRTP) with construction funded during the 2020 to 2025 time frame. The four-lane widening of the existing segment of Overpass Road from Old Pasco Road to Boyette Road and the extension of the roadway as a four-lane divided facility from the future McKendree Road realignment to Curley Road and from east of River Glen Drive to Green Slope Drive is funded for construction in the 2026 to 2030 time frame. The ‘Needs Plan’ of the LRTP shows that the Overpass Road corridor is anticipated to warrant six lanes by the year 2040.

Overpass Road from Old Pasco Road to US 301 is shown as a four-lane facility on Map 7-22, ‘Future Number of Lanes (2035)’ of the Transportation Element of the adopted Pasco County Comprehensive Plan. Note, however, that a Comprehensive Plan Amendment was approved on August 10, 2010 for the Pasadena Hills Area Plan (Ordinance 10-21), which shows Overpass Road from Old Pasco Road to US 301 on Figure PH-4, ‘2050 Future Transportation Map’ as a six-lane facility. While the Transportation Element of the Comprehensive Plan does not specifically identify the interchange improvements as cost-affordable, I-75 at Overpass Road is listed on Table 7-2B, ‘Major Intersections with Entering Traffic Volumes Exceeding 75,000’ as an intersection with entering traffic volumes greater than 100,000 vehicles per day (vpd).

The Pasco County MPO FY 15/16-19/20 *Transportation Improvement Program* (TIP) was amended on June 9, 2016, to include the interchange at I-75 and Overpass Road. The interchange project also includes the widening of Overpass Road from Old Pasco Road to Boyette Road. Per CFR Title 23, Part 450.216(b), phases of the project identified using Local Funds (LF) are included in the *State Transportation Improvement Program* (STIP) by reference. In addition, the widening of I-75 from south of SR 56 to the Pasco/Hernando County line is currently included in the Pasco County MPO FY 15/16-19/20 TIP, as well as the STIP. Portions of the I-75 widening project are complete or construction is currently underway.

Section 2.0

RECOMMENDED ALTERNATIVE

2.1 RECOMMENDED ALTERNATIVE

Based on previous planning efforts; engineering and environmental analyses; public comments submitted via the project website at www.overpassroad.com and received at the Alternatives Public Workshop held at the Victorious Life Church on November 29, 2012; the *Determination of Engineering and Operational Acceptability* of the PIJR received by the FHWA on May 27, 2014; and approval by the Pasco County BCC at a Board meeting held on April 23, 2013, the *Flyover Ramp Alternative* (Interchange) and *Alternative O-3* (Roadway) are being proposed as the Recommended Build Alternative. While it is recognized that the Diamond Interchange Alternative is the least costly option and was preferred by the public, this alternative alone will not be able to satisfactorily handle the traffic volumes projected for the Design Year (2040). Therefore, while the PD&E Study including the EA and supporting technical documents required under the NEPA project development process will further evaluate and seek Location Design Concept Acceptance (LDCA) for the ultimate Flyover Ramp Alternative, actual construction of the interchange may occur in two phases. The first phase would construct a diamond interchange with dual westbound-to-southbound left-turn lanes in the Opening Year (2022); the second phase would construct the westbound-to-southbound Flyover Ramp when warranted by future traffic conditions. Note that the footprint of the diamond interchange falls within the proposed ROW of the ultimate improvements. Therefore, any impacts associated with the diamond interchange would be less than ultimately approved through the NEPA process. An additional advantage of the Flyover Ramp Alternative is that the ROW can be purchased for the ultimate construction footprint at current prices, making it a more economical option.

While Alternative O-3 is comparable in cost with the other two build roadway options, this alternative does not require any residential or business relocation and has the fewest number of potential noise-sensitive sites. In addition, Alternative O-3 is consistent with existing and planned development along the corridor and is supported by the majority of the public and stakeholders, including the Pasco County School Board.

2.1.1 REFINEMENTS TO THE RECOMMENDED ALTERNATIVE

Subsequent to the Alternatives Public Workshop, draft versions of the supporting engineering and environmental technical documents prepared for the Recommended Build Alternatives were submitted to FDOT District Seven for review. Based on this review, FDOT District Seven commented that ponds are not to be located within the existing FDOT/I-75 ROW. As such, the four ponds initially proposed within the interchange infield areas for the Flyover Ramp Alternative were consolidated into two ponds and relocated to new locations.

Based on comments received during and following the Alternatives Public Workshop, the Victorious Life Church requested that a new access road for Blair Drive proposed through church-owned land be moved to the southern end of the property. After meeting with church representatives, the plans were changed to relocate the access road. **Figure 2-1** graphically depicts the revised Recommended Build Interchange Alternative and southern location of the Blair Drive access.

A portion of Alternative O-3 through the Epperson Ranch property has been realigned and the typical section width has been reduced to be consistent with the approved Epperson Ranch South MPUD Master Plan (Rezoning and Conditions of Approval) approved by the BCC on November 5, 2014. On September 1, 2015, the developer of the Epperson Ranch property received authorization to commence the eastern portion of the alignment from approximately 0.49 miles west of Curley Road to Curley Road through approval of the developer's Final Mitigation Plan and a Nationwide Permit issued by the USACE [Permit No. SAJ-2014-01744 (NW-TEH)]. The developer constructed this segment in order to access an approved single-family residential subdivision known as "Park Place", which received a Department of the Army permit from the USACE on September 10, 2015 [Permit No. SAJ-2006-07911 (SP-TEH)].

Additionally, a small segment of the Recommended Build Alternative just west of Fort King Road has been realigned, where Alternative O-3 originally curved to the south to avoid impacts to an existing structure. As this structure has recently been demolished, the property owner has requested that the roadway be straightened out to align with Fairview Heights Road. **Figure 2-2** graphically depicts the revised Recommended Build Roadway Alternative, while **Figures 2-3 through 2-11** reflect the adjusted typical sections along the corridor.

The combined Recommended Build Alternative (Interchange and Roadway segments) for the PD&E Study, hereafter referred to as the O-3 Flyover Alternative, has been further evaluated in subsequent sections of this *Wetland Evaluation and Biological Assessment Report* (WEBAR); the project plan sheets are provided in Appendix A. In addition to the Recommended Build Alternative, the No-Build Alternative will also continue to remain a viable option throughout the PD&E Study process.

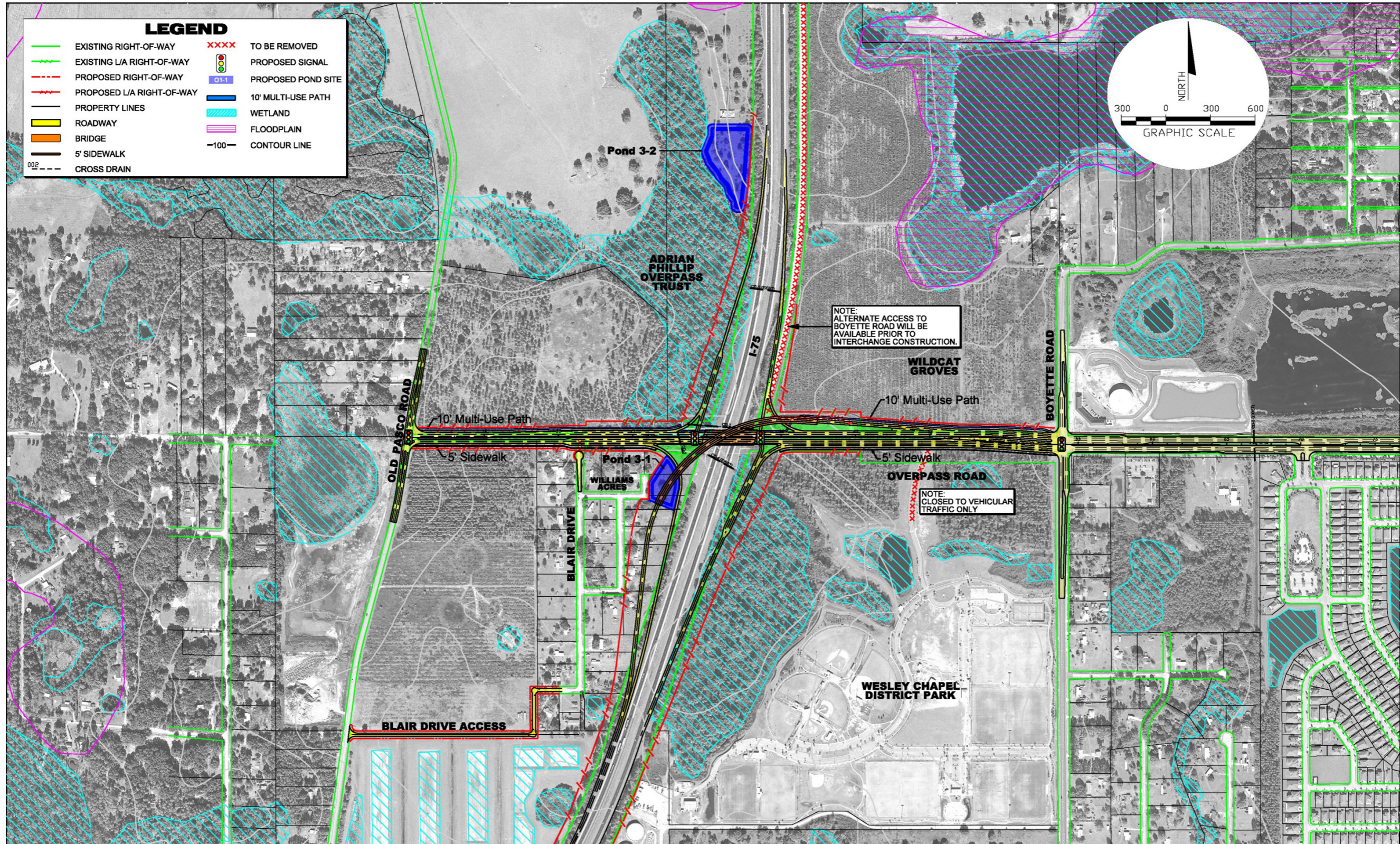


FIGURE 2-1
RECOMMENDED BUILD INTERCHANGE ALTERNATIVE

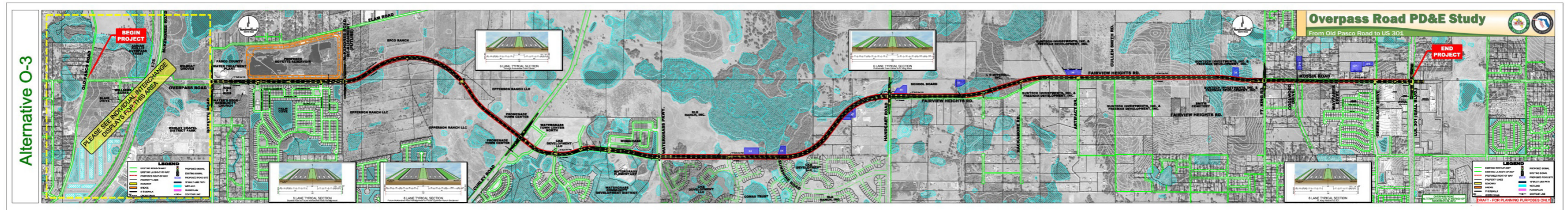
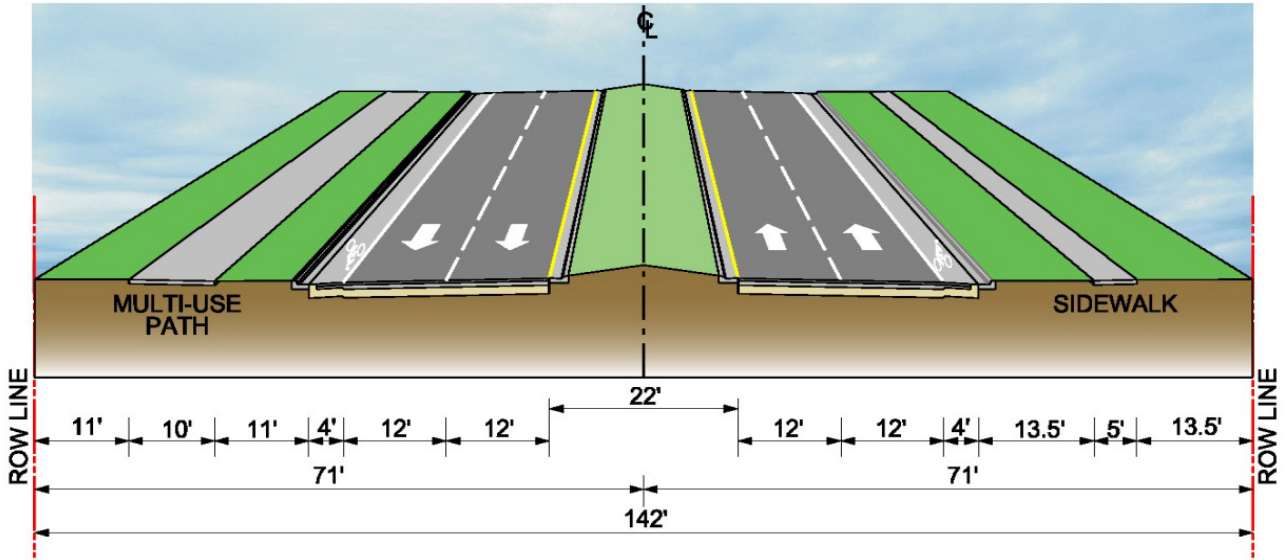
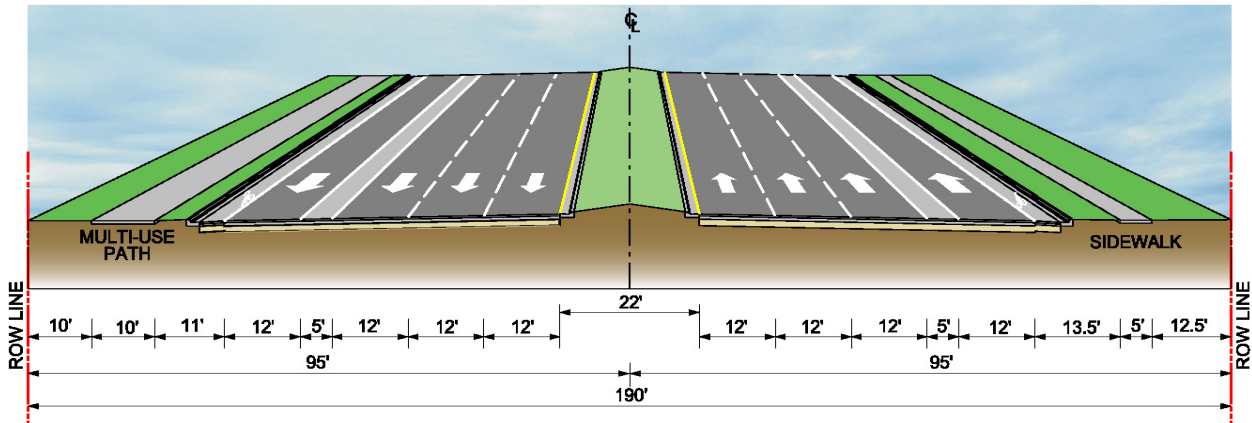


FIGURE 2-2
RECOMMENDED BUILD ROADWAY ALTERNATIVE

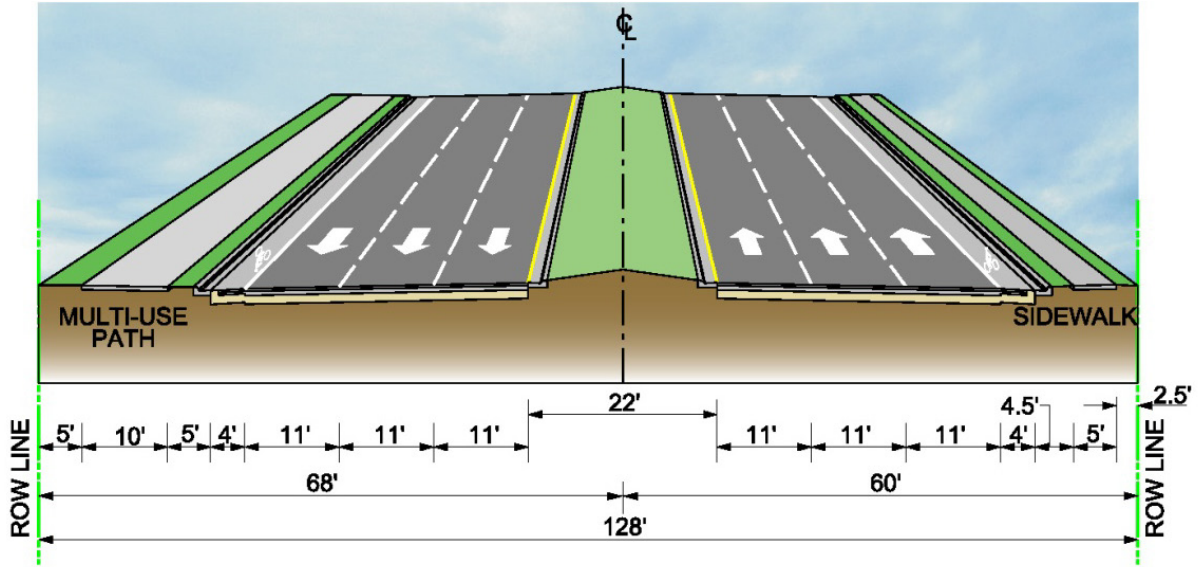
**FIGURE 2-3
FOUR-LANE DIVIDED URBAN TYPICAL SECTION
OLD PASCO ROAD TO I-75**



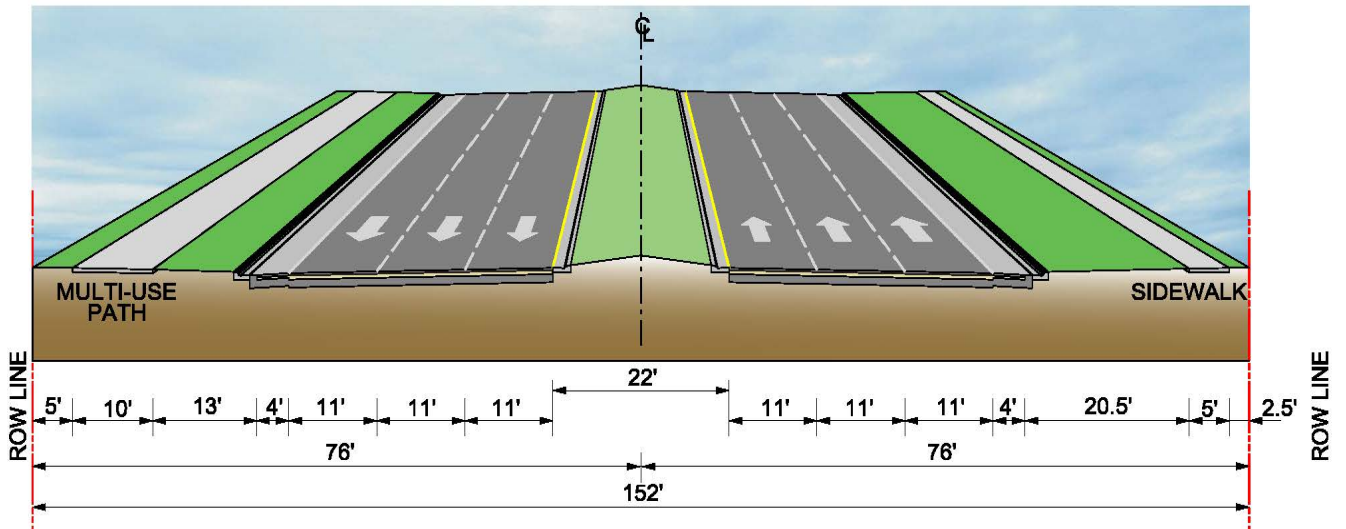
**FIGURE 2-4
SIX-LANE DIVIDED PLUS TWO AUXILIARY LANES URBAN TYPICAL SECTION
I-75 TO BOYETTE ROAD**



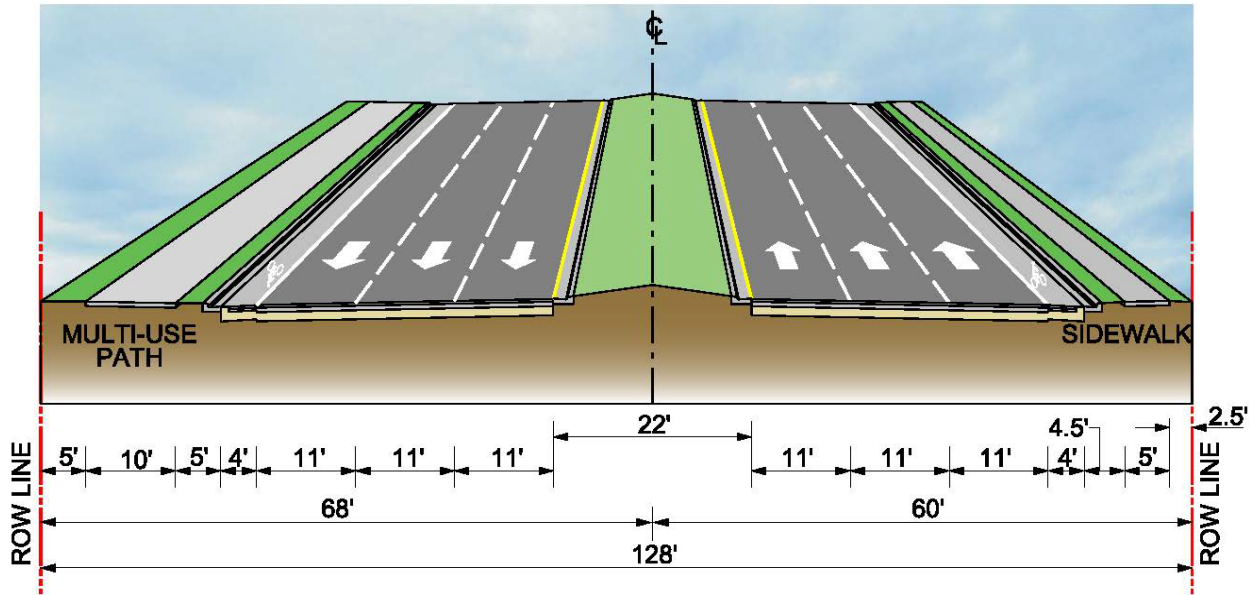
**FIGURE 2-5
SIX-LANE DIVIDED URBAN TYPICAL SECTION
BOYETTE ROAD TO FUTURE MCKENDREE ROAD REALIGNMENT**



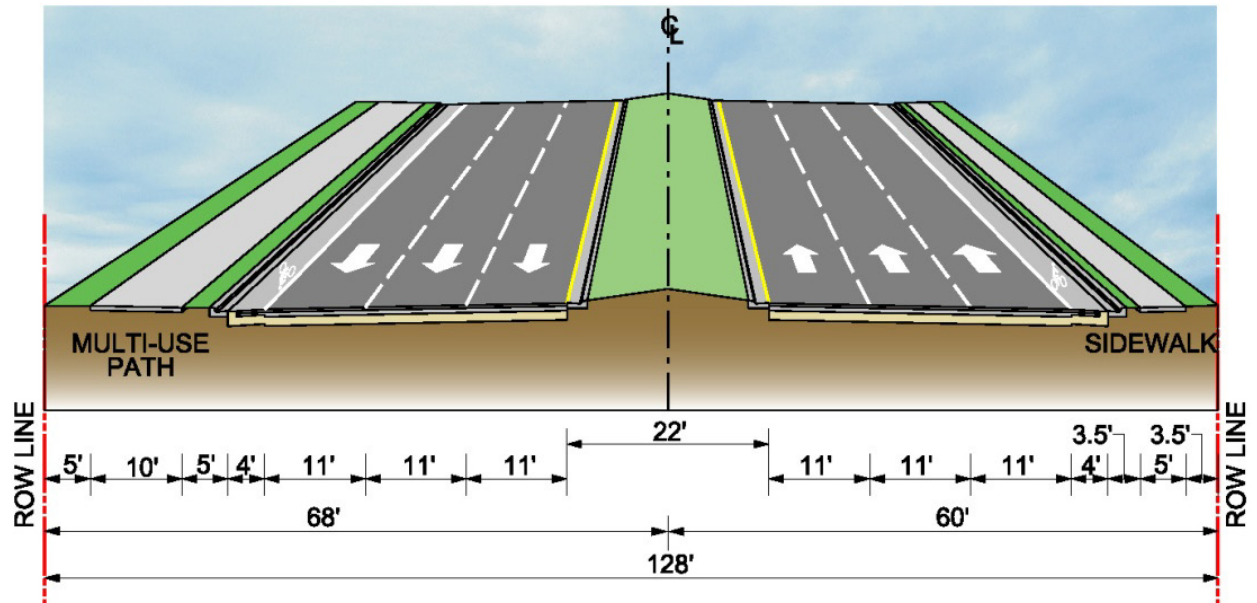
**FIGURE 2-6
SIX-LANE DIVIDED URBAN TYPICAL SECTION
FUTURE MCKENDREE ROAD REALIGNMENT TO FUTURE EPPERSON RANCH BOULEVARD**



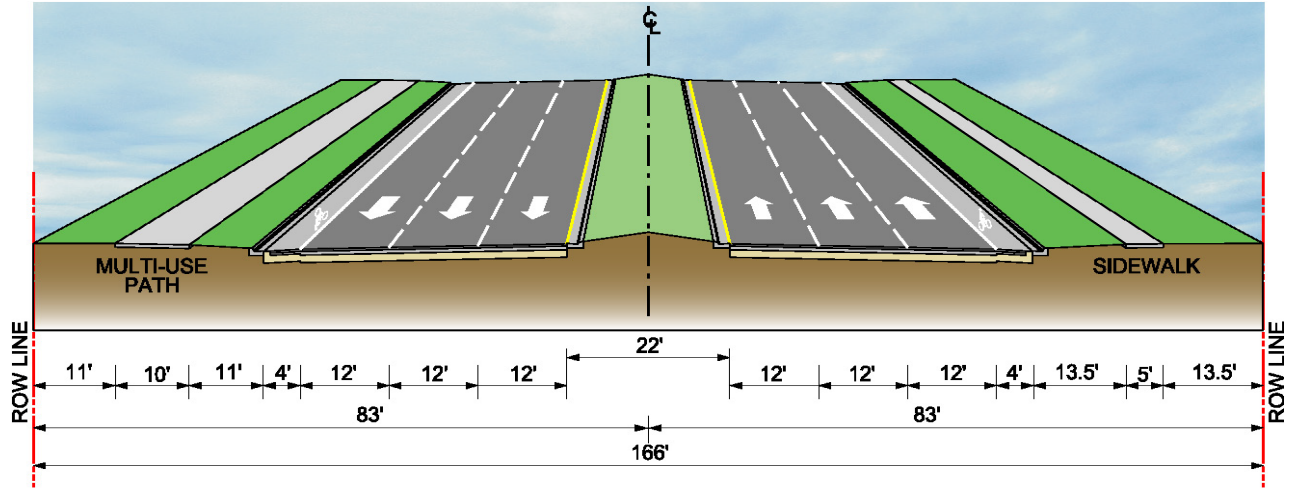
**FIGURE 2-7
SIX-LANE DIVIDED URBAN TYPICAL SECTION
FUTURE EPPERSON RANCH BOULEVARD TO PROMENADE TOWN CENTER**



**FIGURE 2-8
SIX-LANE DIVIDED URBAN TYPICAL SECTION
THROUGH PROMENADE TOWN CENTER**



**FIGURE 2-9
SIX-LANE DIVIDED URBAN TYPICAL SECTION
PROMENADE TOWN CENTER TO FORT KING ROAD**



**FIGURE 2-10
SIX-LANE DIVIDED URBAN TYPICAL SECTION
FORT KING ROAD TO US 301**

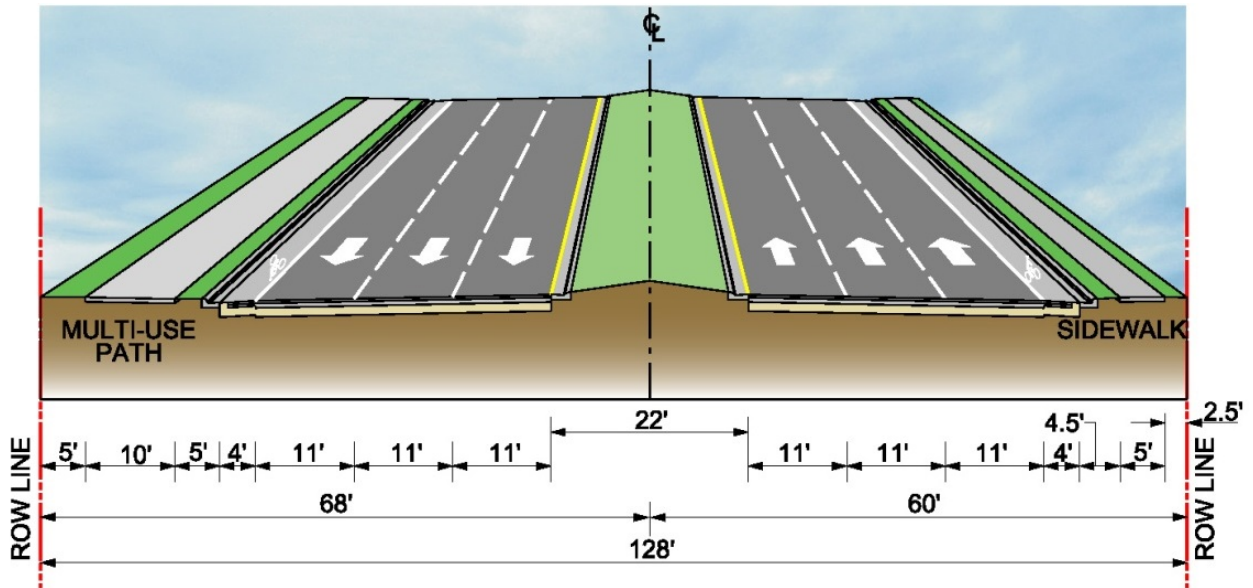
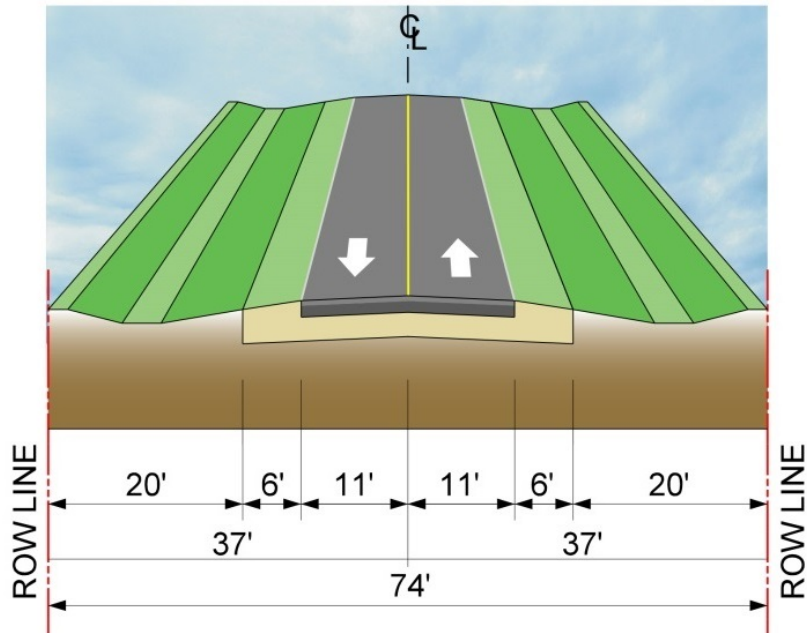


FIGURE 2-11
TWO-LANE UNDIVIDED RURAL TYPICAL SECTION
BLAIR DRIVE ACCESS



Section 3.0

EXISTING HABITATS

3.1 INTRODUCTION

Pursuant to Presidential Executive Order 11990 entitled “Protection of Wetlands,” the United States Department of Transportation (USDOT) has developed a policy, (USDOT Order 5660.1A), Preservation of the Nation’s Wetlands, dated August 24, 1978, which requires all federally authorized highway projects to protect wetlands to the fullest extent possible. In accordance with this policy and the FDOT *PD&E Manual*, Part 2, Chapter 18 – *Wetlands and Other Surface Waters* (dated April 22, 2013), the project study area was evaluated to assess potential wetland impacts that may be associated with the proposed improvements. This section presents a description of wetlands and other surface waters occurring within the project study area. *Section 4.0* presents a description of wetland and surface water impacts that would result from construction of the proposed project and a discussion of the mitigation options to offset these impacts.

3.2 METHODOLOGY

In order to assess the approximate locations and boundaries of existing wetland communities within the project study area, available site-specific data were collected and reviewed prior to field reviews. The project study area is encompassed by a 300-foot buffer extending from both sides of the proposed ROW. The following information was collected and reviewed:

- True color aerials of the project study area, (1 inch = 200 feet) 2012 and 2013
- U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS), *Soil Survey of Pasco County, Florida* (NRCS 1982)
- Florida Association of Professional Soil Scientists, *Hydric Soils of Florida Handbook* (Hurt 2007)
- USGS 7.5 minute San Antonio and Dade City quadrangle maps (USGS 1997)
- U.S. Fish and Wildlife Service (FWS), *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, et. al. 1979)
- FDOT, *Florida Land Use, Cover and Forms Classification System* (FLUCFCS), 3rd edition, (FDOT 1999)
- Southwest Florida Water Management District (SWFWMD) GIS FLUCFCS Database (SWFWMD 2009)

Environmental scientists familiar with Florida natural communities also conducted field reviews of the project study area in September 2012. Field evaluations consisted of pedestrian transects throughout all natural habitat types found within and immediately adjacent to the project study area. The purpose of the reviews was to verify and/or refine preliminary habitat boundaries and classification codes established through in-office literature reviews and aerial photograph interpretation. Approximate wetland boundaries were identified in accordance with the *Florida Wetlands Delineation Manual* (Gilbert et al. 1995), Chapter 62-340, F.A.C. and the guidelines found within USACE *Regional Supplement to the Corps of Engineers Delineations Manual: Atlantic and Gulf Coastal Plain Region* (USACE 2010). During field investigations, each wetland and surface water habitat within the project study area was visually inspected and photographed. Plant species composition was identified for each community. Exotic plant infestations and other disturbances such as soil subsidence, clearing, canals, power lines, etc. were noted. Attention was also given to identifying wildlife and signs of wildlife usage at each wetland and adjacent upland habitat within the project study area.

All wetland and other surface water habitats within the project study area were classified using FLUCFCS (FDOT 1999) and the FWS *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, et al. 1979).

3.3 RESULTS

Based on the results of the in-house and field reviews, 30 soil types, 23 upland community types, nine wetlands types, and three other surface water types are located within the project study area.

3.3.1 SOILS

Based on the *Soil Survey of Pasco County, Florida* (NRCS 1982), 30 soil types are mapped within the project study area. See **Appendix A** for descriptions and maps of the location of each soil type within the project study area. According to the *Hydric Soils of Florida Handbook* (Hurt 2007), nine of the 30 soil types reported within the project study area are defined as hydric.

Of the 21 non-hydric soils, six are reported as having up to 20 percent hydric soil inclusions. Additionally, mapped hydric soils comprise approximately 247 acres (14 percent) and non-hydric soils cover approximately 1,500 acres (86 percent) of the project study area. **Table 3-1** provides the approximate acreage and percentage of each soil type within the project study area.

**TABLE 3-1
EXISTING SOIL TYPES WITHIN THE PROJECT STUDY AREA**

Soil Type ¹	Hydric ² Y/N	Percent Hydric Soil Inclusions ²	Amount	
			Area (ac)	Percent of Total
1 – Wauchula fine sand, 0-5 percent slopes	N	15	4.0	0.2
2 – Pomona fine sand	N	15	536.3	30.7
4 – Felda fine sand	Y	90	18.1	1.0
5 – Myakka fine sand	N	20	13.5	0.8
6 – Tavares sand, 0-5 percent slopes	N	0	18.0	1.0
7 – Sparr fine sand, 0-5 percent slopes	N	0	157.5	9.0
8 – Sellers mucky loamy fine sand	Y	100	66.6	3.8
11 – Adamsville fine sand	N	0	1.8	0.1
15 – Tavares-Urban land complex, 0-5 percent slopes	N	0	1.4	0.1
16 – Zephyr muck	Y	100	0.8	<0.1
18 – Electra variant fine sand, 0-5 percent slopes	N	0	18.8	1.1
21 – Smyrna fine sand	N	20	43.8	2.5
22 – Basinger fine sand	Y	95	1.0	<0.1
23 – Basinger fine sand, depressional	Y	100	31.5	1.8
26 – Narcoossee fine sand	N	0	2.4	0.1
28 – Pits	N	15	9.5	0.5
30 – Okeelanta-Terra Ceia association	Y	95	5.0	0.3
32 – Lake fine sand, 0-5 percent slopes	N	0	25.4	1.4
39 – Chocbee soils, frequently flooded	Y	95	9.1	0.5
43 – Arredondo fine sand, 0-5 percent slopes	N	0	111.0	6.4
45 – Kendrick fine sand, 0-5 percent slopes	N	0	88.3	5.1
46 – Cassia fine sand, 0-5 percent slopes	N	0	53.9	3.1
48 – Lochloosa fine sand, 0-5 percent slopes	N	0	0.4	<0.1
49 – Blichton fine sand, 0-2 percent slopes	N	20	7.5	0.4
59 – Newnan fine sand, 0-5 percent slopes	N	0	117.1	6.7
60 – Palmetto-Zephyr-Sellers complex	Y	100	114.5	6.6
69 – Millhopper fine sand, 0-5 percent slopes	N	0	157.2	9.0
70 – Placid fine sand	Y	100	0.1	<0.1
73 – Zolfo fine sand	N	0	123.4	7.1
99 – Water	N/A	0	8.6	0.5
Total			1,746.6	100.0

¹ NRCS 1982.

² Hurt 2007.

3.3.2 EXISTING LAND USE AND VEGETATIVE COVER

Descriptions and aerial photographs depicting existing land uses and vegetative cover within the project study area are provided in **Appendix B**. A listing of existing land uses and vegetative cover, as well as the acreage and percentage of each type identified within the project study area, is shown in **Table 3-2**. Wetland and other surface water habitats comprise approximately 327 acres (19 percent) of the project study area and include freshwater forested, scrub, emergent, and riverine wetlands, as well as numerous excavated drainage features and reservoirs.

**TABLE 3-2
EXISTING LAND USES AND VEGETATIVE COVER WITHIN THE PROJECT STUDY AREA**

FLUCFCS Classification¹	FLUCFCS Description	FWS Wetland Classification²	Acres within Project Study Area	Percent of Project Study Area	
Developed Areas	110	Residential, Low Density	NA	234.0	13.4
	120	Residential, Medium Density	NA	57.9	3.3
	130	Residential, High Density	NA	29.3	1.7
	140	Commercial and Services	NA	20.2	1.2
	148	Cemeteries	NA	0.1	<0.1
	171	Educational	NA	6.0	0.3
	172	Religious	NA	3.2	0.2
	180	Recreational	NA	5.0	0.3
	814	Roads and Highways	NA	133.2	7.6
	820	Communications	NA	0.2	<0.1
Undeveloped Upland Habitats	830	Utilities	NA	59.5	3.4
	190	Open Land	NA	224.4	12.8
	211	Improved Pasture	NA	189.0	10.8
	221	Citrus Groves	NA	49.1	2.8
	224	Abandoned Groves	NA	108.6	6.2
	260	Other Open Lands (Rural)	NA	87.5	5.0
	320	Shrub and Brushland	NA	1.3	0.1
	411	Pine Flatwoods	NA	29.2	1.7
	414	Pine-Mesic Oak	NA	2.8	0.2
	425	Temperate Hardwood	NA	24.3	1.4
427	Live Oak	NA	7.2	0.4	
434	Hardwood-Conifer Mixed	NA	14.8	0.8	
441	Coniferous Plantations	NA	132.7	7.6	
Sub-Total Uplands			1,419.5	81.3	
Wetland Habitats	611	Bay Swamps	PFO1C	0.4	<0.1
	615	Stream and Lake Swamps	PFO1C	111.3	6.4
	617	Mixed Wetland Hardwoods	PFO1C	3.0	0.2
	621	Cypress	PFO2C	5.5	0.3
	630	Wetland Forested Mixed	PFO1/4C	5.1	0.3
	631	Wetland Scrub	PSS1C	51.7	3.0
	641	Freshwater Marsh	PEM1C	51.4	3.0
	643	Wetland Prairie	PEM1J	40.5	2.3
Other Surface Water Habitats	644	Emergent Aquatic Vegetation	PAB4H	1.5	0.1
	510	Streams and Waterways	PEM1Jx	27.8	1.6
	520	Lakes	L2OWH	4.6	0.3
	534	Reservoirs less than 10 acres	POWHX	24.4	1.4
Sub-Total Wetlands/Other Surface Waters			327.2	18.7	
TOTAL			1,746.6	100.0	

NA – Not Applicable.

¹ FDOT 1999.

² Cowardin et al. 1979.

FWS Descriptions:

- PFO1C: Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded
- PFO2C: Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded
- PFO1/4C: Palustrine, Forested, Broad-Leaved Deciduous/ Needle-Leaved Evergreen, Seasonally Flooded
- PSS1C: Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded
- PEM1C: Palustrine, Emergent, Persistent, Seasonally Flooded
- PEM1J: Palustrine, Emergent, Persistent, Intermittently Flooded
- PEM1Jx: Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated
- PAB4H: Palustrine, Aquatic Bed, Floating Vascular, Permanently Flooded
- L2OWH: Lacustrine, Littoral, Open Water, Permanently Flooded
- POWHx: Palustrine, Open Water, Permanently Flooded, Excavated

3.3.3 INDIVIDUAL WETLANDS AND OTHER SURFACE WATERS

Based on collected field data and in-house reviews, 41 wetlands, 18 surface waters (reservoir ponds), 20 ditches, and one lake occur within the project study area.

Appendix C provides descriptions of the 80 individual wetland and other surface water habitats as well as aerial maps depicting the location of each wetland and surface water within the project study area. Photographs of individual wetlands and other surface waters are provided in **Appendix D**.

As shown in **Table 3-3** below, several of the individual wetlands contain multiple FLUCFCS and FWS classifications, as they are comprised of various habitat types.

**TABLE 3-3
INDIVIDUAL WETLANDS AND OTHER SURFACE WATERS
WITHIN THE PROJECT STUDY AREA**

Wetland/SW ID	FLUCFCS Description	FLUCFCS Code	FWS Wetland Classification*	Acres Within PSA
<i>Wetlands</i>				
WL 1	Freshwater Marsh	641	PEM1C	4.2
WL 2	Stream and Lake Swamps/Freshwater Marsh	615/641	PFO1C/PEM1C	38.1
WL 3	Stream and Lake Swamps	615	PFO1C	19.3
WL 4	Emergent Aquatic Vegetation	644	PAB4H	1.5
WL 5	Wetland Scrub	631	PSS1C	13.4
WL 6	Freshwater Marsh	641	PEM1C	0.3
WL 7	Stream and Lake Swamp	615	PFO1C	5.5
WL 8	Cypress/Freshwater Marsh/Wet Prairie	621/641/643	PFO2C/PEM1C/P EM1J	13.8
WL 9	Freshwater Marsh	641	PEM1C	2.3
WL 10	Wetland Scrub	631	PSS1C	1.0
WL 11	Freshwater Marsh	641	PEM1C	7.8
WL 12	Cypress/Wetland Scrub	621/631	PFO2C/PSS1C	4.7
WL 13	Freshwater Marsh	641	PEM1C	3.7
WL 14	Freshwater Marsh	641	PEM1C	2.3
WL 15	Freshwater Marsh	641	PEM1C	1.0
WL 16	Wetland Scrub	631	PSS1C	4.6
WL 17	Mixed Wetland Hardwoods/Wetland Scrub/ Freshwater Marsh/Wet Prairie	617/631/641/6 43	PFO1C/PSS1C/P EM1C/PEM1J	12.2
WL 18	Freshwater Marsh	641	PEM1C	0.3
WL 19	Freshwater Marsh	641	PEM1C	2.4
WL 20	Cypress/Wetland Scrub/Freshwater Marsh	621/631/641	PFO2C/PSS1C/P EM1C	6.1
WL 21	Cypress/Wet Prairie	621/643	PFO2C/PEM1J	10.0
WL 22	Freshwater Marsh	641	PEM1C	0.5
WL 23	Wet Prairie	643	PEM1J	0.9
WL 24	Wet Prairie	643	PEM1J	1.3
WL 25	Wet Prairie	643	PEM1J	13.9
WL 26	Wetland Forested Mixed/Wetland Scrub	630/631	PFO1/4C/ PSS1C	6.8

**TABLE 3-3 (CONTINUED)
INDIVIDUAL WETLANDS AND OTHER SURFACE WATERS
WITHIN THE PROJECT STUDY AREA**

Wetland/SW ID	FLUCFCS Description	FLUCFCS Code	FWS Wetland Classification*	Acres Within PSA
WL 27	Freshwater Marsh	641	PEM1C	2.5
WL 28	Stream and Lake Swamps/Freshwater Marsh/Wet Prairie	615/641/643	PFO1C/PEM1C/PEM1J	34.9
WL 29	Freshwater Marsh	641	PEM1C	3.1
WL 30	Stream and Lake Swamps	615	PFO1C	16.7
WL 31	Wetland Forested Mixed	630	PFO1/4C	2.0
WL 32	Freshwater Marsh	641	PEM1C	1.3
WL 38	Freshwater Marsh	641	PEM1C	0.4
WL 39	Mixed Wetland Hardwoods/Freshwater Marsh	617/641	PFO1C/PEM1C	3.5
WL 40	Freshwater Marsh	641	PEM1C	1.1
WL 41	Stream and Lake Swamps	615	PFO1C	6.3
WL 42	Freshwater Marsh	641	PEM1C	0.3
WL 43	Freshwater Marsh	641	PEM1C	0.9
WL 44	Bay Swamps/Wet Prairie	611/643	PFO1C/PEM1J	0.9
WL 45	Freshwater Marsh	641	PEM1C	0.4
WL 46	Wetland Scrub	631	PSS1C	18.2
<i>Other Surface Waters</i>				
Lake 1	Lake	520	L2OWH	4.6
SW 1	Reservoir less than 10 acres	534	POWHx	0.1
SW 2				2.4
SW 3				4.8
SW 4				2.5
SW 5				0.3
SW 6				1.4
SW 7				1.3
SW 8				0.5
SW 9				0.8
SW 10				0.4
SW 11				1.5
SW 12				0.1
SW 13				0.2
SW 14				0.1
SW 15				0.6
SW 16				0.1
SW 17				6.9
SW 18				0.4

**TABLE 3-3 (CONTINUED)
INDIVIDUAL WETLANDS AND OTHER SURFACE WATERS
WITHIN THE PROJECT STUDY AREA**

Wetland/SW ID	FLUCFCS Description	FLUCFCS Code	FWS Wetland Classification*	Acres Within PSA			
DITCH 1	Streams and Waterways	510	PEM1Jx	0.4			
DITCH 2				1.1			
DITCH 3				0.4			
DITCH 4				3.5			
DITCH 5				8.9			
DITCH 6				1.6			
DITCH 7				0.4			
DITCH 8				1.0			
DITCH 9				1.2			
DITCH 10				0.9			
DITCH 11				0.2			
DITCH 12				0.3			
DITCH 14				0.2			
DITCH 15				2.0			
DITCH 16				0.6			
DITCH 20				0.6			
DITCH 21				3.3			
DITCH 22				0.9			
DITCH 23				0.2			
DITCH 24				0.1			
Subtotal for Wetlands				270.4			
Subtotal for Other Surface Waters				56.8			
Total				327.2			

*** FWS Wetland Descriptions:**

- PFO1C: Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded
- PFO2C: Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded
- PFO1/4C: Palustrine, Forested, Broad-Leaved Deciduous/ Needle-Leaved Evergreen, Seasonally Flooded
- PSS1C: Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded
- PEM1C: Palustrine, Emergent, Persistent, Seasonally Flooded
- PEM1J: Palustrine, Emergent, Persistent, Intermittently Flooded
- PAB4H: Palustrine, Aquatic Bed, Floating Vascular, Permanently Flooded
- L2OWH: Lacustrine, Littoral, Open Water, Permanently Flooded
- POWHx: Palustrine, Open Water, Permanently Flooded, Excavated
- PEM1Jx: Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated

Section 4.0

WETLAND IMPACT ANALYSIS

4.1 WETLAND AND OTHER SURFACE WATER IMPACTS

Construction of the project will result in unavoidable impacts to wetlands and other surface waters. Impacts have been avoided and minimized to the greatest extent possible. The impacts are unavoidable due to the location of the wetlands and other surface waters within the project area and their proximity to the proposed stormwater ponds and floodplain compensation sites.

It is assumed that all wetlands/surface waters located within the project ROW will potentially be impacted by the proposed Overpass Road improvements; therefore, all were included in the impact assessment. The impact area of each wetland/surface water equals its total acreage within the project ROW. All wet ditches as listed in *Section 4.0* and described in **Appendix C** were included in the impact analysis due to the presence of aquatic vegetation and the potential for this surface water to serve as suitable foraging habitat for the wood stork (*Mycteria americana*).

Based on this evaluation, permanent impacts to the wetlands and other surface waters located within the O-3 Flyover Alternative (Recommended Build Alternative) proposed ROW are anticipated as a result of construction of the project. For the purpose of this section, the Recommended Build Alternative has been evaluated and presented based on the following segmented approach:

- Build Roadway Alternative O-3 consists of the roadway component from Boyette Road to US 301
- Flyover Ramp Build Interchange Alternative consists of the roadway component from Old Pasco Road to Boyette Road, including the proposed interchange at I-75

Table 4-1 provides a summary of the proposed wetland and other surface water impacts for Build Roadway Alternative O-3. **Table 4-2** provides a summary of the proposed wetland and other surface water impacts for the Flyover Ramp Build Interchange Alternative. The Recommended Build Alternative results in a total of 40.8 acres of wetland and other surface water impacts (26.9 acres for the Build Roadway Alternative O-3 segment and 13.9 acres for the Flyover Ramp Build Interchange Alternative segment).

4.2 UNIFORM MITIGATION ASSESSMENT METHOD

The *Uniform Mitigation Assessment Methodology* (UMAM) per Chapter 62-345, F.A.C., is a state and federally-approved method used to assess wetlands in the State of Florida. UMAM was developed by the Florida Department of Environmental Protection (FDEP) and the water management districts to determine the amount of mitigation required to offset adverse impacts to

wetlands. The methodology was designed to assess functions provided by wetlands, the amount those functions are reduced by a proposed impact, and the amount of mitigation necessary to offset the proposed functional losses. This method is also used to determine the degree of improvement in ecological value that will be created by proposed mitigation activities.

**TABLE 4-1
PROPOSED WETLAND AND SURFACE WATER IMPACTS
BUILD ROADWAY ALTERNATIVE O-3**

Wetland/SW ID	FLUCFCS Description	FLUCFCS Code	FWS Wetland Classification*	Acres of Impact
<i>Wetlands</i>				
WL 5	Wetland Scrub	631	PSS1C	4.3
WL 8	Freshwater Marsh/Wet Prairie	641/643	PEM1C/PEM1J	0.7
WL 9	Freshwater Marsh	641	PEM1C	0.8
WL 11	Freshwater Marsh	641	PEM1C	0.1
WL 12	Wetland Scrub	631	PSS1C	0.1
WL 13	Freshwater Marsh	641	PEM1C	<0.1
WL 15	Freshwater Marsh	641	PEM1C	<0.1
WL 17	Mixed Wetland Hardwoods/ Freshwater Marsh/Wet Prairie	617/641/643	PFO1C/PEM1C/PEM1J	3.6
WL 20	Wetland Scrub/Freshwater Marsh	631/641	PSS1C/PEM1C	1.9
WL 23	Wet Prairie	643	PEM1J	0.2
WL 28	Stream and Lake Swamps	615	PFO1C	4.0
WL 30	Stream and Lake Swamps	615	PFO1C	4.3
WL 46	Wetland Scrub	631	PSS1C	3.0
<i>Other Surface Waters</i>				
SW 12	Reservoir less than 10 acres	534	POWHx	<0.1
DITCH 4	Streams and Waterways	510	PEM1Jx	0.3
DITCH 5				1.3
DITCH 6				0.3
DITCH 8				0.5
DITCH 9				0.3
DITCH 12				0.1
DITCH 15				0.8
DITCH 16				0.3
Subtotal for Wetlands				23.0
Subtotal for Other Surface Waters				3.9
Total				26.9

The UMAM assessment includes a Qualitative Characterization (Part 1) as well as a Quantitative Assessment and Scoring (Part 2). The Qualitative Characterization is a basic descriptor of the site being evaluated. The variables described include the following:

- Significant nearby features
- Water classifications
- Assessment area size
- Hydrology and relationship to contiguous offsite wetlands

- Uniqueness of the assessment area
- Functions of the assessment area
- Wildlife utilization

**TABLE 4-2
PROPOSED WETLAND AND SURFACE WATER IMPACTS
FLYOVER RAMP BUILD INTERCHANGE ALTERNATIVE**

Wetland/SW ID	FLUCFCS Description	FLUCFCS Code	FWS Wetland Classification*	Acres of Impact
<i>Wetlands</i>				
WL 2	Stream and Lake Swamps/Freshwater Marsh	615/641	PFO1C/PEM1C	4.7
WL 3	Stream and Lake Swamps	615	PFO1C	5.8
<i>Other Surface Waters</i>				
DITCH 1	Streams and Waterways	510	PEM1Jx	0.4
DITCH 2				0.5
DITCH 3				0.1
DITCH 20				0.6
DITCH 21				0.9
DITCH 22				0.9
Subtotal for Wetlands				10.5
Subtotal for Other Surface Waters				3.4
Total				13.9

The Quantitative Assessment provides a score of the assessment area in both the current condition and “with impact” condition. The assessment scoring evaluates the following parameters:

- Location and landscape support
- Water environment
- Vegetative community

4.3 UMAM RESULTS

For this PD&E Study, representative UMAM scores were developed for each wetland affected by the proposed project (**Table 4-3**). Table 4-3 also includes the impacts to the ditches to incorporate the loss of additional wood stork suitable foraging habitat. The difference between the existing condition (current) scores and the proposed condition (with) scores for each wetland was then multiplied by the acreage of proposed impact to establish the estimated lost value of functions to fish and wildlife resulting from construction of the proposed project (**Tables 4-4 and 4-5**). The estimated total numeric value of functions to fish and wildlife lost as a result of construction of the Recommended Build Alternative is 24.41 (16.28 for the Build Roadway Alternative O-3 segment and 8.13 for the Flyover Ramp Build Interchange Alternative segment). The completed UMAM data sheets are provided in **Appendix E**. Wetland/surface water impact figures are provided in **Appendix F**.

**TABLE 4-3
REPRESENTATIVE UMAM SCORES FOR WETLAND AND DITCHES**

Wetland/ Surface Water ID	FLUCFCS Code	FWS Classification	Location and Landscape Support		Water Environment		Community Structure		Score (sum/30)		Delta
			Current	With	Current	With	Current	With	Current	With	
WL 2	615/641	PFO1C/ PEM1C	7	0	7	0	7	0	0.70	0	0.70
WL 3	615	PFO1C	7	0	7	0	7	0	0.70	0	0.70
WL 5	631	PSS1C	6	0	7	0	6	0	0.63	0	0.63
WL 8	641/643	PEM1C/ PEM1J	8	0	7	0	6	0	0.70	0	0.70
WL 9	641	PEM1C	6	0	6	0	6	0	0.60	0	0.60
WL 11	641	PEM1C	6	0	6	0	4	0	0.53	0	0.53
WL 12	631	PSS1C	6	0	6	0	5	0	0.57	0	0.57
WL 15	641	PEM1C	6	0	6	0	4	0	0.53	0	0.53
WL 17	617/641/ 643	PFO1C/ PEM1C/ PEM1J	8	0	7	0	7	0	0.73	0	0.73
WL 20	631/641	PSS1C/ PEM1C	8	0	7	0	7	0	0.73	0	0.73
WL 23	643	PEM1J	6	0	5	0	8	0	0.63	0	0.63
WL 28	615	PFO1C	7	0	7	0	8	0	0.73	0	0.73
WL 30	615	PFO1C	7	0	7	0	7	0	0.70	0	0.70
WL 46	631	PSS1C	5	0	6	0	4	0	0.50	0	0.50
Ditches	510	PEM1Jx	2	0	3	0	2	0	0.23	0	0.23

Note: UMAM scores must be reviewed and approved by SWFWMD and USACE during permitting.

**TABLE 4-4
ESTIMATED UMAM FUNCTIONAL LOSS FROM WETLAND AND SURFACE WATER IMPACTS
BUILD ROADWAY ALTERNATIVE O-3**

Wetland/ Surface Water ID	FLUCFCS Code	FWS Classification	Delta	Impact Acres	Functional Loss
WL 5	631	PSS1C	0.63	4.3	2.71
WL 8	641/643	PEM1C/PEM1J	0.70	0.7	0.49
WL 9	641	PEM1C	0.60	0.8	0.48
WL 11	641	PEM1C	0.53	0.1	0.05
WL 12	631	PSS1C	0.57	0.1	0.06
WL 15	641	PEM1C	0.53	<0.1	0.01
WL 17	617/641/643	PFO1C/ PEM1C/PEM1J	0.73	3.6	2.63
WL 20	631/641	PSS1C/PEM1C	0.73	1.9	1.39
WL 23	643	PEM1J	0.63	0.2	0.13
WL 28	615	PFO1C	0.73	4.0	2.92
WL 30	615	PFO1C	0.70	4.3	3.01
WL 46	631	PSS1C	0.50	3.0	1.50
Ditches 4,5,6,8,9,12,15,16	510	PEM1Jx	0.23	3.9	0.90
Total				26.9	16.28

**TABLE 4-5
ESTIMATED UMAM FUNCTIONAL LOSS FROM WETLAND AND SURFACE WATER IMPACTS
FLYOVER RAMP BUILD INTERCHANGE ALTERNATIVE**

Wetland/ Surface Water ID	FLUCFCS Code	FWS Classification	Delta	Impact Acres	Functional Loss
WL 2	615/641	PFO1C/PEM1C	0.70	4.7	3.29
WL 3	615	PFO1C	0.70	5.8	4.06
Ditches 1,2,3,20,21,22	510	PEM1Jx	0.23	3.4	0.78
Total				13.9	8.13

4.4 MITIGATION ALTERNATIVES

With respect to wetlands, actions taken to reduce or lessen impacts prior to the impacts occurring are referred to as “minimization and avoidance measures”. All applicants for state and federal environmental permits authorizing wetland impacts must show the wetland minimization and avoidance measure for their proposed project. However, when wetland impacts are unavoidable and no practicable alternative exists, then the subsequent loss of wetlands and the ecological functions they perform must be replaced. This replacement is referred to by the regulatory agencies as “compensatory mitigation” [33 CFR Part 332], which is further defined as:

...the restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

In 2008, the USACE and USEPA issued regulations governing compensatory mitigation for activities authorized by the Department of the Army (Federal Register, 2008). These regulations, as promulgated in 33 CFR Part 332, establish a hierarchy for determining the type and location of compensatory mitigation. To briefly summarize, the rule establishes a preference for the use of mitigation bank credits if a mitigation bank has the appropriate number and resource type of credits available. If the permitted impacts are not in the service area of an approved mitigation bank, or if the appropriate number and resource type of credits are otherwise unavailable, then the rule establishes a preference for in-lieu fee program credits. If an approved mitigation bank or in-lieu fee program cannot be used to provide the required compensatory mitigation, the rule establishes a preference for permittee-responsible mitigation conducted under a watershed approach.

The Recommended Build Alternative would result in unavoidable wetland impacts to freshwater wetland habitats. Wetland impacts resulting from construction of the project are required to be mitigated to satisfy all mitigation requirements of United States Code (U.S.C.) 1344 and Part IV, Chapter 373 Florida Statutes (F.S.). The mitigation would need to be sufficient to offset the UMAM functional loss resulting from the wetland impacts.

Presently, the entire project is located within the service area of the Hillsborough River Mitigation Bank (HRMB) and the North Tampa Mitigation Bank (NTMB). The HRMB, which

is located in the central portion of Pasco County and within the Hillsborough River Drainage Basin (HRDB), is approximately 793 acres in size and was permitted by both the SWFWMD and the USACE. The NTMB is a 161.44-acre site located along the Hillsborough River west of I-75 in Hillsborough County within the HRDB. The NTMB was permitted by both the SWFWMD and the USACE to offset freshwater forested impacts within the HRDB. The status of available mitigation banks and credits would be reassessed as this project moves forward into design and permitting.

If the use of a mitigation bank or in-lieu fee program is not currently available, a conceptual mitigation plan may be created to offset the unavoidable impacts to wetlands that would result from construction of the Recommended Build Alternative. A conceptual mitigation plan may include restoring, enhancing, or creating wetland/surface water habitats of similar type and quality (on-site or off-site) within the same drainage basin as the project study area. Wetland restoration activities restore a disturbed wetland's hydrology and habitat value to that of its historic (pre-impacted) condition. Enhancement activities must result in improvement to an existing wetland's hydrology and habitat value. Wetland enhancement typically involves eradication of nuisance/exotic vegetative species and/or the lowering of existing grades to improve the wetland's hydrologic regime and vegetative community structure. Wetland creation consists of the excavation of upland areas to appropriate elevations to support wetland hydrology. Planting of hydrophytic vegetation is typically included as part of the wetland creation process, in order to provide a seed source to the site and create vegetative diversity.

The exact type of mitigation used to offset wetland impacts from the proposed Overpass Road improvements will be coordinated with USACE and SWFWMD during the state and federal permitting phase of this project.

Section 5.0

PERMITTING AND REVIEW AGENCIES

Both the USACE and SWFWMD regulate impacts to wetlands within the project study area. Other agencies, including the FWS, National Marine Fisheries Service (NMFS), USEPA, and the Florida Fish and Wildlife Conservation Commission (FWC), review and comment on wetland permit applications. The FWC also issues permits for gopher tortoise relocation activities and burrowing owl nest taking. In addition, the FDEP regulates stormwater discharges from construction sites. The complexity of the permitting process will depend greatly on the degree of the impact to jurisdictional areas. Depending on the types of permits needed from the regulatory agencies, the permitting process typically ranges from 90 to 180 days. It is anticipated that the following permits will be required for this project:

<u>Permit</u>	<u>Issuing Agency</u>
Section 404 Dredge and Fill Permit	USACE
Environmental Resource Permit (ERP)	SWFWMD
National Pollutant Discharge Elimination System (NPDES)	FDEP
Burrowing Owl Nest Taking Permit (as necessary)	FWC
Gopher Tortoise Conservation Permit (as necessary)	FWC
Eagle Nest Disturbance Permit (as necessary)	FWS and FWC

Federal Permits

Section 404 Dredge and Fill Permit

It is anticipated that an individual permit will be required from the USACE. An individual permit will require compliance with the 404(b)(1) guidelines, including verification that all impacts have first been avoided to the greatest extent possible, that unavoidable impacts have been minimized to the greatest extent possible, and lastly that unavoidable impacts have been mitigated in the form of wetlands creation, restoration, and/or enhancement.

State Permits

Environmental Resource Permit (ERP)

SWFWMD requires an ERP when construction of any project results in the creation of a new or modification of an existing water management system or results in impacts to waters of the state. As with USACE permits, the complexity associated with the ERP permitting process will depend on the size of the project and/or the extent of wetland impacts. The SWFWMD will likely require an individual ERP for this project.

National Pollutant Discharge Elimination System (NPDES)

40 CFR Part 122 prohibits point source discharges of stormwater to waters of the U.S. without a NPDES permit. Under the State of Florida's delegated authority to administer the NPDES program, construction sites that will result in greater than 1 acre of disturbance must file for and obtain either coverage under an appropriate generic permit contained in Chapter 62-621, F.A.C, or an individual permit issued pursuant to Chapter 62-620, F.A.C. A major component of the NPDES permit is the development of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP identifies potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges from the site and discusses good engineering practices (i.e., best management practices) that will be used to reduce the pollutants.

Gopher Tortoise Relocation Permit

Based on field reviews, suitable habitat exists within the project study area for the state-listed **gopher tortoise** (*Gopherus polyphemus*). According to the FWC permitting guidelines, there are four available options to address the presence of gopher tortoises on lands slated for development:

1. Avoid development
2. Avoid destruction of tortoise burrows
3. Relocate tortoises on-site (permit required)
4. Relocate them off-site (permit required)

In accordance with the requirements of Rules 68A-25.002 and 68A-27.004 (F.A.C.), a permit for a gopher tortoise capture/relocation/release activity must be secured from FWC before initiating any relocation work. A Conservation Permit is available for development projects that require the relocation of gopher tortoises when more than ten burrows occur on the development site. The Ten or Fewer Burrows Permit is for projects that contain ten or fewer gopher tortoise burrows on the development site. Both of these permits allow for relocation either to an on-site preserve or off-site to a FWC-approved Recipient Site.

Florida Burrowing Owl Permit

Florida burrowing owls (*Athene cunicularia floridana*) are listed by FWC as a species of special concern and have been documented within one mile of the project study area. This species is protected by the Federal Migratory Bird Treaty Act and FWC's policy is to issue permits for nest destruction only as a last resort. The County must make every effort to realign the project to avoid the nest(s), and permits are only issued for inactive nests. Coordination is required with the FWC before disturbing burrows, and the County must commit to survey areas of suitable habitat prior to construction. If nest(s) are active, Federal permits may also be required.

Eagle Nest Disturbance Permit

Though the **bald eagle** (*Haliaeetus leucocephalus*) has been removed from Federal and state listings, it is still protected by the Bald and Golden Eagle Protection Act in accordance with 16 United States Code 668 and the FWS Migratory Treaty Act in accordance with 16 United States Codes 703-712. Because bald eagle nests within Florida are closely monitored by the FWC, if a nest is observed within 660 feet of the project area, an Eagle Disturbance Permit may be required. If a bald eagle nest is found within 660 feet of the project area during the design and permitting phase, coordination will occur with FWC to secure any and all approvals regarding this species.

Section 6.0

LISTED SPECIES

6.1 *OBJECTIVE*

The potential effects of the proposed project on state and federally listed species were assessed by determining the natural habitats that would be affected by the project and determining the potential use of these habitats by listed species.

6.2 *METHODOLOGY*

Prior to performing field reviews, a letter was sent to the Florida Natural Areas Inventory (FNAI), FWS and FWC requesting information on documented occurrences of listed species within one mile of the project study area and wood stork rookeries located within 15 miles of the project study area. A list of threatened and endangered species with the potential for occurrence within the project study area was then compiled based on information received from the responding agencies and in-house research. All correspondence with federal and state agencies is included as **Appendix G**.

On August 19, 2015, the Draft WEBAR was sent to the FWC and FWS for their concurrence with the effect determinations for each species. FWC responded on September 2, 2015 and FWS responded on September 14, 2015 (see Appendix G – Agency Coordination) and both the FWC and FWS concurred with the findings and effect determinations in the Draft WEBAR.

In addition to the literature and databases listed in *Section 3.2*, the following data sources were reviewed to assess the potential occurrence of federally- and state- listed plant and animal species within the project study area:

- FWC, Eagle Nest Locator website:
(<http://myfwc.com/eagle/eaglenests/nestlocator.aspx>)
- FWC, *Florida's Endangered Species, Threatened Species, and Species of Special Concern* (January 2013)
- FWC, *Florida Black Bear Management Plan*, Florida Fish and Wildlife Conservation Commission, Tallahassee, 215 p. (June 27, 2012)
- FWS, *Endangered and Threatened Wildlife and Plants*
- FWS, *Endangered and Threatened Wildlife and Plants*, 50 CFR 17.11 and 17.12
- FWS, 2014 GIS wood stork data for active colonies

- FWS, online endangered ESA library PDF species information sheets; Website (<http://www.fws.gov/endangered/esa-library/pdf/>)
- FNAI maps and database, (updated May 2015), Website: (<http://www.fnai.org/bioticssearch.cfm>)
- *FNAI Element Occurrence Data Report*, (February 22, 2012)
- Florida Department of Agriculture & Consumer Services, Division of Plant Industry (FDACS), *Notes on Florida's Endangered and Threatened Plants: Botany Contribution No. 38, 5th edition*, (2010), Website: (<http://www.freshfromflorida.com/pi/enpp/botany/images/Notes2003.pdf>)
- *Atlas of Florida Vascular Plants*, Institute for Systemic Botany, Website: (<http://www.florida.plantatlas.usf.edu/>)

Environmental scientists familiar with Florida natural communities also conducted a field review of the project study area. The field review consisted of pedestrian transects throughout all habitat types found within the project study area. The purpose of this review was to verify and/or refine preliminary habitat boundaries and classification codes established through in-office literature reviews and photo interpretation. During the field review, each upland and surface water community within the project study area was visually inspected and plant species composition, exotic plant infestations, shifts in historical plant communities, and any other disturbances such as soil subsidence, clearing, canals, power lines, etc. were noted. Wildlife and signs of wildlife usage in each upland and surface water community were also noted.

6.3 RESULTS

The project study area was evaluated for potential occurrences of federally- and state-listed plant and animal species in accordance with 50 CFR 17 and Chapters 5B-40 and 68A-27, F.A.C.

For a species to be considered potentially present, the project study area must be within the species' range and must contain suitable habitat for the species. Based on evaluation of collected data, field reviews, and the FNAI data report and database search, the federally- and state-listed species discussed below were identified as having the potential to occur within or adjacent to the project study area. An effect determination was then established for each federally- and state-listed species described below based on an analysis of the potential impacts of the proposed project to each species.

Based on site-specific literature reviews and habitat evaluations, 44 federal and state listed plant and animal species have been documented within Pasco County. Other species of concern that are not state or federally listed but are protected by state and/or federal law include the Florida black bear and the bald eagle. Both the black bear and bald eagle have the potential to occur within the project study area. Of the 46 listed and protected species known to occur or that have historically been documented in Pasco County, 20 animal species and nine plant species have the

potential to occur within the project study area. Evaluations were based on the availability of appropriate habitat, documentation of the species within one mile of the project study area, and direct sightings of each species during field reviews. A complete listing of all listed and protected species that have the potential to occur in Pasco County is provided in **Appendix H**. All plant and animal species with the potential to occur within the project study area are described in detail below.

Fauna

Federally-Listed Species

Eastern indigo snake (*Drymarchon couperi*): The eastern indigo snake is listed as threatened by the FWS. The eastern indigo snake is found in a variety of habitats including swamps, wet prairies, and pinelands. It may use gopher tortoise burrows for shelter to escape hot or cold ambient temperatures within its range. Suitable habitat for this species is available throughout the project study area. While suitable habitat exists within the project study area, no eastern indigo snakes were observed during the field survey. To minimize the potential for adverse impacts to the eastern indigo snake, the latest FWS's standard eastern indigo snake precautions (updated August 2013) (**Appendix I**) will be implemented during construction of the project. With this commitment, it has been determined that the project "may affect, but is not likely to adversely affect" the eastern indigo snake.

Gopher tortoise (*Gopherus polyphemus*): The gopher tortoise is listed as threatened by the FWC and is considered a candidate species by FWS due to habitat loss, degradation, and declining number of individuals. Suitable habitat for the gopher tortoise is present within the project study area in open pasture areas, and several gopher tortoise burrows were observed outside the I-75 interchange during the field review, but none were observed within the project study area during the inspection. In order to protect this species, current FWC regulations require a permit for any ground disturbance activity occurring within 25-feet of a potentially occupied gopher tortoise burrow. Based on the FWC regulations, any gopher tortoise burrows located within 25 feet of the project construction area must be relocated to a permitted FWC recipient site (on- or off-site). During the design and permitting phases of this project, the project area will be surveyed for gopher tortoise burrows. If gopher tortoises or potentially occupied burrows are observed, coordination will occur with the FWC to secure all permits needed and perform relocation activities. With this commitment, it has been determined that this project "may affect, but is not likely to adversely affect" the gopher tortoise.

Florida scrub jay (*Aphelocoma coerulescens*): The Florida scrub jay is listed as threatened by the FWS. According to FWS online databases, the entire project study area falls within the FWS Consultation Area for this species. Although suitable habitat (citrus groves, open land and improved pasture) is present within the project study area, no classic sandhill xeric habitat areas (turkey or oak scrub) were noted and no Florida scrub jays were observed during the field review. Based on a review of FNAI data, the Florida scrub jay has been documented within Pasco County, but not within one mile of the project study area. Based on this information, it is anticipated that the project will have "no effect" on the Florida scrub-jay.

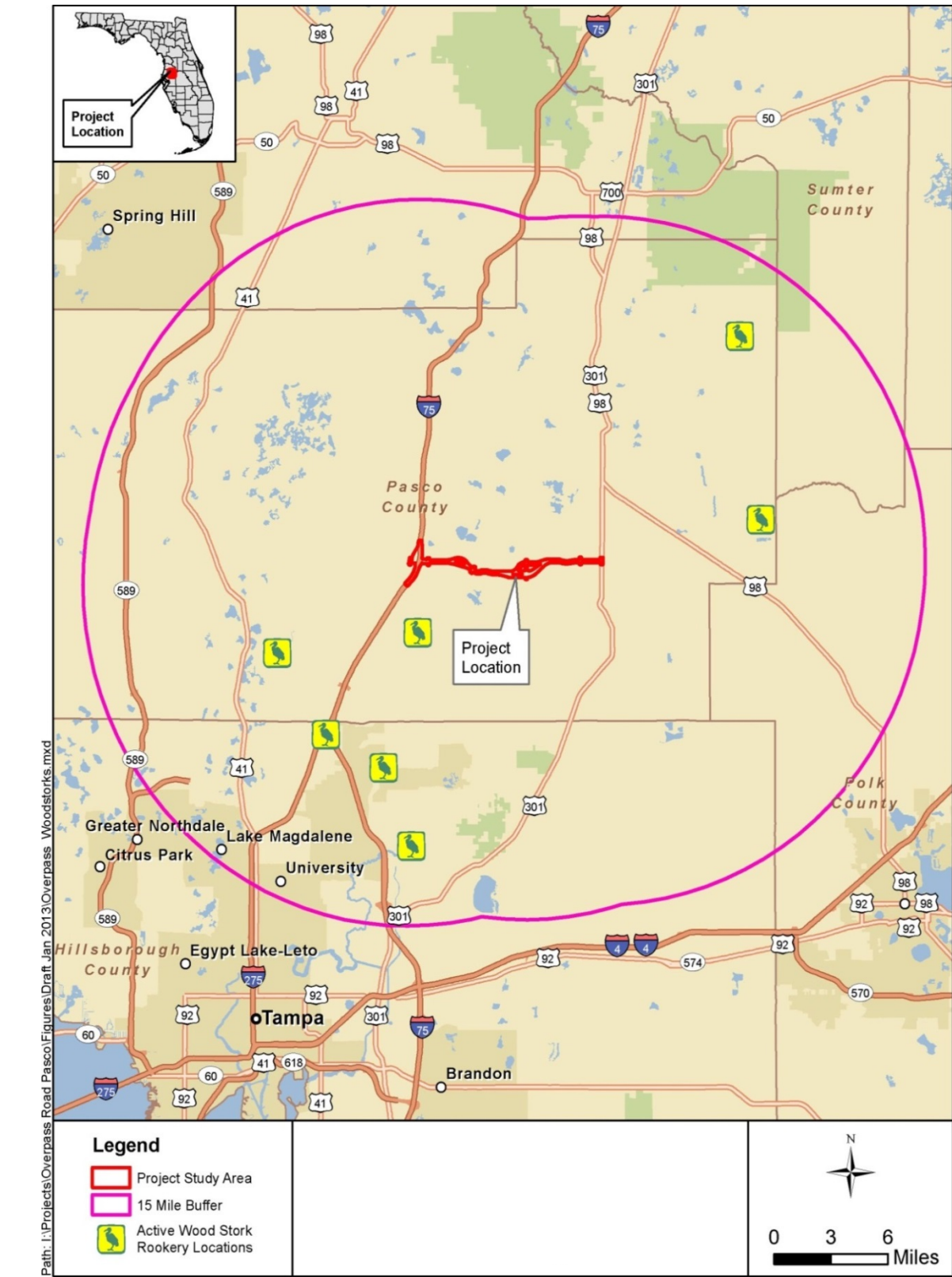
Wood stork (*Mycteria americana*): The wood stork is listed as threatened by the FWS. This wading bird species is opportunistic and uses various habitat types, including forested wetlands, freshwater marshes, swamps, lagoons, ponds, tidal creeks, flooded pastures, and ditches for feeding. However, a specialized feeding technique commonly referred to as groping limits the wood stork to feeding in shallow water. This species can be expected to use ditches, wet prairies and marshes within the project study area for foraging. The FWS has defined the core foraging area (CFA) for the wood stork in Pasco County as a 15-mile radius from breeding colonies. Based on information provided by the FWS, FWC, and FNAI, the project study area is located within the 15-mile radius core foraging area of seven active wood stork nesting colonies (**Figure 6-1**). Based on a review of FNAI data, there are several documented occurrences of this species within one mile of the project study area; the closest located approximately 2.4 miles south of the project area. During field reviews, one wood stork was observed foraging within the project study area south of Fairview Heights Road near Hackamore Road.

Because suitable habitat exists for the wood stork in the project study area, informal Section 7 consultation will be re-initiated during project design and permitting. At that time, the current information will be evaluated and suitable foraging habitat compensation will be provided within the service area of an FWS-approved wetland mitigation bank or wood stork conservation bank (preferably located within the CFA of wood stork foraging habitat lost). For these reasons, it is anticipated that the project “may affect, but is not likely to adversely affect” the wood stork.

State-Listed Species

Gopher frog (*Rana capito*), Florida pine snake (*Pituophis melanoleucus mugitis*), and Florida mouse (*Peromyscus floridanus*): Burrows excavated by the gopher tortoise may also harbor the gopher frog, the Florida pine snake, and the Florida mouse, all of which are listed by the FWC as species of special concern. Suitable habitat for these species is present within the project study area in open pasture areas, and several gopher tortoise burrows were observed outside the I-75 interchange during the field review, but none were observed within the project study area during the inspection. According to FNAI, the gopher frog, Florida pine snake, and Florida mouse have not been documented within one mile of the project study area. In order to protect these species, current FWC regulations require a permit for any ground disturbance activity occurring within 25 feet of a potentially occupied gopher tortoise burrow. Based on the FWC regulations, any gopher tortoise burrows located within 25 feet of the project construction area must be relocated to a permitted FWC recipient site (on- or off-site). During the design and permitting phases of this project, the project area will be surveyed for gopher tortoise burrows. If potentially occupied burrows are observed, coordination will occur with the FWC to secure all permits needed and perform relocation activities. The listed species found to be utilizing the burrows will be relocated with the tortoises or allowed to exit the construction area of their own volition as per current FWC guidelines. With this commitment, it has been determined that this project “may affect, but is not likely to adversely affect” the gopher frog, the Florida pine snake, or the Florida mouse.

**FIGURE 6-1
ACTIVE WOOD STORK ROOKERY LOCATIONS MAP**



Short-tailed snake (*Lampropeltis extenuata*): The short-tailed snake is listed as threatened by the FWC. The short-tailed snake is found in dry sandy uplands and may use gopher tortoise burrows for shelter to escape hot or cold ambient temperatures within its range. Suitable habitat for this species is available throughout the project study area in improved pastures and open lands. While suitable habitat exists within the project study area, no short-tailed snakes were observed during the field survey and no individuals have been documented within one mile of the project study area. With this information, it has been determined that the project will have “no effect” on the short-tailed snake.

Limpkin (*Aramus guarana*), **little blue heron** (*Egretta caerulea*), **snowy egret** (*Egretta thula*), **reddish egret** (*Egretta rufescens*), **tricolored heron** (*Egretta tricolor*), **roseate spoonbill** (*Platalea ajaja*), and **white ibis** (*Eudicimus albus*): Wading birds including the limpkin, little blue heron, snowy egret, reddish egret, tricolored heron, roseate spoonbill, and white ibis are listed as species of special concern by the FWC. While each species is distinct, wading birds are discussed collectively since they occupy similar habitats and have similar feeding patterns. The primary concern for impacts to these wading birds is the loss of foraging habitat (i.e., wetlands). Based on a review of FNAI data, the little blue heron has been documented within one mile of the project study area. In addition, a little blue heron and white ibis were observed during the field review utilizing wetland areas for foraging. As part of the project, all wetland impacts will be mitigated to prevent a net loss of wetland habitat functions and values. Based on this information and Pasco County’s commitments to mitigate for wetland impacts, it has been determined that the project “may affect, but is not likely to adversely affect” these species.

Southeastern American kestrel (*Falco sparverius paulus*): The southeastern American kestrel is listed as threatened by the FWC due to population declines. The species utilizes open habitats for foraging and nests in tree cavities. The southeastern American kestrel prefers habitats such as pine scrub, dry prairies, mixed pine, hardwood forests, and pine flatwoods. While the project study area contains suitable habitat for the southeastern American kestrel, no individuals were observed within the project study area during the field review, and this species has not been documented within one mile of the project study area according to FNAI. Due to its mobility and ability to use adjacent open areas for foraging, it has been determined that the project will have “no effect” on the southeastern American kestrel.

Florida burrowing owl (*Athene cunicularia floridana*): The Florida burrowing owl is listed as a species of special concern by the FWC due to habitat degradation and loss. Suitable habitat for this species exists within the project study area and burrowing owls have been documented within one mile of the project study area according to FNAI reports. While no individuals or burrows were observed during the field review, suitable habitat exists within open pastureland throughout the project study area. During the design and permitting phases of the project, areas of suitable habitat will be surveyed and coordinated with the FWC and FWS (as required) to secure all necessary approvals regarding this species. Therefore, it has been determined that this project “may affect, but is not likely to adversely affect” the Florida burrowing owl.

Florida sandhill crane (*Grus canadensis pratensis*): The Florida sandhill crane is listed by the FWC as threatened due to population decline. The sandhill crane is associated with shallow freshwater areas, pasture, and open woods habitats. Habitats such as wet and dry prairies, marshes, and marshy lake margins are optimum for the sandhill crane. A pair of adult sandhill cranes with a chick was observed foraging near the entrance to Watergrass subdivision during the field review. As part of this project, all adverse wetland impacts will be mitigated to prevent a net loss of wetland functions and values. In addition, the project area will be surveyed for Florida sandhill crane nests during the design and permitting phase of this project and prior to construction. If Florida sandhill crane nests are found within the project area, coordination will occur with the FWC to ensure project construction will not adversely impact this species. With this commitment, it has been determined that the project “may affect, but is not likely to adversely affect” the Florida sandhill crane.

Sherman’s fox squirrel (*Sciurus niger shermani*): Sherman’s fox squirrel is listed as a species of special concern by the FWC due to loss of suitable habitat. This species is found from the Florida panhandle south to the northern end of Lake Okeechobee and inhabits pine forests, which are dominated by longleaf or south Florida slash pines, and oak hammocks with open spaces for foraging. Based on information received from FNAI, no individuals have been documented within one mile of the project study area and no individuals were observed during the field review. Prior to construction, the project area will be surveyed for fox squirrel nests. If fox squirrel nests are found within the project area, coordination will occur with the FWC to ensure project construction will not adversely impact this species. With this commitment, it has been determined that the project “may affect, but is not likely to adversely affect” the Sherman’s fox squirrel.

Other Species of Concern

American alligator (*Alligator mississippiensis*): The alligator is federally-listed as ‘threatened due to similarity of appearance.’ Alligators are common in coastal Florida, and in many parts of their range the alligator is not actually endangered or threatened. Similarity of appearance to a listed species is a regulatory designation used to facilitate the enforcement of the Endangered Species Act. It is used when a species is so similar to a listed species that enforcement personnel would have substantial difficulty in attempting to differentiate between the listed and unlisted species. The American alligator has this designation due to similarity of appearance to the endangered American crocodile (*Crocodylus acutus*) and other rare crocodylians. The final rule (52 FR 21059) for the American alligator designation removes federal agency responsibilities for the alligator under Section 7 of the *Endangered Species Act*. During the field reviews, an alligator was observed within Surface Water 4.

Bald eagle (*Haliaeetus leucocephalus*): Though the bald eagle has been removed from Federal and state listings, it is still protected by the *Bald and Golden Eagle Protection Act* in accordance with 16 United States Code 668 and the *FWS Migratory Treaty Act* in accordance with 16 United States Codes 703-712. The bald eagle typically uses riparian habitat associated with coastal areas, lake shorelines, and river banks. The nests are generally located near water bodies

that provide a dependable food source. The FWC online bald eagle nest locator website indicates that there are no nest sites documented within one mile of the project study area, with the nearest active nest documented approximately 1.5 miles north of the project area. In addition, no bald eagle nests were observed within the project study area during the field review. Because bald eagle nests within Florida are closely monitored by the FWC, if a nest is observed within 660 feet of the project area, an *Eagle Disturbance Permit* may be required. If a bald eagle nest is found within 660 feet of the project area, coordination will occur with FWC to secure any and all approvals regarding this species prior to construction.

Florida Black Bear (*Ursus americanus floridanus*): Although the Florida black bear has been removed from the state list, it is still protected and managed by the FWC pursuant to the Florida Black Bear Conservation Rule 68A-4.009, F.A.C. The Florida black bear can be found statewide in a number of habitats including mixed hardwood pine communities, cabbage palm hammock and forested wetland systems. This species tends to den alone within tree cavities, river banks, logs or caves. They will also seek shelter on the ground in palmetto thickets, gallberry, fetterbush, and sweet pepperbush. Marginal suitable habitat for the black bear is available within the project area in the upland forests. According to FWC, the project area is not located within the FWC-designated Primary or Secondary Florida black bear range. No black bears were observed within the project study area during the field review.

Critical Habitat

The project study area was also evaluated for the occurrence of listed species Critical Habitat designated by Congress in 17 CFR 35.1532. No designated Critical Habitat for any federally listed species occurs within the project study area. Based on this information, it has been determined that the proposed project will not affect any Critical Habitat.

Flora

A review of state and federally listed plants that occur within Pasco County and their preferred habitats was performed prior to the field reviews. Listed plant species have been documented within Pasco County; however, general field surveys did not detect the occurrence of any protected plant species within the project study area. In addition, FNAI databases and the FNAI data report do not list any protected plant species as having been documented within one mile of the project study area. Coordination with the FDACS will be initiated and efforts will be made prior to construction to allow for seed collection and/or relocation to adjacent habitat or other suitable protected lands if protected plant species are observed within the preferred alignment during the design phase. As a result, it is anticipated that the project will have “no effect” on listed plant species.

6.4 COMMITMENTS

Based on the field and literature reviews outlined in this report, federally and/or state listed species have the potential to occur within the project study area. In order to avoid adverse impacts to these species, Pasco County will commit to the following items:

1. Due to the presence of gopher tortoise habitat and the observance of potentially occupied burrows adjacent to the project study area, a gopher tortoise survey within the construction limits (including the roadway footprint and stormwater management ponds) will be performed prior to construction per FWC guidelines. Relocation permits needed for this species will be secured during design and any gopher tortoises will be relocated prior to the construction phase of the project.
2. Due to the presence of Florida burrowing owl habitat and the documentation of potentially occupied burrows within the project study area, a burrowing owl survey within the construction limits (including the roadway footprint and stormwater management ponds) will be performed during design and permitting and prior to construction per FWC guidelines. Any relocation permits needed for this species will be secured during the design and construction phases of the project.
3. Due to the presence of Florida sandhill cranes and suitable nesting areas located within the project study area, a sandhill crane nest survey will be performed within the construction limits (including the roadway footprint and stormwater management ponds) prior to construction per FWC guidelines. Coordination will occur with FWC during the design and construction phases of the project.
4. Due to the presence of Sherman's fox squirrel habitat and documentation of potentially occupied habitat within one mile of the project study area, a survey for fox squirrel nests will be performed within the construction limits (including the roadway footprint and stormwater management ponds) prior to construction per FWC guidelines. If fox squirrel nests are found within the project area, coordination will occur with the FWC to ensure project construction will not adversely impact this species.
5. To avoid potential adverse impacts to the wood stork, informal Section 7 consultation will be re-initiated with the FWS during project design and permitting. The loss of suitable wood stork habitat located within the preferred alignment will be mitigated to confirm that there is no net loss of wetlands. Mitigation for lost foraging habitat will be provided within the core foraging range of known habitat rookeries to comply with the FWS *Standard Local Operating Procedures for Endangered Species* (SLOPES) requirements.
6. The FWS *Standard Protection Measures* for the eastern indigo snake (**Appendix I**) will be adhered to during construction of the proposed project.
7. Although no bald eagle nests have been documented within one mile of the project study area according to the FWC online database, surveys will be completed during project design. Should a bald eagle nest be observed within 660 feet of the construction area, standard construction precautions will be followed based on FWC guidelines. Monitoring of any eagle nests located between 330 to 660 feet from the construction impact area will be conducted during the nesting season, and construction will be avoided

within the primary protection zone (330 feet from any bald eagle nest) during the nesting season. Any permits required will be secured prior to construction.

8. Although no protected plant species have been documented within one mile of the project study area according to the FNAI database/report, coordination will occur with FDACS prior to construction to allow for seed collection and/or relocation to adjacent habitat or other suitable protected lands if protected plant species are observed within the preferred alignment during the design phase.

6.5 SUMMARY

In summary, federally and state listed animal species were identified as having the potential to occur within the project study area. **Table 6-1** summarizes the project impact determination for the federally and state listed species, respectively. Based on the findings and commitments contained herein, a determination has been made that the proposed project will either have *no effect* or *may affect, but is not likely to adversely affect* any state or federally listed animal or plant species nor will it affect any designated Critical Habitat.

**TABLE 6-1
SUMMARY OF LISTED SPECIES IMPACT DETERMINATIONS**

Federal Listed Species (FWS)	Status	Impact Determination
Eastern indigo snake (<i>Drymarchon couperi</i>) Wood stork (<i>Mycteria americana</i>)	Threatened	“May affect, but is not likely to adversely affect”
Florida scrub jay (<i>Aphelocoma coerulescens</i>)	Threatened	“No effect”
State Listed Species (FWC)		
Southeastern American kestrel (<i>Falco sparverius paulus</i>) Short-tailed snake (<i>Stilosoma extenuatum</i>)	Threatened	“No effect”
Gopher tortoise (<i>Gopherus polyphemus</i>) Florida sandhill crane (<i>Grus canadensis pratensis</i>)	Threatened	“May affect, but is not likely to adversely affect”
Limpkin (<i>Aramus guarauna</i>) Little blue heron (<i>Egretta caerulea</i>) Reddish egret (<i>Egretta rufescens</i>) Snowy egret (<i>Egretta thula</i>) Tricolored heron (<i>Egretta tricolor</i>) Rosette spoonbill (<i>Platalea ajaja</i>) White ibis (<i>Eudcimus albus</i>) Florida burrowing owl (<i>Athene cunicularia floridana</i>) Gopher frog (<i>Rana capito</i>) Florida pine snake (<i>Pituophis melanoleucus mugitis</i>) Florida mouse (<i>Podomys floridanus</i>) Sherman’s fox squirrel (<i>Sciurus niger shermani</i>)	Species of Special Concern	“May affect, but is not likely to adversely affect”

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APPENDIX A

Soils Maps and Descriptions

Appendix A - Soils

Listed below are the soil types reported within the project study area, their corresponding NRCS reference number reported in the *Soil Survey of Pasco County, Florida* (NRCS 1982), and their general characteristics.

1 – Wauchula Fine Sand, 0 to 5 percent slopes

Wauchula fine sand, 0 to 5 percent slopes, is a nearly level to gently sloping, poorly drained soil occurring in broad, low areas in the flatwoods and on wet seepage hillsides in the uplands. Slopes are smooth to concave. In most years, under natural conditions, the water table is at a depth of less than 10 inches for about one to four months. It is at a depth of 10 to 40 inches for as long as six months, except during very dry periods, when it drops below a depth of 40 inches. Wauchula fine sand, 0 to 5 percent slopes, is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007), but may contain up to 15 percent hydric soil inclusions. Wauchula fine sand, 0 to 5 percent slopes, comprises 0.2 percent of the project study area.

2 – Pomona Fine Sand

Pomona fine sand is a nearly level, poorly drained soil occurring in large areas on low ridges in the flatwoods. Slopes are smooth to concave and range from 0 to 2 percent. In most years, under natural conditions, the water table is within a depth of 10 inches for one to three months and is at a depth of 10 to 40 inches for six months or more. Pomona fine sand is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007), but may contain up to 15 percent hydric soil inclusions. Pomona fine sand comprises 31.0 percent of the project study area.

4 – Felda Fine Sand

Felda fine sand is a poorly drained, nearly level soil occurring on low-lying, broad areas in the flatwoods. Slopes range from 0 to 2 percent. The water table is within 10 inches of the surface for two to six months each year, under natural conditions. Felda fine sand is classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Felda fine sand comprises 1.1 percent of the project study area.

5 – Myakka Fine Sand

Myakka fine sand is a nearly level, poorly drained soil occurring on broad areas in the flatwoods. Slopes are smooth to concave and range from 0 to 2 percent. The water table is at a depth of less than 10 inches for one to four months in most years and recedes to a depth of more than 40 inches during very dry seasons. Myakka fine sand is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007), but may contain up to 20 percent hydric soil inclusions. Myakka fine sand comprises 0.8 percent of the project study area.

6 – Tavares Sand, 0 to 5 percent slopes

Tavares sand, 0 to 5 percent slopes, is a nearly level to gently sloping, moderately well drained soil that occurs on low ridges and knolls. The water table is at a depth of 40 to 60 inches for six to twelve months and below 60 inches during very dry periods, in most years. Tavares sand, 0 to 5 percent slopes, is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Tavares sand, 0 to 5 percent slopes, comprises 1.0 percent of the project study area.

7 – Sparr Fine Sand, 0 to 5 percent slopes

Sparr fine sand, 0 to 5 percent slopes, is a nearly level to gently sloping, somewhat poorly drained soil occurring on seasonally wet uplands. Slopes are smooth to concave. The seasonal high water table is commonly perched above the subsoil, at a depth of 20 to 40 inches for one to four months during most years. Sparr fine sand, 0 to 5 percent slopes, is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Sparr fine sand, 0 to 5 percent slopes, comprises 9.0 percent of the project study area.

8 – Sellers Mucky Loamy Fine Sand

Sellers mucky loamy fine sand is a nearly level, very poorly drained soil occurring in depressions. Slopes are generally concave and less than 2 percent. Under natural conditions, this soil is ponded during wet seasons for three to six months and the water table is within a depth of about 10 inches for six to twelve months. Sellers mucky loamy fine sand is classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Sellers mucky loamy fine sand comprises 3.9 percent of the project study area.

11 – Adamsville Fine Sand

The Adamsville series consists of nearly level, somewhat poorly drained, fine sand soils formed in low broad flats. The water table is at a depth of 20 to 40 inches below the surface of the soil for two to six months, but may rise to within 20 inches of the surface for less than two weeks during very wet seasons. The water table recedes to a depth of more than 40 inches during dry periods. Adamsville fine sand is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Adamsville fine sand comprises 0.1 percent of the project study area.

15 – Tavares-Urban Land Complex, 0 to 5 percent slopes

This soil series consists of urban land and nearly level to gently sloping, moderately well drained Tavares sand soils formed on low ridges. Most areas made up of this series are artificially drained by sewer systems or surface ditches. Soils not artificially drained have a water table depth of 40 to 60 inches below the surface of the soil for six to ten months. This soil is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Tavares-urban land complex, 0 to 5 percent slopes, comprises 0.1 percent of the project study area.

16 – Zephyr Muck

Zephyr muck is a nearly level, very poorly drained soil occurring within depressions. Slopes are smooth to concave and are less than 2 percent. This soil is ponded for more than six months in most years. Zephyr muck is classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Zephyr muck comprises less than 0.1 percent of the project study area.

18 – Electra Variant Fine Sand, 0 to 5 percent slopes

Electra variant fine sand, 0 to 5 percent slopes, is a nearly level to gently sloping, somewhat poorly drained soil occurring on upland ridges. Slopes are smooth to convex. Under natural conditions, the water table is at a depth of 25 to 40 inches for a cumulative period of four months and recedes to a depth of more than 40 inches during drier periods. Infrequently, the water table may rise to within 10 inches of the surface briefly during periods of high rainfall. Electra variant

fine sand, 0 to 5 percent slopes, is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Electra variant fine sand, 0 to 5 percent slopes, comprises 1.1 percent of the project study area.

21 – Smyrna Fine Sand

Smyrna fine sand is a nearly level, poorly drained soil occurring on broad flatwood areas. Slopes are smooth to concave and range from 0 to 2 percent. The water table is at a depth of less than 10 inches for a period of one to four months in most years and between 10 and 40 inches for more than six months. Smyrna fine sand is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007), but may contain up to 20 percent hydric soil inclusions. Smyrna fine sand comprises 2.5 percent of the project study area.

22 – Basinger Fine Sand

Basinger fine sand is a poorly drained, nearly level soil occurring in poorly defined drainageways and sloughs in the flatwoods. Individual areas are irregular in shape and slopes are less than 2 percent. The water table is at a depth of less than 10 inches for two to six months annually and at a depth of 10 to 30 inches for a period of more than six months in most years. Basinger fine sand is classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Basinger fine sand comprises less than 0.1 percent of the project study area.

23 – Basinger Fine Sand, depressional

Basinger fine sand, depressional, is a nearly level, poorly drained soil found in depressional areas in the flatwoods and along the edges of some lakes. Slopes are smooth to concave and range from 0 to 2 percent. This soil is ponded for six to nine months or more in most years. Basinger fine sand, depressional, is classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Basinger fine sand, depressional, comprises 1.8 percent of the project study area.

26 – Narcoossee Fine Sand

Narcoossee fine sand is a somewhat poorly drained soil occurring on low knolls and ridges in the flatwoods. Individual areas are irregular in shape and slopes are less than 2 percent. In most years, the water table is at a depth of 2 to 3.5 feet for four to six months. During extended dry periods, the water table recedes to a depth of more than 60 inches. During the wet season, after heavy rains, the water table may briefly rise above a depth of 2 feet. Narcoossee fine sand is not classified as a hydric soil in the *Hydric Soils of Florida Handbook* (Hurt 2007). Narcoossee fine sand comprises 0.1 percent of the project study area.

28 – Pits

Pits are excavations from which soil and geologic material have been removed, primarily for use in road construction or for foundations. Pits, locally called borrow pits, are mostly small, but a few are large. Some pits were constructed to retain runoff water. Pits are not classified as hydric by the *Hydric Soils of Florida Handbook* (Hurt 2007), but may contain up to 15 percent hydric soil inclusions. Pits comprise 0.5 percent of the project study area.

30 – Okeelanta-Terra Ceia Association

Okeelanta-Terra Ceia association consists of nearly level, very poorly drained soils that occur on low swampy areas that have low ridges. Slopes are dominantly less than 1 percent. The water

table is at or above the surface except during extended dry periods. Okeelanta-Terra Ceia association is classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Okeelanta-Terra Ceia association comprises 0.3 percent of the project study area.

32 – Lake Fine Sand, 0 to 5 percent slopes

Lake fine sand, 0 to 5 percent slopes, is a nearly level to gently sloping, excessively drained soil occurring along ridgetops and on low hillsides in the uplands. Slopes are smooth to concave. The water table is below a depth of 120 inches. Lake fine sand, 0 to 5 percent slopes, is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Lake fine sand, 0 to 5 percent slopes, comprises 1.4 percent of the project study area.

39 – Chobee Soils, frequently flooded

Chobee soils are nearly level, very poorly drained soils occurring in swamps along the floodplains of most of the major rivers and streams in Pasco County. Under natural conditions, the water table is within 10 inches of the surface for more than six months. Flooding occurs frequently during the rainy season and typically lasts one to four months. Chobee soils, frequently flooded are classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Chobee soils, frequently flooded, comprise 0.5 percent of the project study area.

43 – Arredondo Fine Sand, 0 to 5 percent slopes

Arredondo fine sand is a nearly level to gently sloping, well-drained soil that is found on uplands. Water table information is not available for this soil; however, the available water capacity is low in the surface and subsurface layers and is high in the subsoil. The permeability is rapid to moderate. Arredondo fine sand, 0 to 5 percent slopes is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Arredondo fine sand, 0 to 5 percent slopes, comprises 6.1 percent of the project study area.

45 – Kendrick Fine Sand, 0 to 5 percent slopes

Kendrick fine sand, 0 to 5 percent slopes, is a well-drained, nearly level to gently sloping soil occurring on uplands. Slopes are smooth to concave. The water table is below a depth of 72 inches. Kendrick fine sand, 0 to 5 percent slopes, is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Kendrick fine sand, 0 to 5 percent slopes, comprises 4.9 percent of the project study area.

46 – Cassia Fine Sand, 0 to 5 percent slopes

Cassia fine sand, 0 to 5 percent slopes, is a nearly level to gently sloping, somewhat poorly drained soil that occurs on low ridges in the flatwoods. Slopes are smooth to concave. The water table is at a depth of 15 to 40 inches for a period of about six months in most years and recedes to a depth of more than 40 inches during very dry seasons. Cassia fine sand, 0 to 5 percent slopes, is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Cassia fine sand, 0 to 5 percent slopes, comprises 3.1 percent of the project study area.

48 – Lochloosa Fine Sand, 0 to 5 percent slopes

Lochloosa fine sand, 0 to 5 percent slopes, is a nearly level to gently sloping, somewhat poorly drained soil occurring on the uplands. Individual areas are irregular in shape and slopes are smooth to concave. The water table is at a depth of 30 to 60 inches for a period of one to four

months during most years. It rises to depth of about 15 inches for one to three weeks during rainy seasons. The water table recedes to a depth of more than 60 inches in the dry season. Wetness is caused by seepage in the more sloping areas. Lochloosa fine sand, 0 to 5 percent slopes, is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Lochloosa fine sand, 0 to 5 percent slopes, comprises less than 0.1 percent of the project study area.

49 – Blicton Fine Sand, 0 to 2 percent slopes

Blicton fine sand, 0 to 2 percent slopes, is a nearly level, poorly drained soil occurring on the uplands. In most years, the water table is at a depth of less than 10 inches for a cumulative period of one to four months. In drier seasons, it recedes to a depth of more than 40 inches. Blicton fine sand, 0 to 2 percent slopes, is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007), but may contain up to 20 percent hydric soil inclusions. Blicton fine sand, 0 to 2 percent slopes, comprises 0.4 percent of the project study area.

59 – Newnan Fine Sand, 0 to 5 percent slopes

Newnan fine sand, 0 to 5 percent slopes, is a somewhat poorly drained soil occurring on low ridges in the flatwoods. The water table is at a depth of 24 to 40 inches for two to four months during most years and recedes to a depth of more than 60 inches during the drier seasons. Newnan fine sand, 0 to 5 percent slopes, is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Newnan fine sand, 0 to 5 percent slopes, comprises 6.6 percent of the project study area.

60 – Palmetto-Zephyr-Sellers Complex

Palmetto-Zephyr-Sellers complex consists of areas of nearly level, poorly drained Palmetto soils and closely similar soils as well as small areas of nearly level, very poorly drained Zephyr and Sellers soils. This complex occurs as elongated areas in the flatwoods. Slopes are less than 2 percent. The water table in Palmetto soils is generally at a depth of less than 10 inches for two to six months during most years. Zephyr soils are ponded for more than six months in most years. Sellers soils are ponded for three to six months in most years. The water table recedes to a depth of about 30 inches or more during the drier seasons. Palmetto-Zephyr-Sellers complex is classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Palmetto-Zephyr-Sellers complex comprises 6.6 percent of the project study area.

69 – Millhopper Fine Sand, 0 to 5 percent slopes

Millhopper fine sand, 0 to 5 percent slopes, is a nearly level to gently sloping, moderately well drained soil that is found on uplands. Slopes are smooth to concave. Under natural conditions, the water table is perched above the loamy horizon. The water table is at a depth of 40 to 60 inches for one to four months and at a depth of 60 to 72 inches for two to four months in most years. Millhopper fine sand, 0 to 5 percent slopes, is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Millhopper fine sand, 0 to 5 percent slopes, comprises 9.1 percent of the project study area.

70 – Placid Fine Sand

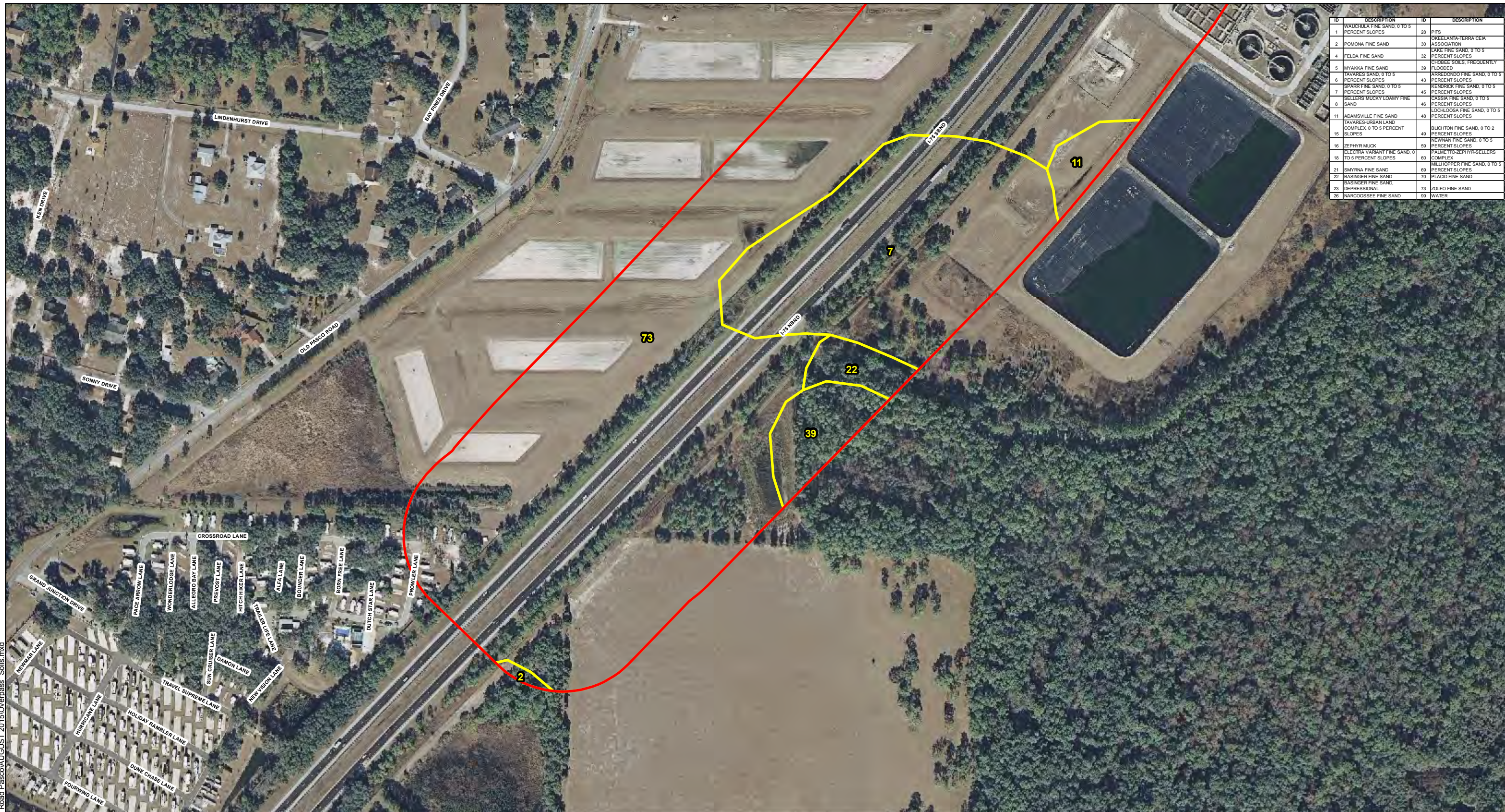
Placid fine sand is a nearly level, very poorly drained soil occurring at the base of sloping parts of the landscape and along narrow, slightly depressional, short drainageways. Individual areas of

this soil are irregular in shape and slopes are smooth to convex and less than 2 percent. The water table is at a depth of less than 10 inches for a cumulative period of six months in most years. It recedes to a depth of 60 inches or more during extended dry periods. In most years, the lowest parts of an area have water above the surface during wet seasons. Infrequently, water covers most of an area during periods when extended heavy rainfall saturates the soil and impedes drainage. Placid fine sand is classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Placid fine sand comprises less than 0.1 percent of the project study area.

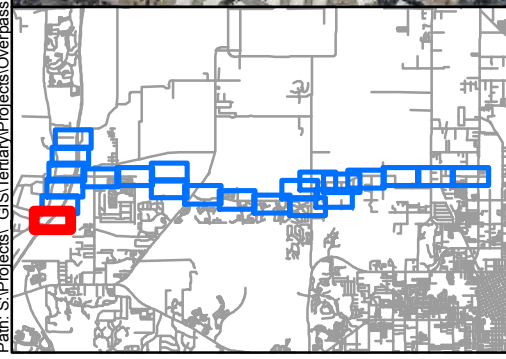
73 – Zolfo Fine Sand



Zolfo fine sand is a nearly level, somewhat poorly drained soil occurring on landscape positions that are slightly higher than adjacent flatwood areas. Slopes range from 0 to 2 percent. The seasonal high water table is at a depth of 24 to 40 inches for two to six months in most years. In some years, the water table may be at a depth of 10 to 24 inches for periods of up to two weeks. Commonly, the water table is at a depth of less than 60 inches for more than nine months of the year. Zolfo fine sand is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Zolfo fine sand comprises 7.1 percent of the project study area.

ID	DESCRIPTION	ID	DESCRIPTION
1	WALDOUGHA FINE SAND, 0 TO 5 PERCENT SLOPES	28	PITS
2	POMONA FINE SAND	30	ORIELANTA-TERRA CEIA ASSOCIATION
4	FELDA FINE SAND	32	LAKE FINE SAND, 0 TO 5 PERCENT SLOPES
5	MYAKKA FINE SAND	39	FLOODED
6	MYAKKA FINE SAND, 0 TO 5 PERCENT SLOPES	43	CHROME SOILS, FREQUENTLY
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	ARRINGTON FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	CASSA FINE SAND, 0 TO 5 PERCENT SLOPES
15	TAVARES URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	LOGHOUSA FINE SAND, 0 TO 5 PERCENT SLOPES
16	ZEPHYR MUCK	59	BLUGHTON FINE SAND, 0 TO 2 PERCENT SLOPES
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES	60	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
21	SMYRNA FINE SAND	69	PALMETTO-ZEPHYR-SELLERS COMPLEX
22	BASINGER FINE SAND	70	MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
23	BASINGER FINE SAND, DEPRESSIONAL	73	FLACID FINE SAND
26	NARCOSSEE FINE SAND	73	ZOLFO FINE SAND
		99	WATER



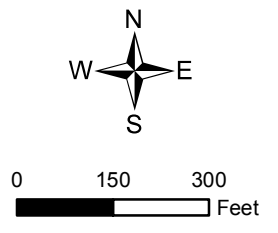
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Legend
 Project Study Area
 NRCS Soils

Source:
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 Soils- NRCS, 2010

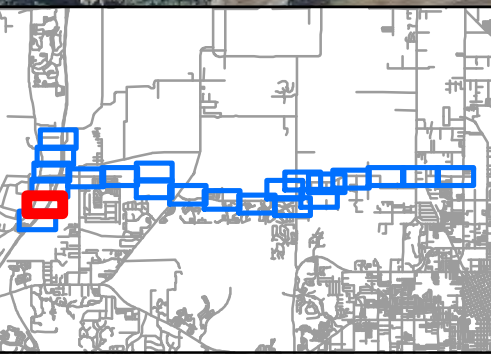
**Overpass Road from Old Pasco Road
 to US 301 PD+E Study**
NRCS Soils Map
 Pasco County, FL
 Sheet 1 of 22





ID	DESCRIPTION	ID	DESCRIPTION
1	WALDOUGHA FINE SAND, 0 TO 5 PERCENT SLOPES	28	PITS
2	POMONA FINE SAND	30	ORIELANTA-TERRA CEIA ASSOCIATION
4	FELDA FINE SAND	32	LAKE FINE SAND, 0 TO 5 PERCENT SLOPES
5	MYAKKA FINE SAND	39	FLOODED
6	TAVARES SAND, 0 TO 5 PERCENT SLOPES	43	CHOCHEE SOILS, FREQUENTLY FLOODED
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	RENDROCK FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	CASSIA FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	LOCHLOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
15	TAVARES URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	BLUGHTON FINE SAND, 0 TO 2 PERCENT SLOPES
16	ZEPHYR MUCK	59	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES	60	COMPLEX
21	SMYRNA FINE SAND	69	MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
22	BASINGER FINE SAND	70	PLACID FINE SAND
23	BASINGER FINE SAND, DEPRESSIONAL	73	ZOLFO FINE SAND
26	NARCOSSEE FINE SAND	99	WATER

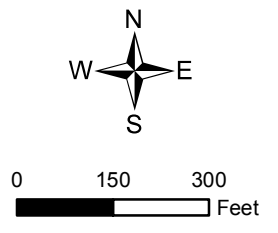
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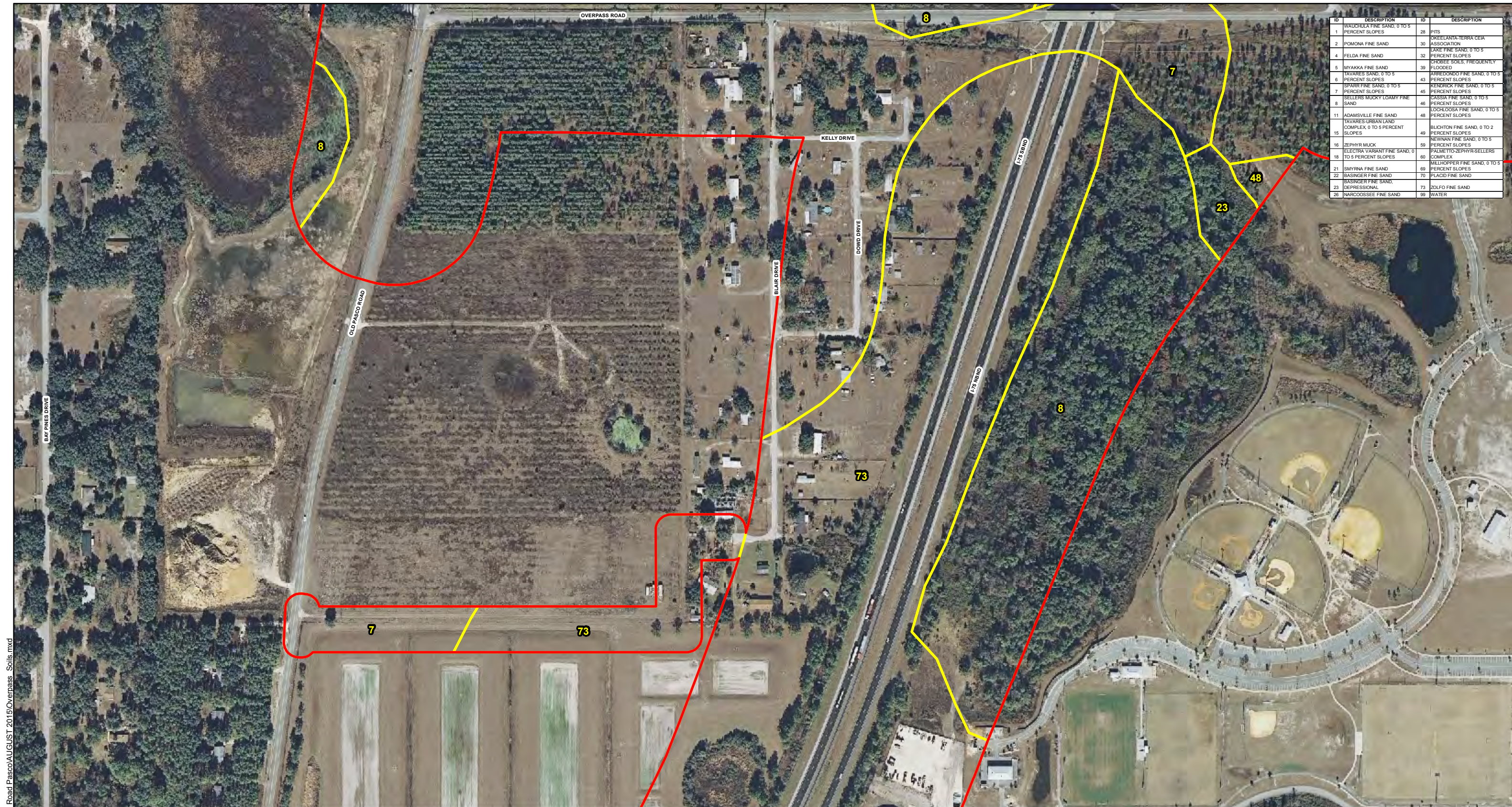


- Legend**
- Project Study Area
 - NRCS Soils

Source:
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Soils- NRCS, 2010



**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
NRCS Soils Map
Pasco County, FL
Sheet 2 of 22





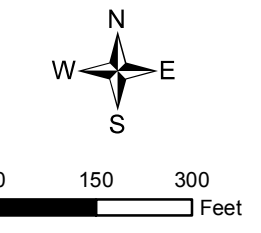
ID	DESCRIPTION	ID	DESCRIPTION
1	WALLOOLA FINE SAND, 0 TO 5 PERCENT SLOPES	28	PITS
2	POMONA FINE SAND	30	ORIELANTA-TERRA CEIA ASSOCIATION
4	FELDA FINE SAND	32	CAPE FINE SAND, 0 TO 5 PERCENT SLOPES
5	MYAKKA FINE SAND	39	FLOODED
6	MYAKKA FINE SAND, 0 TO 5 PERCENT SLOPES	43	CHOBEE SOILS, FREQUENTLY FLOODED
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	CASSA FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	LOGHOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
15	TAVARES URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	BLUGHTON FINE SAND, 0 TO 2 PERCENT SLOPES
16	ZEPHYR MUCK	59	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES	60	PALMETTO-ZEPHYR-SELLERS COMPLEX
21	SMYRNA FINE SAND	69	MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
22	BASINGER FINE SAND	70	PLACID FINE SAND
23	BASINGER FINE SAND, DEPRESSIONAL	73	ZOLFO FINE SAND
26	NARCOSSEE FINE SAND	99	WATER

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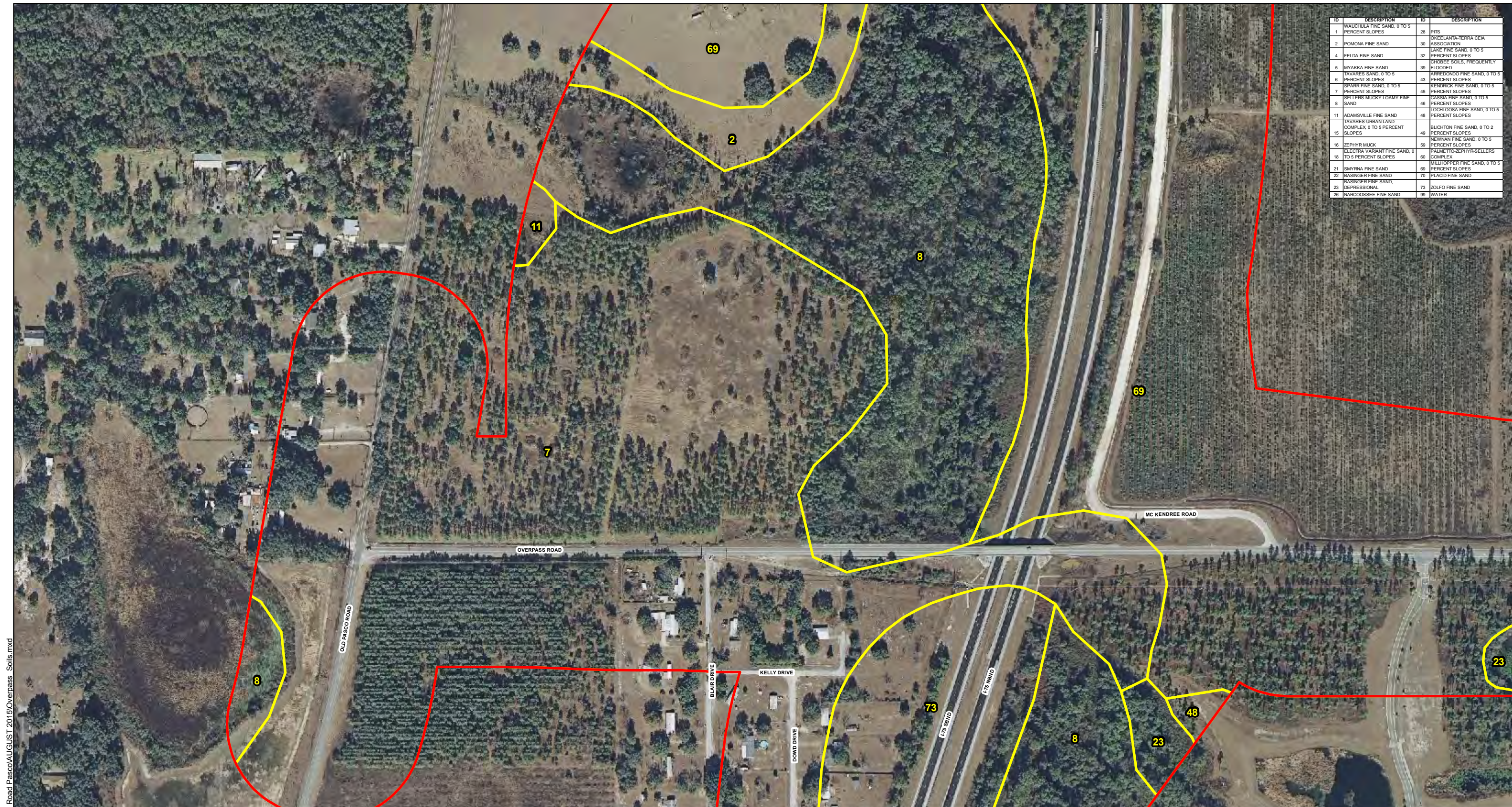
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 NRCS Soils

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**Overpass Road from Old Pasco Road
 to US 301 PD+E Study**
NRCS Soils Map
 Pasco County, FL
 Sheet 3 of 22



ID	DESCRIPTION	ID	DESCRIPTION
1	WALLOOLA FINE SAND, 0 TO 5 PERCENT SLOPES	28	PITS
2	POMONA FINE SAND	30	OKEELENTA-TERRA CEIA ASSOCIATION
4	FELDA FINE SAND	32	CAKE FINE SAND, 0 TO 5 PERCENT SLOPES
5	MYAKKA FINE SAND	39	FLOODED
6	TAYLORS SAND, 0 TO 5 PERCENT SLOPES	43	CHOBEE SOILS, FREQUENTLY FLOODED
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	ARRINGTON FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	CASSA FINE SAND, 0 TO 5 PERCENT SLOPES
15	TAYLORS URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	LOGHOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
16	ZEPHYR MUCK	59	BLUGHTON FINE SAND, 0 TO 2 PERCENT SLOPES
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES	60	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
21	SMYRNA FINE SAND	69	PALMETTO-ZEPHYR-SELLERS COMPLEX
22	BASINGER FINE SAND	70	MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
23	BASINGER FINE SAND, DEPRESSIONAL	73	FLACID FINE SAND
26	NARCOSSEE FINE SAND	79	ZOLFO FINE SAND
		99	WATER

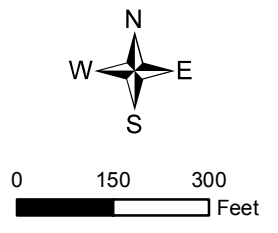


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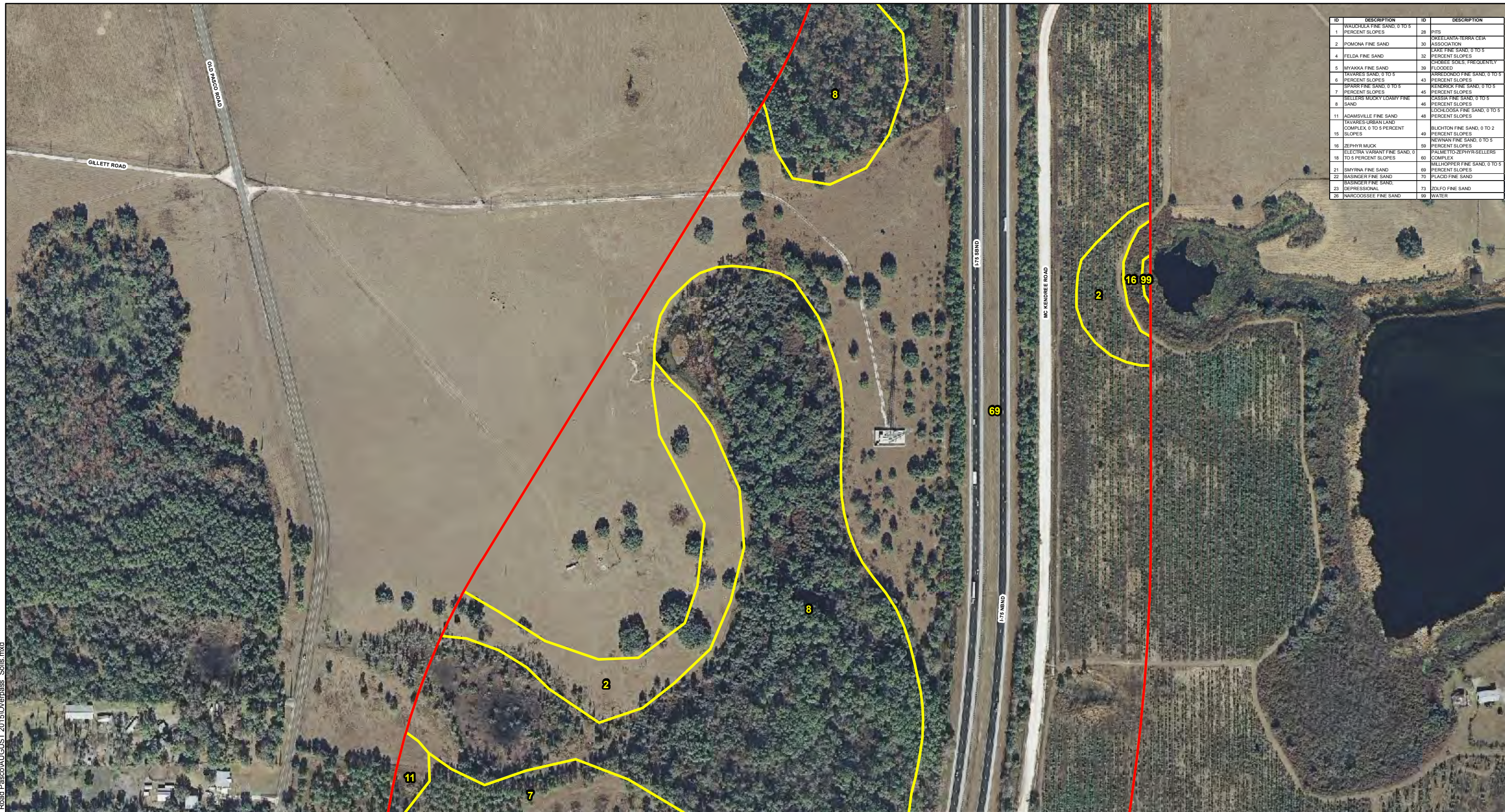
Legend
 Project Study Area
 NRCS Soils

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Aerials- FDOT, 2011
Soils- NRCS, 2010

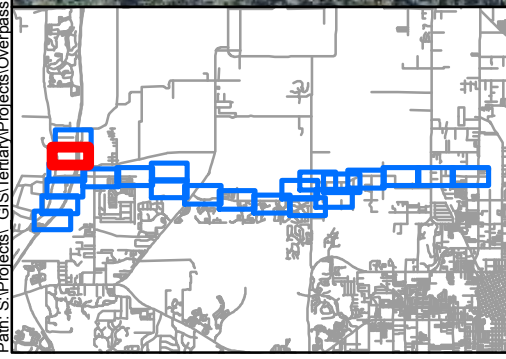
**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
NRCS Soils Map
Pasco County, FL
Sheet 4 of 22



ID	DESCRIPTION	ID	DESCRIPTION
1	WALDOUGA FINE SAND, 0 TO 5 PERCENT SLOPES	28	PITS
2	POMONA FINE SAND	30	OKEEELANTA-TERRA CEIA ASSOCIATION
4	FELDA FINE SAND	32	LAKE FINE SAND, 0 TO 5 PERCENT SLOPES
5	MYAKKA FINE SAND	39	FLOODED
6	TAVARES SAND, 0 TO 5 PERCENT SLOPES	43	CHOBEE SOILS, FREQUENTLY FLOODED
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	CASSIA FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	LOGHOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
15	TAVARES URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	BUGHTON FINE SAND, 0 TO 2 PERCENT SLOPES
16	ZEPHYR MUCK	59	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES	60	COMPLEX
21	SMYRNA FINE SAND	69	MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
22	BASINGER FINE SAND	70	FLACID FINE SAND
23	BASINGER FINE SAND, DEPRESSIONAL	73	ZOLFO FINE SAND
26	NARCOSSEE FINE SAND	99	WATER



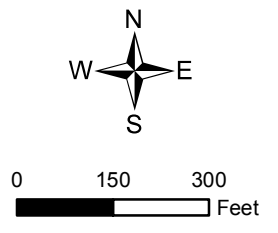
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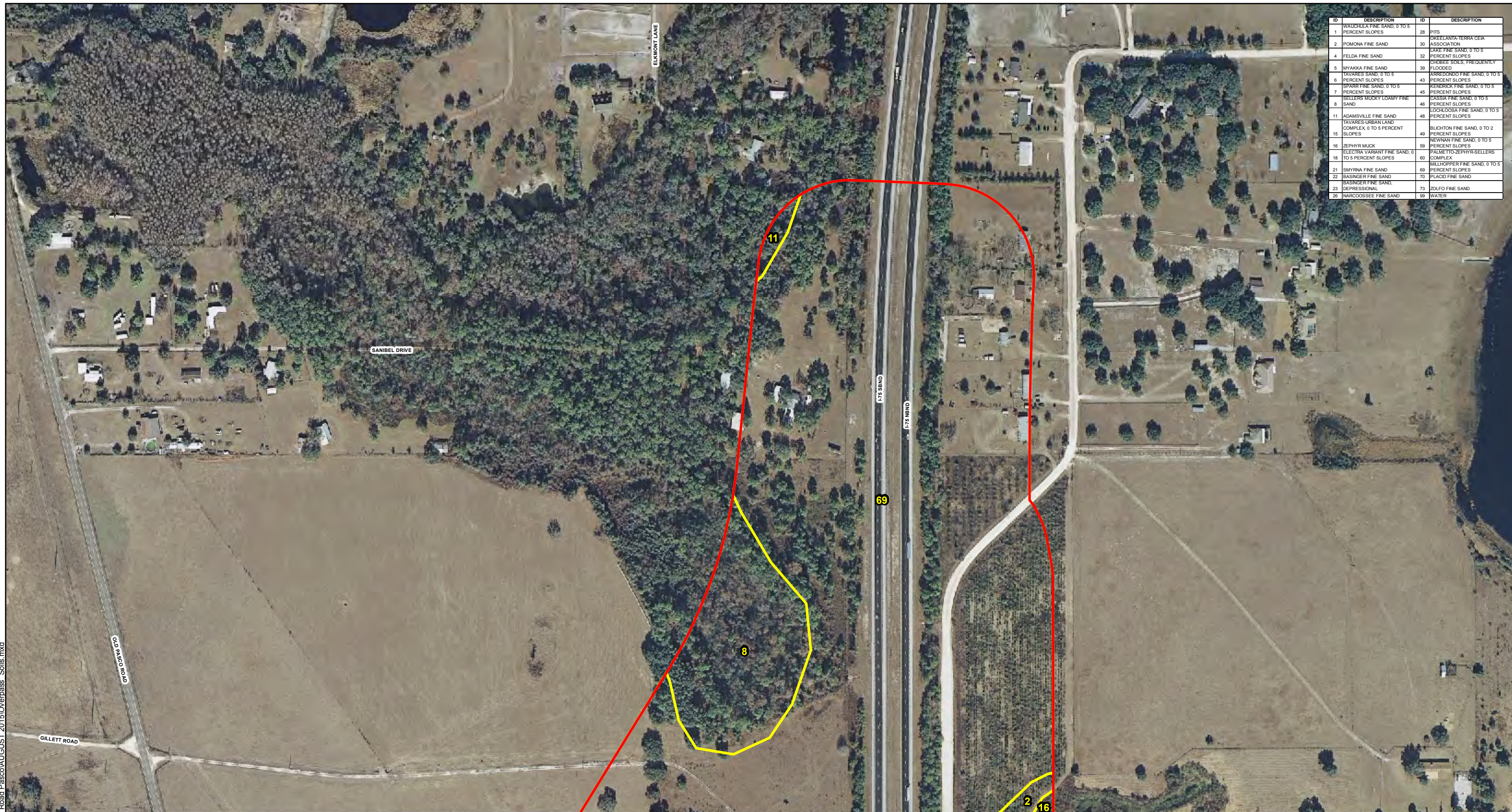
- Legend**
- Project Study Area
 - NRCS Soils

Source:
Aerials- FDOT, 2011
Soils- NRCS, 2010

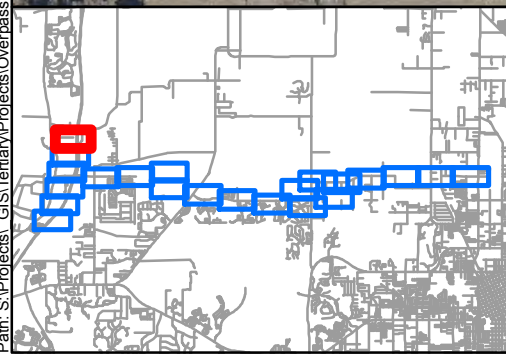
**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
NRCS Soils Map
Pasco County, FL
Sheet 5 of 22



ID	DESCRIPTION	ID	DESCRIPTION
1	WALLOOJA FINE SAND, 0 TO 5 PERCENT SLOPES	28	PITS
2	POMONA FINE SAND	30	OKEELENTA-TERRA CEIA ASSOCIATION
4	FELDA FINE SAND	32	CARE FINE SAND, 0 TO 5 PERCENT SLOPES
5	MYAKKA FINE SAND	39	FLOODED
6	MYAKKA FINE SAND, 0 TO 5 PERCENT SLOPES	43	CHOBEE SOILS, FREQUENTLY FLOODED
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	ARRINGTON FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	CASSIA FINE SAND, 0 TO 5 PERCENT SLOPES
15	TAVARES URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	LOGHOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
16	ZEPHYR MUCK	59	BLUGHTON FINE SAND, 0 TO 2 PERCENT SLOPES
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES	60	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
21	SMYRNA FINE SAND	69	PALMETTO-ZEPHYR-SELLERS COMPLEX
22	BASINGER FINE SAND	70	MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
23	BASINGER FINE SAND, DEPRESSIONAL	73	PLACID FINE SAND
26	NARCOSSEE FINE SAND	99	ZOLFO FINE SAND



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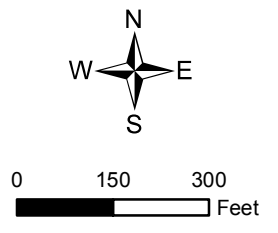
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Project Study Area

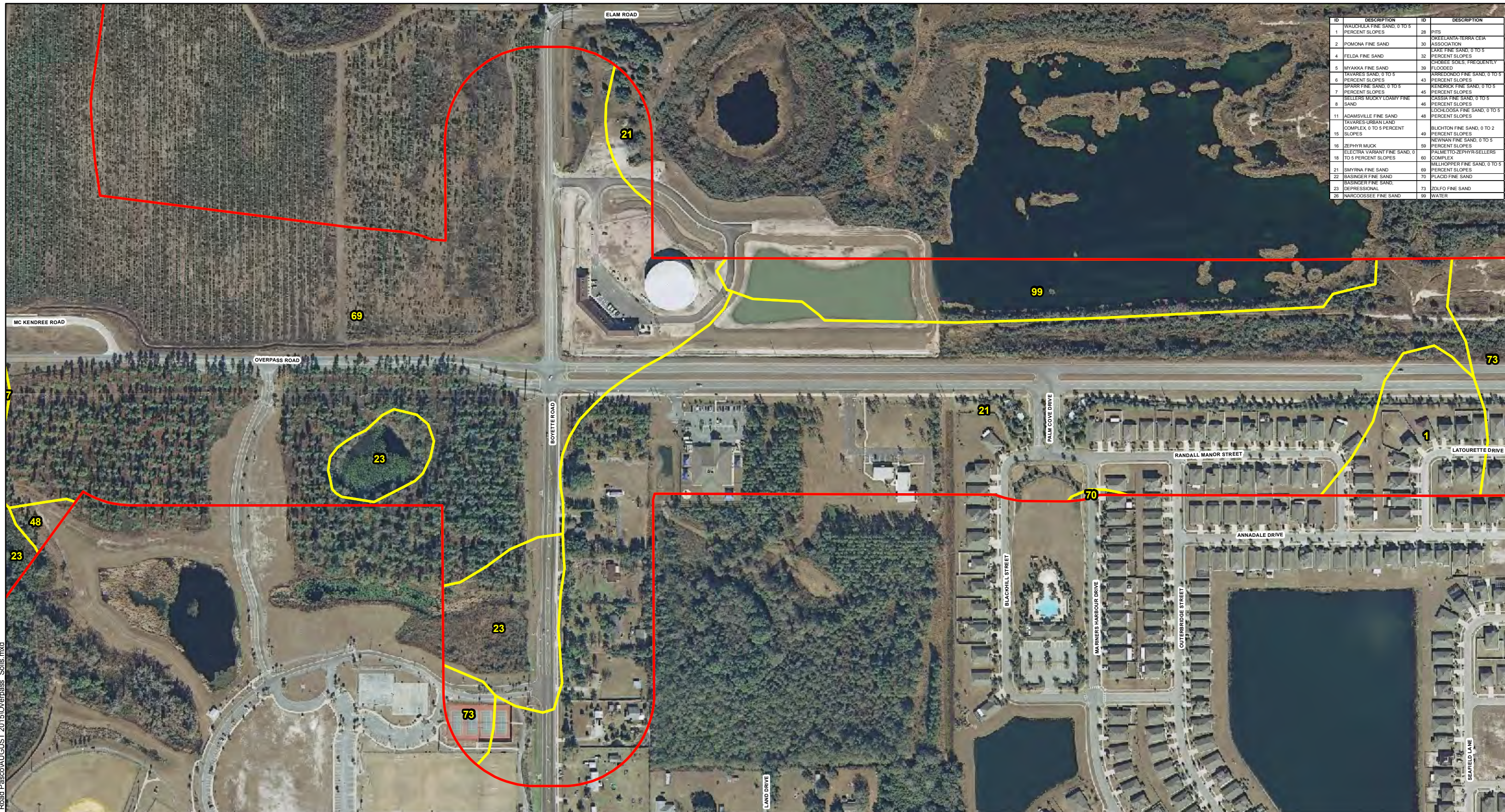
NRCS Soils

Source:
Aerials- FDOT, 2011
Soils- NRCS, 2010

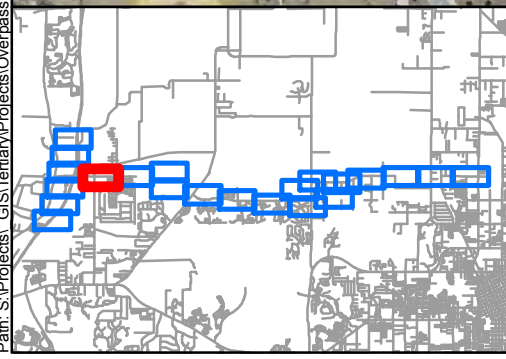
**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
NRCS Soils Map
Pasco County, FL
Sheet 6 of 22



ID	DESCRIPTION	ID	DESCRIPTION
1	WALLOOJA FINE SAND, 0 TO 5 PERCENT SLOPES	28	PITS
2	POMONA FINE SAND	30	ORIELANTA-TERRA CEIA ASSOCIATION
4	FELDA FINE SAND	32	FARE FINE SAND, 0 TO 5 PERCENT SLOPES
5	MYAKKA FINE SAND	39	FLOODED
6	MYAKKA FINE SAND, 0 TO 5 PERCENT SLOPES	43	CHOBEE SOILS, FREQUENTLY FLOODED
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	CASSIN FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	LOGHOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
15	TAVARES URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	BLUGHTON FINE SAND, 0 TO 2 PERCENT SLOPES
16	ZEPHYR MUCK	59	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES	60	PALMETTO-ZEPHYR-SELLERS COMPLEX
21	SMYRNA FINE SAND	69	MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
22	BASINGER FINE SAND	70	FLACID FINE SAND
23	BASINGER FINE SAND, DEPRESSIONAL	73	ZOLFO FINE SAND
26	NARCOSSEE FINE SAND	99	WATER



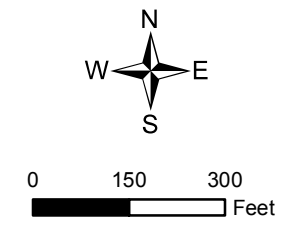
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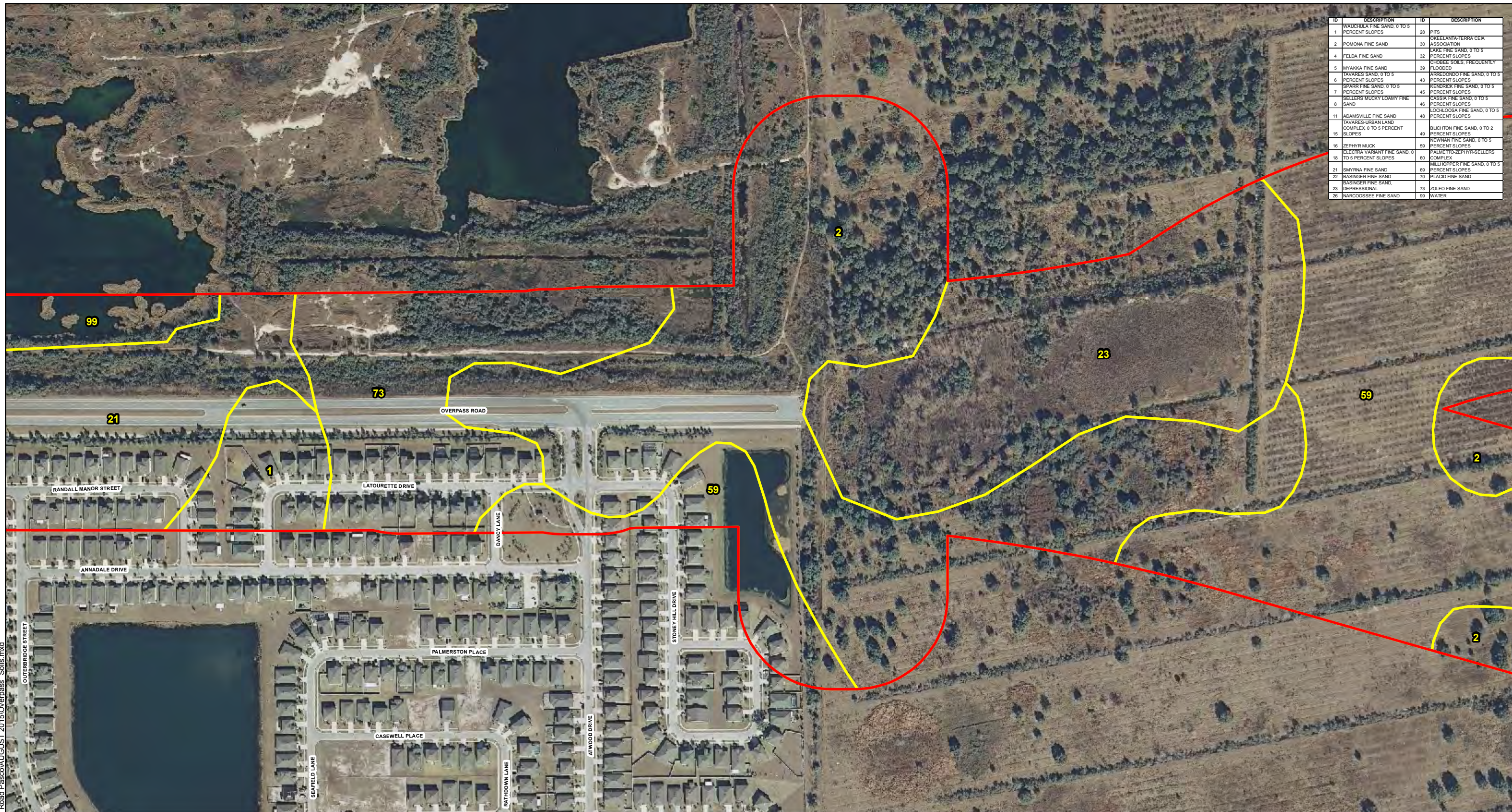
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 Project Study Area
 NRCS Soils

Source:
Aerials- FDOT, 2011
Soils- NRCS, 2010

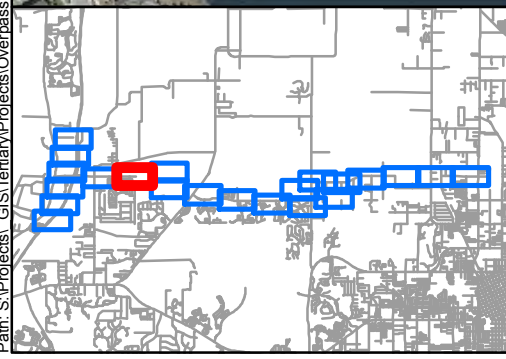
**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
NRCS Soils Map
Pasco County, FL
Sheet 7 of 22



ID	DESCRIPTION	ID	DESCRIPTION
1	WALLOOLA FINE SAND, 0 TO 5 PERCENT SLOPES	28	PITS
2	POMONA FINE SAND	30	OKELANTA-TERRA CEIA ASSOCIATION LAKE FINE SAND, 0 TO 5 PERCENT SLOPES
4	FELDA FINE SAND	32	LAKE FINE SAND, 0 TO 5 PERCENT SLOPES
5	MYAKKA FINE SAND	39	FLOODED
6	MYAKKA FINE SAND, 0 TO 5 PERCENT SLOPES	43	CHOBEE SOILS, FREQUENTLY FLOODED
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	ARRINGTON FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	CASSIN FINE SAND, 0 TO 5 PERCENT SLOPES
15	TAVARES URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	LOGHOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
16	ZEPHYR MUCK	59	BLUGHTON FINE SAND, 0 TO 2 PERCENT SLOPES
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES	60	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
21	SMYRNA FINE SAND	69	PALMETTO-ZEPHYR-SELLERS COMPLEX
22	BASINGER FINE SAND	70	MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
23	BASINGER FINE SAND, DEPRESSIONAL	73	PLACID FINE SAND
26	NARCOSSEE FINE SAND	79	ZOLFO FINE SAND
		99	WATER



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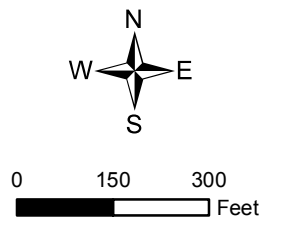
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Project Study Area

NRCS Soils

Source:
Aerials- FDOT, 2011
Soils- NRCS, 2010

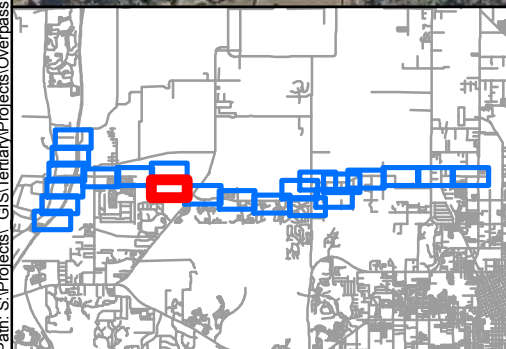
**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
NRCS Soils Map
Pasco County, FL
Sheet 8 of 22



ID	DESCRIPTION	ID	DESCRIPTION
1	WALDOUGHA FINE SAND, 0 TO 5 PERCENT SLOPES	28	PITS
2	POMONA FINE SAND	30	OKEELENTA-TERRA CEIA ASSOCIATION
4	FELDA FINE SAND	32	LAKE FINE SAND, 0 TO 5 PERCENT SLOPES
5	MYAKKA FINE SAND	39	FLOODED
6	MYAKKA FINE SAND, 0 TO 5 PERCENT SLOPES	43	CHOBEE SOILS, FREQUENTLY FLOODED
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	CASSIA FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	LOGHOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
15	TAVARES URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	BLUGHTON FINE SAND, 0 TO 2 PERCENT SLOPES
16	ZEPHYR MUCK	59	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES	60	PALMETTO-ZEPHYR-SELLERS COMPLEX
21	SMYRNA FINE SAND	69	MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
22	BASINGER FINE SAND	70	PLACID FINE SAND
23	BASINGER FINE SAND, DEPRESSIONAL	73	ZOLFO FINE SAND
26	NARCOSSEE FINE SAND	99	WATER



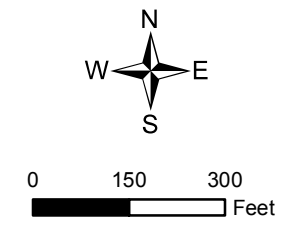
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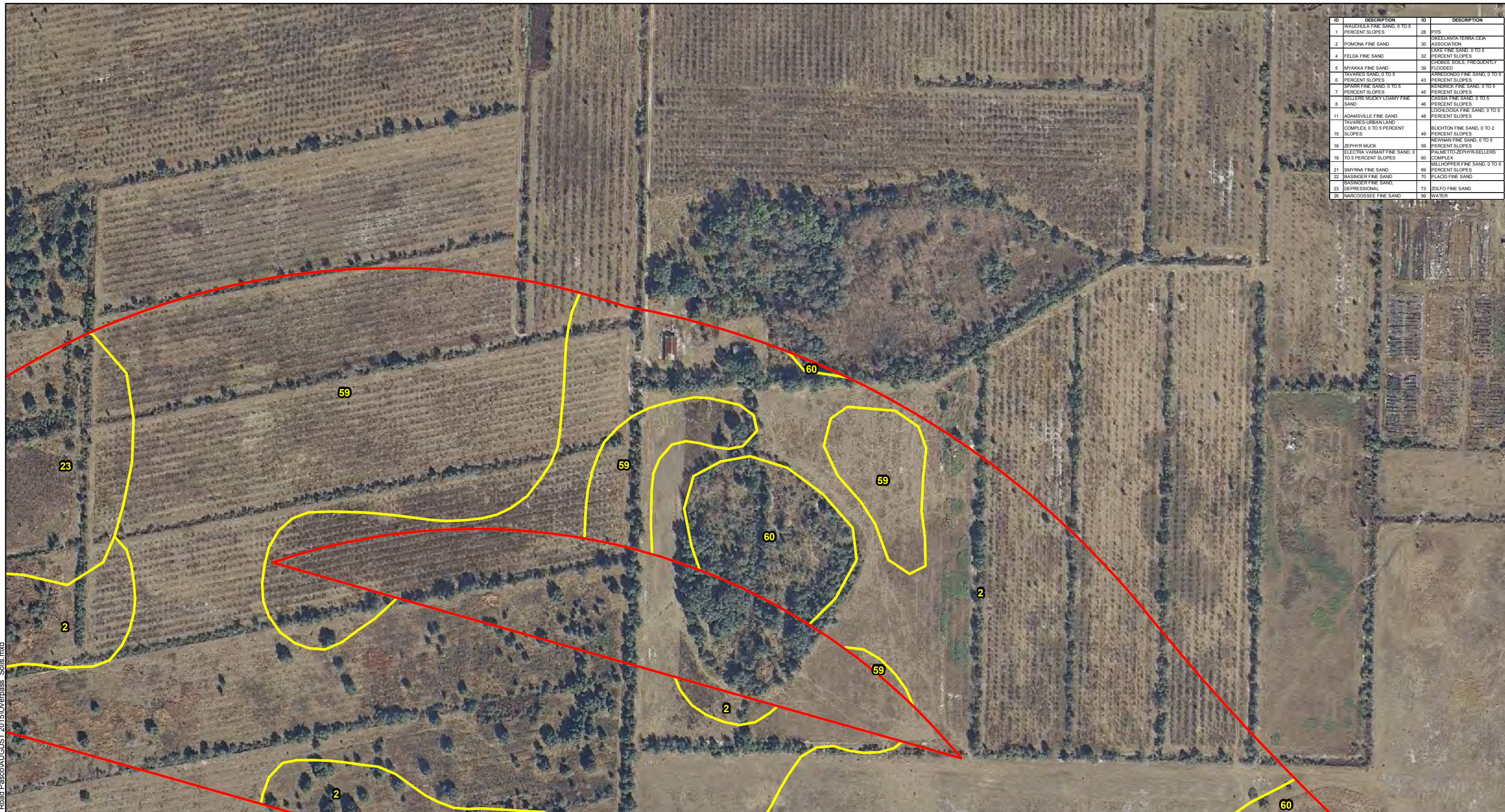
- Legend**
- Project Study Area
 - NRCS Soils

Source:
Aerials- FDOT, 2011
Soils- NRCS, 2010

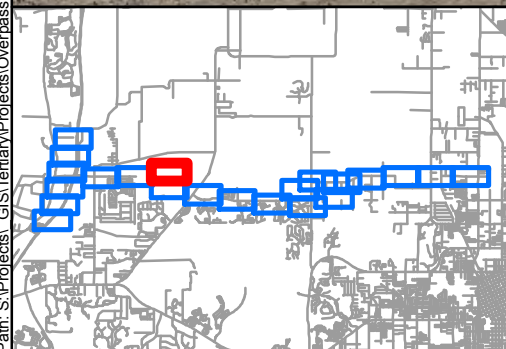
**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
NRCS Soils Map
Pasco County, FL
Sheet 9 of 22





ID	DESCRIPTION	ID	DESCRIPTION
1	WALDOUGHA FINE SAND, 0 TO 5 PERCENT SLOPES	28	PITS
2	POMONA FINE SAND	30	OKEELANTA-TERRA CEIA ASSOCIATION
4	FELDA FINE SAND	32	LAKE FINE SAND, 0 TO 5 PERCENT SLOPES
5	MYAKKA FINE SAND	39	FLOODED
6	MYAKKA FINE SAND, 0 TO 5 PERCENT SLOPES	43	CHOCBEE SOILS, FREQUENTLY FLOODED
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	CASSIA FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	LOGHOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
15	TAVARES URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	BLIGHTON FINE SAND, 0 TO 2 PERCENT SLOPES
16	ZEPHYR MUCK	59	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES	60	PALMETTO-ZEPHYR-SELLERS COMPLEX
21	SMYRNA FINE SAND	69	MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
22	BASINGER FINE SAND	70	PLACID FINE SAND
23	BASINGER FINE SAND, DEPRESSIONAL	73	ZOLFO FINE SAND
26	NARCOSSEE FINE SAND	99	WATER



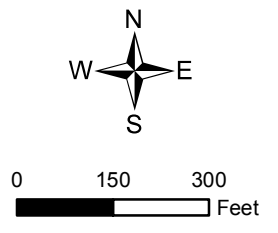
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Legend
 Project Study Area
 NRCS Soils

Source:
Aerials- FDOT, 2011
Soils- NRCS, 2010

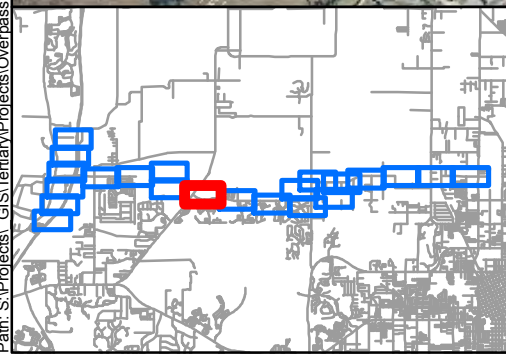
**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
NRCS Soils Map
Pasco County, FL
Sheet 10 of 22



ID	DESCRIPTION	ID	DESCRIPTION
1	WALDOUGHA FINE SAND, 0 TO 5 PERCENT SLOPES	28	PITS
2	POMONA FINE SAND	30	OKEEELANTA-TERRA CEIA ASSOCIATION LAKE FINE SAND, 0 TO 5 PERCENT SLOPES
4	FELDA FINE SAND	32	FLOODED
5	MYAKKA FINE SAND	39	CHROME SOILS, FREQUENTLY FLOODED
6	TAYLORS SAND, 0 TO 5 PERCENT SLOPES	43	ARRINGTON FINE SAND, 0 TO 5 PERCENT SLOPES
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	CASSIA FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	LOCHLOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
15	TAYLORS URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	BLUCHTON FINE SAND, 0 TO 2 PERCENT SLOPES
16	ZEPHYR MUCK	59	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES	60	PALMETTO-ZEPHYR-SELLERS COMPLEX
21	SMYRNA FINE SAND	69	MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
22	BASINGER FINE SAND	70	PLACID FINE SAND
23	BASINGER FINE SAND, DEPRESSIONAL	73	ZOLFO FINE SAND
26	NARCOSSEE FINE SAND	99	WATER



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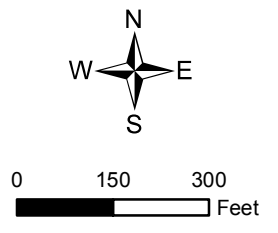
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Project Study Area

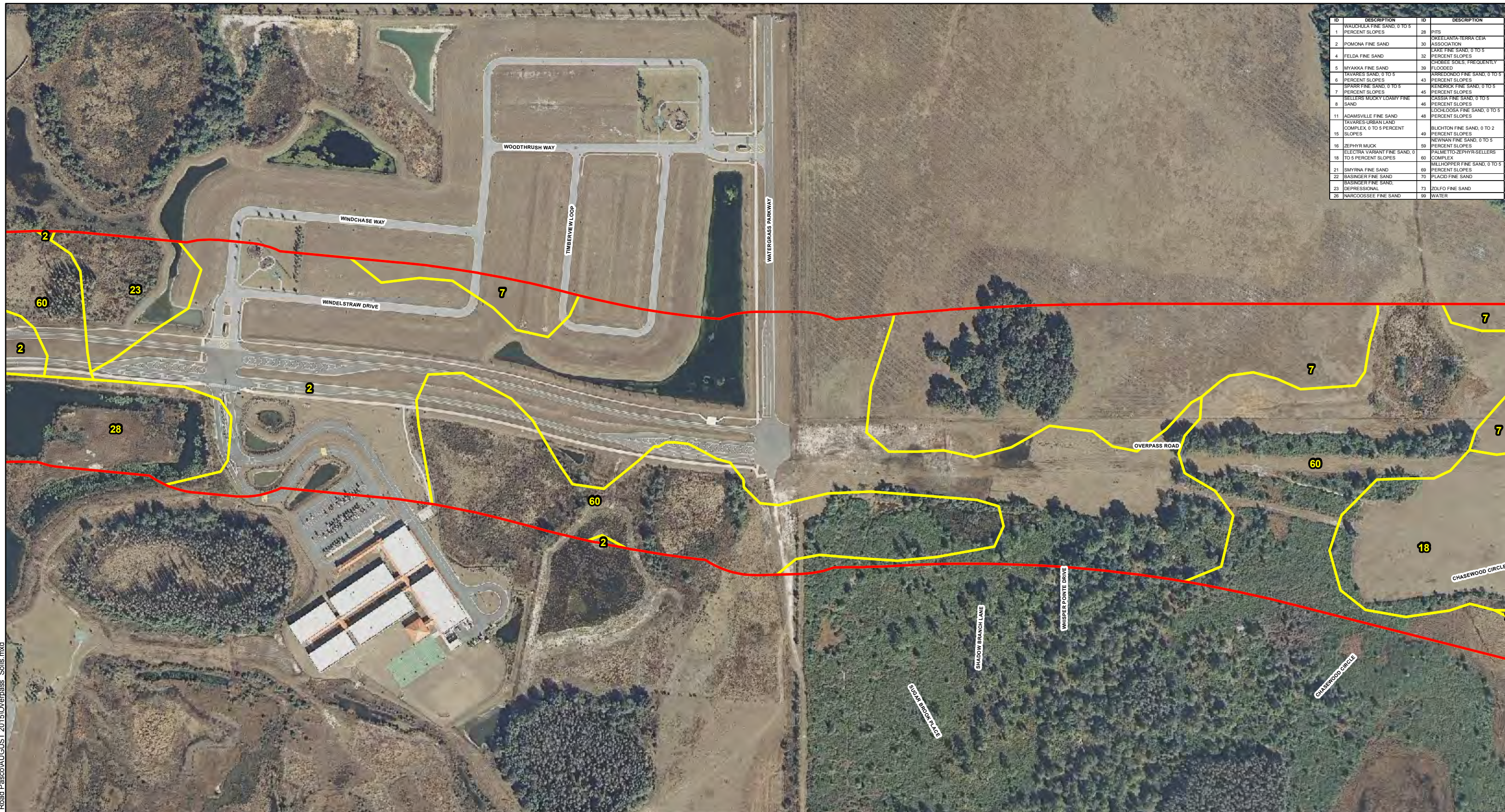
NRCS Soils

Source:
Aerials- FDOT, 2011
Soils- NRCS, 2010

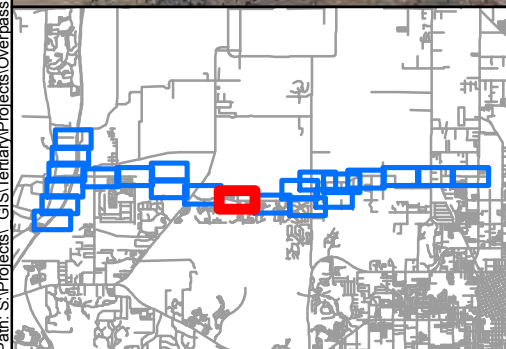
**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
NRCS Soils Map
Pasco County, FL
Sheet 11 of 22



ID	DESCRIPTION	ID	DESCRIPTION
1	WALDOUGHA FINE SAND, 0 TO 5 PERCENT SLOPES	28	PITS
2	POMONA FINE SAND	30	OKEELANTA-TERRA CEIA ASSOCIATION
4	FELDA FINE SAND	32	CARE FINE SAND, 0 TO 5 PERCENT SLOPES
5	MYAKKA FINE SAND	39	FLOODED
6	TAVARES SAND, 0 TO 5 PERCENT SLOPES	43	CHOBEE SOILS, FREQUENTLY FLOODED
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	CASSA FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	LOGHOUSA FINE SAND, 0 TO 5 PERCENT SLOPES
15	TAVARES URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	BLIGHTON FINE SAND, 0 TO 2 PERCENT SLOPES
16	ZEPHYR MUCK	59	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES	60	PALMETTO-ZEPHYR-SELLERS COMPLEX
21	SMYRNA FINE SAND	69	MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
22	BASINGER FINE SAND	70	PLACID FINE SAND
23	BASINGER FINE SAND, DEPRESSIONAL	73	ZOLFO FINE SAND
26	NARCOSSEE FINE SAND	99	WATER



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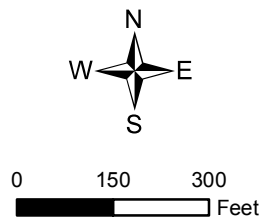


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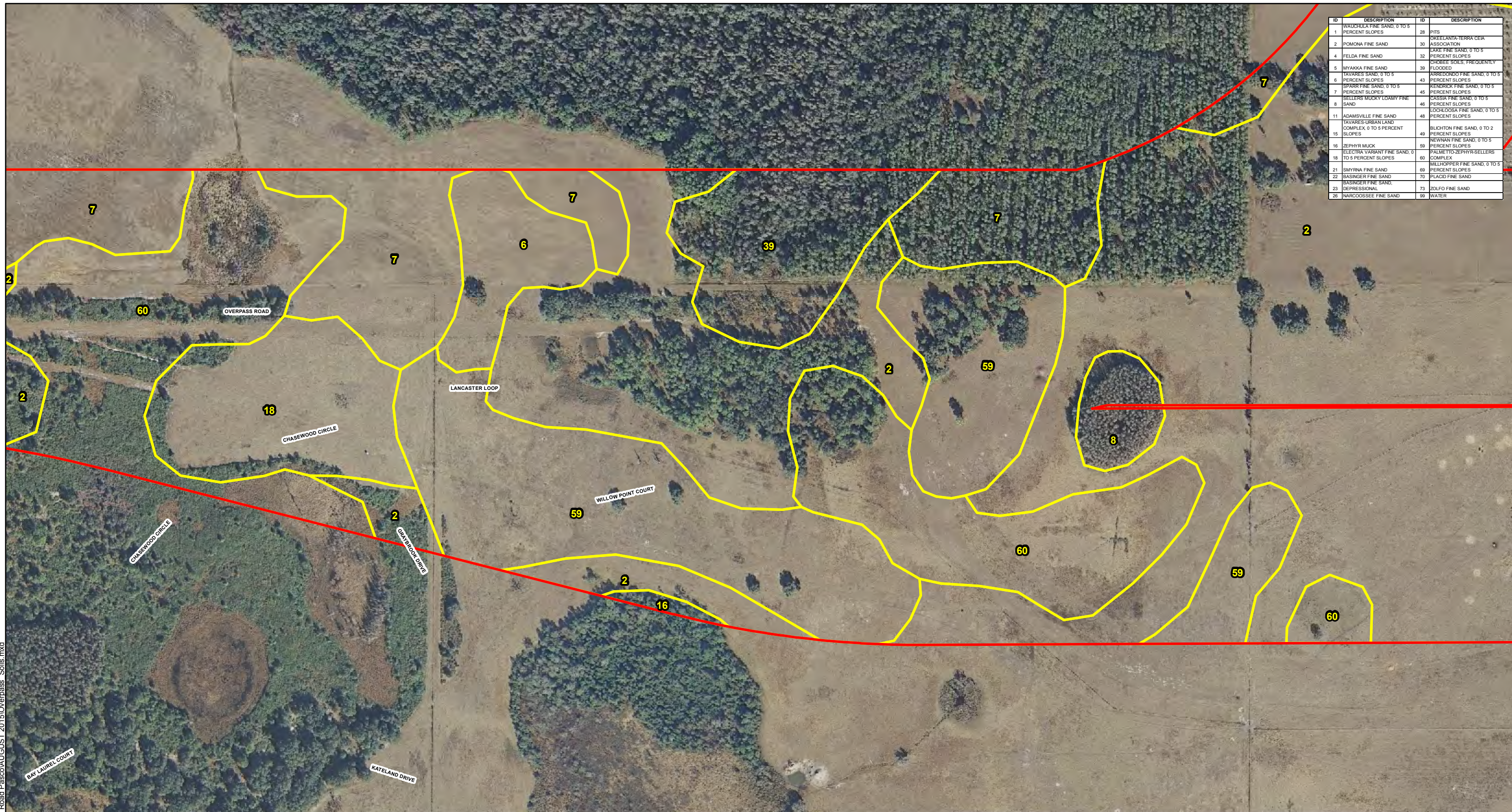
- Project Study Area
- NRCS Soils

Source:
Aerials- FDOT, 2011
Soils- NRCS, 2010

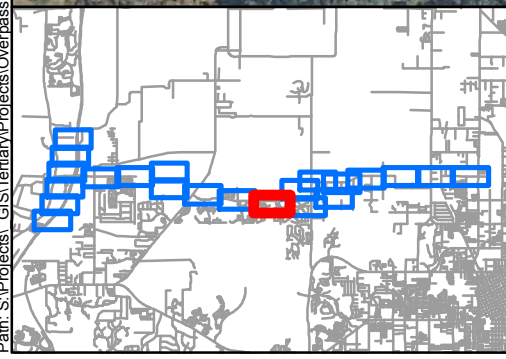
**Overpass Road from Old Pasco Road
to US 31 PD+E Study**
NRCS Soils Map
Pasco County, FL
Sheet 12 of 22



ID	DESCRIPTION	ID	DESCRIPTION
1	WALDOUGHA FINE SAND, 0 TO 5 PERCENT SLOPES	28	PITS
2	POMONA FINE SAND	30	OKEELENTA-TERRA CEIA ASSOCIATION
4	FELDA FINE SAND	32	LAKE FINE SAND, 0 TO 5 PERCENT SLOPES
5	MYAKKA FINE SAND	39	CHOBEE SOILS, FREQUENTLY FLOODED
6	AVARES SAND, 0 TO 5 PERCENT SLOPES	43	ARRINGTON FINE SAND, 0 TO 5 PERCENT SLOPES
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	CASSIA FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	LOGHOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
15	AVARES URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	BLIGHTON FINE SAND, 0 TO 2 PERCENT SLOPES
16	ZEPHYR MUCK	59	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
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22	BASINGER FINE SAND	70	FLACID FINE SAND
23	BASINGER FINE SAND, DEPRESSIONAL	73	ZOLFO FINE SAND
26	NARCOSSEE FINE SAND	99	WATER



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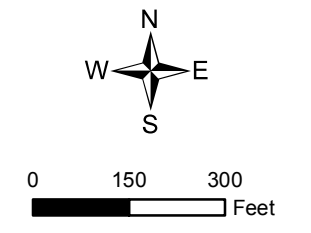


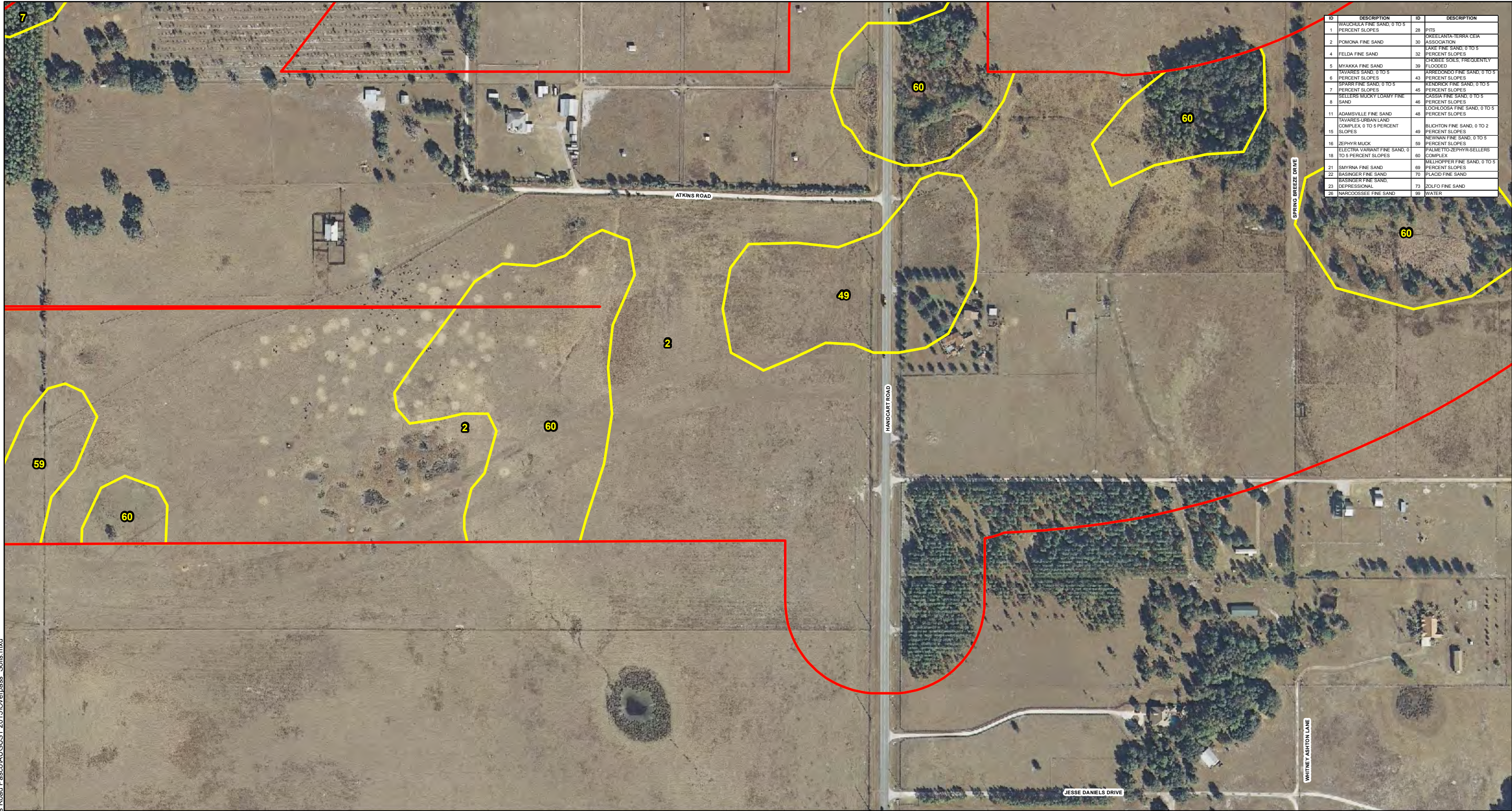
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- Project Study Area
- NRCS Soils

Source:
Aerials- FDOT, 2011
Soils- NRCS, 2010



**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
NRCS Soils Map
Pasco County, FL
Sheet 13 of 22





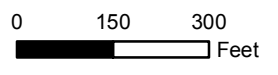
ID	DESCRIPTION	ID	DESCRIPTION
1	WALDOUGHA FINE SAND, 0 TO 5 PERCENT SLOPES	28	PITS
2	POMONA FINE SAND	30	OKEELENTA-TERRA CEIA ASSOCIATION
4	FELDA FINE SAND	32	CAPE FINE SAND, 0 TO 5 PERCENT SLOPES
5	MYAKKA FINE SAND	39	FLOODED
6	WYARES SAND, 0 TO 5 PERCENT SLOPES	43	CHOBEE SOILS, FREQUENTLY FLOODED
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	CASSIA FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	LOGHOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
15	TAVARES URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	BUGHTON FINE SAND, 0 TO 2 PERCENT SLOPES
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22	BASINGER FINE SAND	70	FLACID FINE SAND
23	DEPRESSIONAL	73	ZOLFO FINE SAND
26	NARCOSSEE FINE SAND	99	WATER

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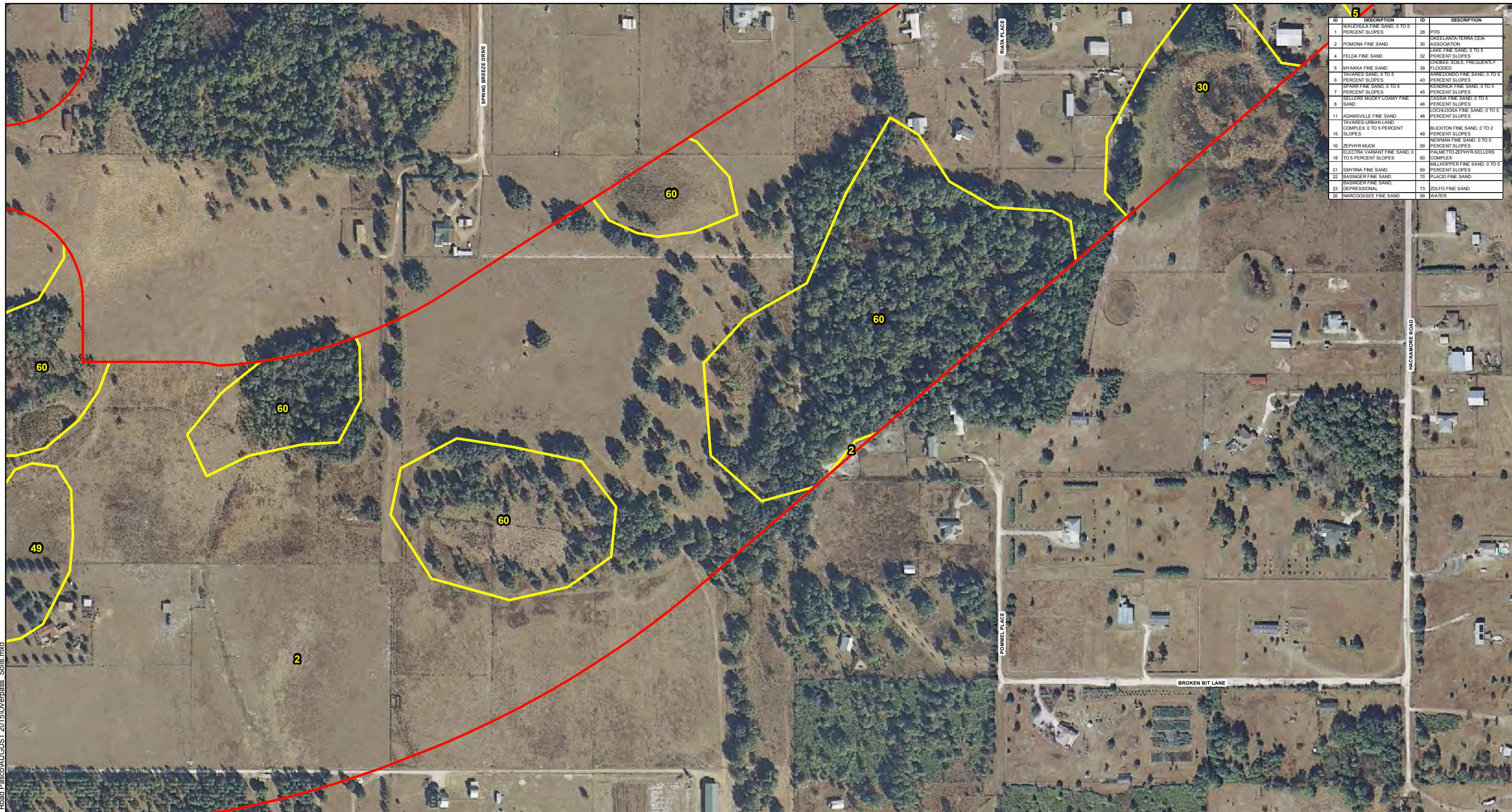
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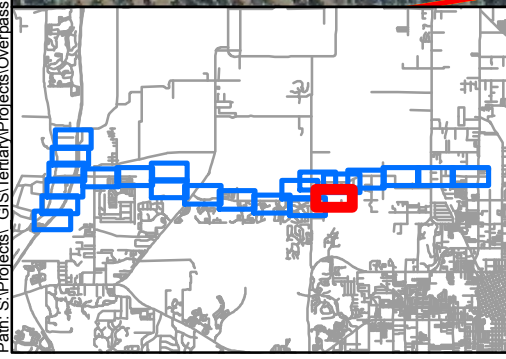
Overpass Road from Old Pasco Road to US 301 PD+E Study
NRCS Soils Map
 Pasco County, FL
 Sheet 14 of 22



ID	DESCRIPTION	ID	DESCRIPTION
1	WALDOUGHA FINE SAND, 0 TO 5 PERCENT SLOPES	28	PITS
2	POMONA FINE SAND	30	ORIELANTA-TERRA CEIA ASSOCIATION
4	FELDA FINE SAND	32	CAPE FINE SAND, 0 TO 5 PERCENT SLOPES
5	MYAKKA FINE SAND	39	FLOODED
6	TAVARES SAND, 0 TO 5 PERCENT SLOPES	43	CHOBEE SOILS, FREQUENTLY
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	CASSA FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	LOCHLOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
15	TAVARES URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	BLUGHTON FINE SAND, 0 TO 2 PERCENT SLOPES
16	ZEPHYR MUCK	59	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES	60	PALMETTO-ZEPHYR-SELLERS COMPLEX
21	SMYRNA FINE SAND	69	MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
22	BASINGER FINE SAND	70	PLACID FINE SAND
23	BASINGER FINE SAND, DEPRESSIONAL	73	ZOLFO FINE SAND
26	NARCOSSEE FINE SAND	99	WATER



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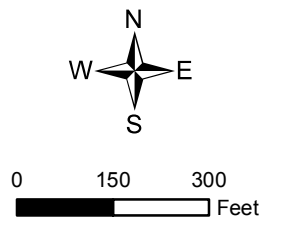
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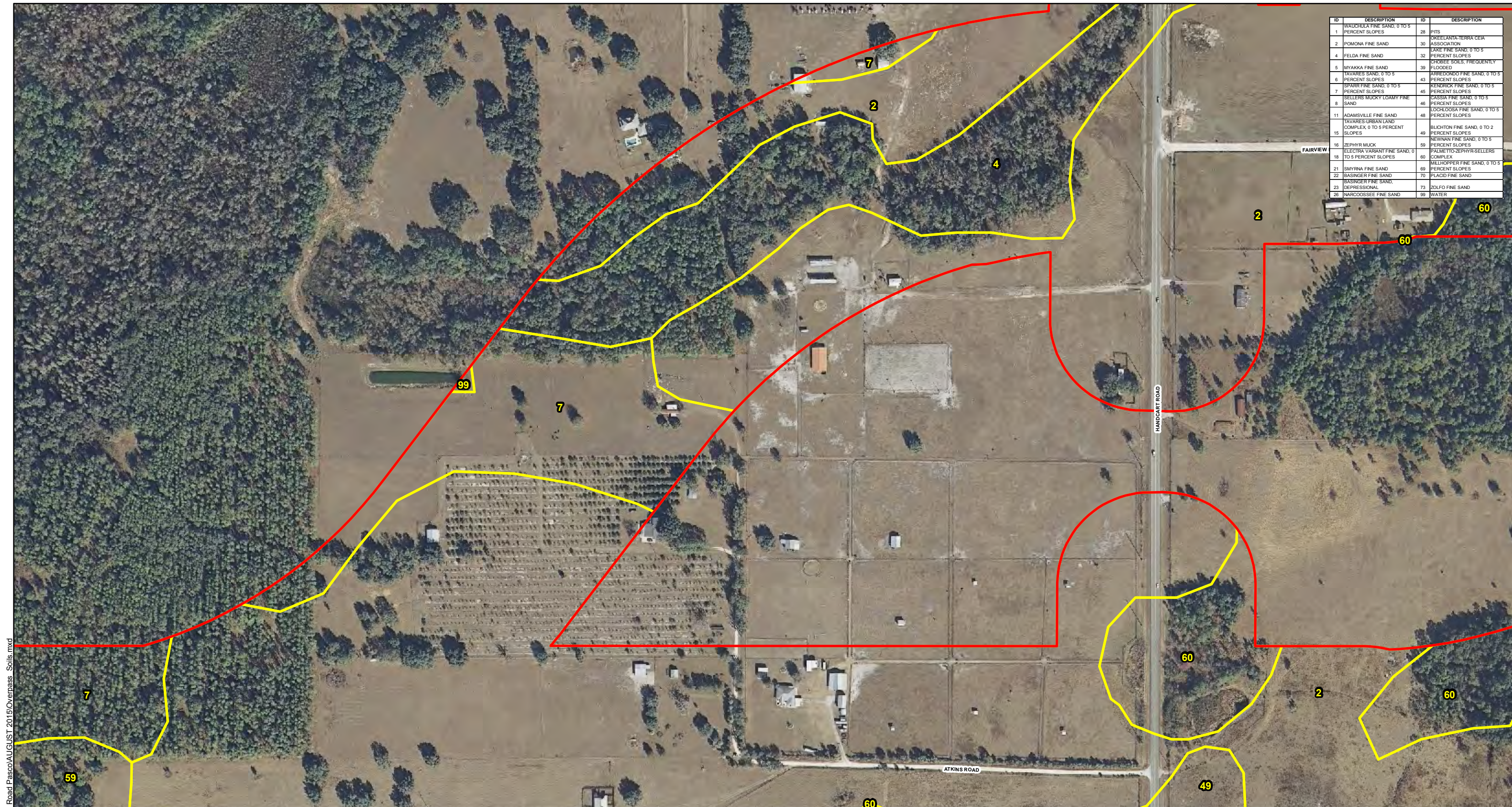
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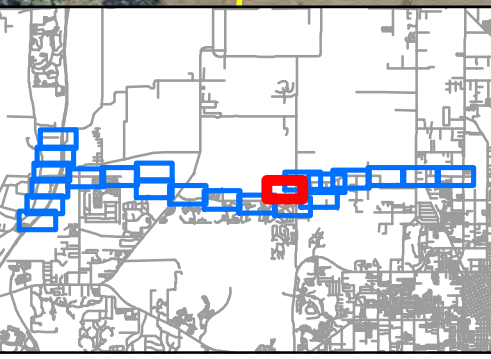
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NRCS Soils Map
Pasco County, FL
Sheet 15 of 22



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2	POMONA FINE SAND	30	ORIELANTA-TERRA CEIA ASSOCIATION CARE FINE SAND, 0 TO 5 PERCENT SLOPES
4	FELDA FINE SAND	32	CARE FINE SAND, 0 TO 5 PERCENT SLOPES
5	MYAKKA FINE SAND	39	CHOBEE SOILS, FREQUENTLY FLOODED
6	WAVES FINE SAND, 0 TO 5 PERCENT SLOPES	43	ARRINGTON FINE SAND, 0 TO 5 PERCENT SLOPES
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	CASSA FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	LOGHOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
15	WAVES URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	BLIGHTON FINE SAND, 0 TO 2 PERCENT SLOPES
16	ZEPHYR MUCK	59	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES	60	PALMETTO-ZEPHYR-SELLERS COMPLEX
21	SMYRNA FINE SAND	69	MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
22	BASINGER FINE SAND	70	PLACID FINE SAND
23	BASINGER FINE SAND, DEPRESSIONAL	73	ZOLFO FINE SAND
26	NARCOSSEE FINE SAND	99	WATER



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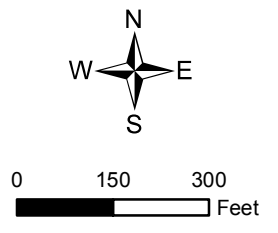
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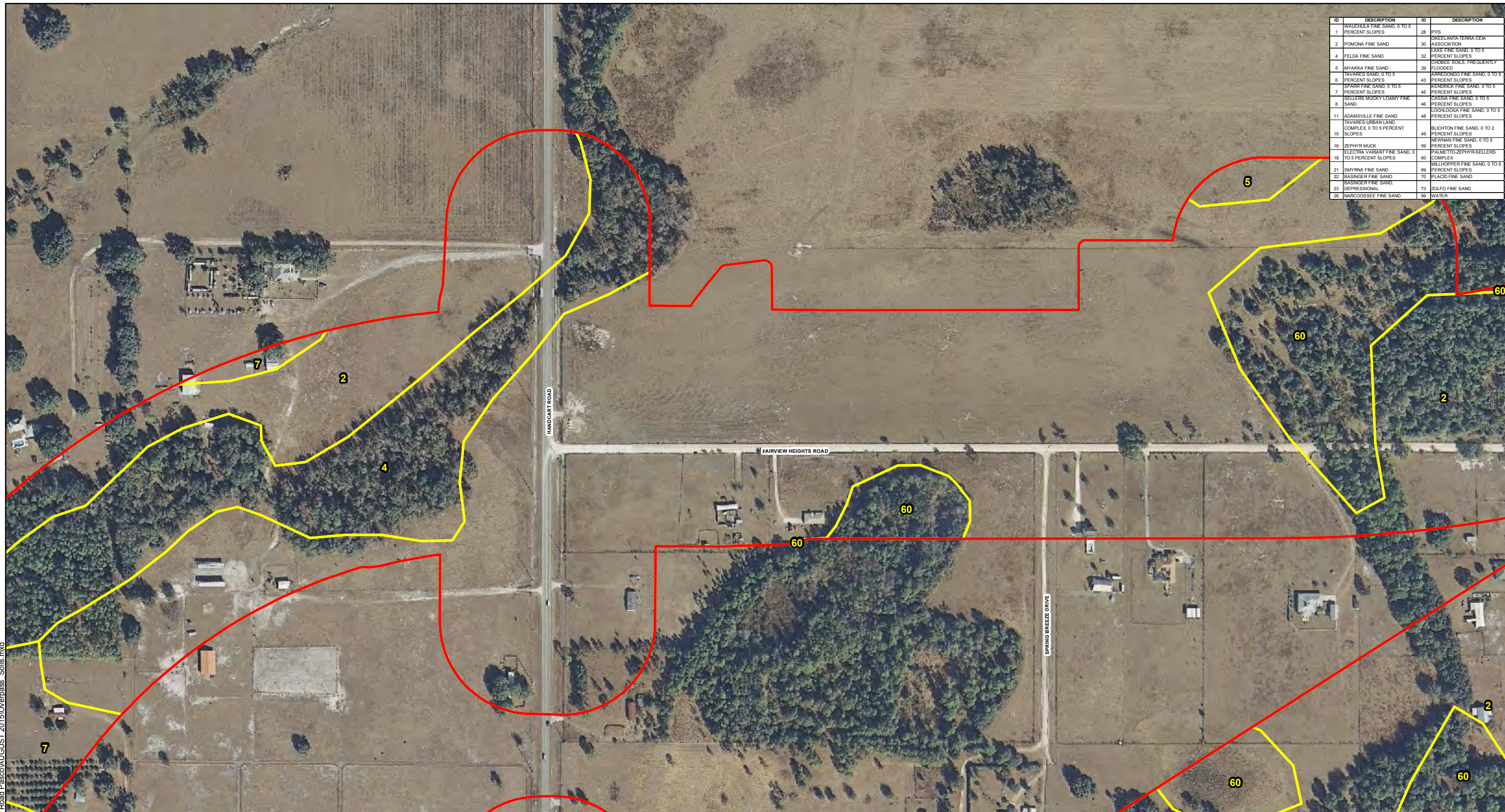
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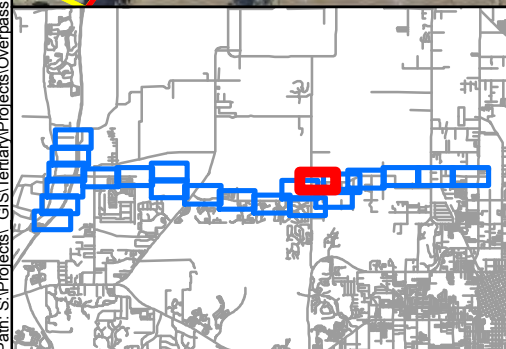
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NRCS Soils Map
Pasco County, FL
Sheet 16 of 22



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2	POMONA FINE SAND	30	OKEELENTA-TERRA CEIA ASSOCIATION LAKE FINE SAND, 0 TO 5 PERCENT SLOPES
4	FELDA FINE SAND	32	CHOBEE SOILS, FREQUENTLY FLOODED
5	MYAKKA FINE SAND	39	ARRADONDO FINE SAND, 0 TO 5 PERCENT SLOPES
6	TAVARES SAND, 0 TO 5 PERCENT SLOPES	43	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	CASSIA FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	LOGHOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	BLUGHTON FINE SAND, 0 TO 2 PERCENT SLOPES
15	TAVARES URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
16	ZEPHYR MUCK	59	PALMETTO-ZEPHYR-SELLERS COMPLEX
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES	60	MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
21	SMYRNA FINE SAND	69	FLACID FINE SAND
22	BASINGER FINE SAND	70	ZOLFO FINE SAND
23	BASINGER FINE SAND, DEPRESSIONAL	73	
26	NARCOSSEE FINE SAND	99	WATER



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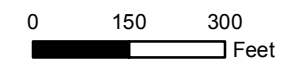


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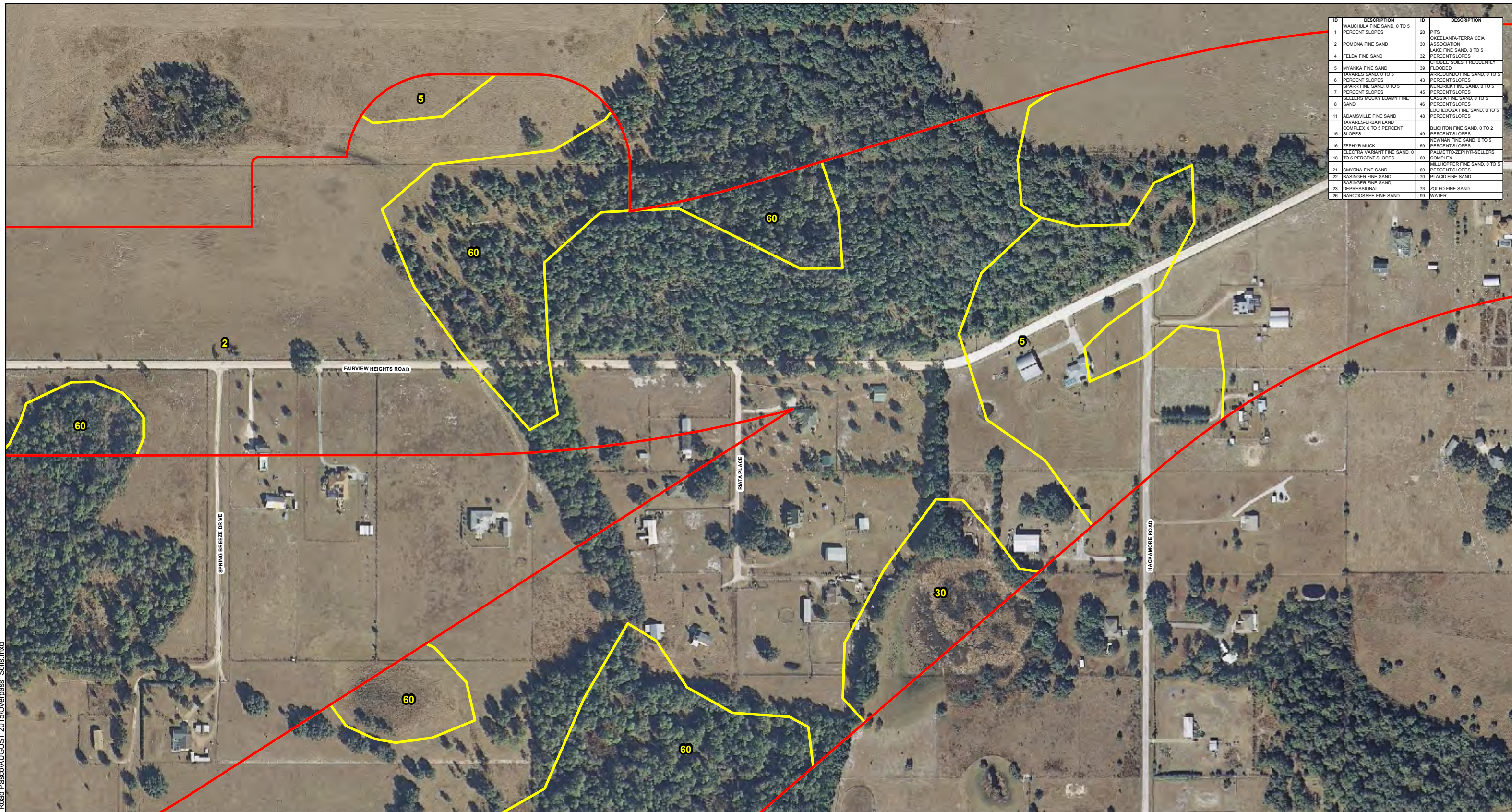
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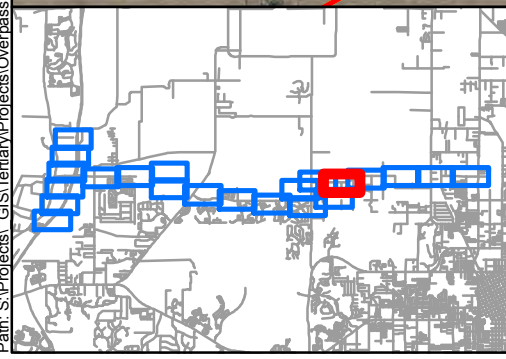
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NRCS Soils Map
Pasco County, FL
Sheet 17 of 22



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2	POMONA FINE SAND	30	ORIELANTA-TERRA CEIA ASSOCIATION
4	FELDA FINE SAND	32	LAKE FINE SAND, 0 TO 5 PERCENT SLOPES
5	MYAKKA FINE SAND	39	FLOODED
6	TAVARES SAND, 0 TO 5 PERCENT SLOPES	43	CHOBEE SOILS, FREQUENTLY FLOODED
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	ARRINGTON FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	CASSIA FINE SAND, 0 TO 5 PERCENT SLOPES
15	TAVARES URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	LOCHLOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
16	ZEPHYR MUCK	59	BLUGHTON FINE SAND, 0 TO 2 PERCENT SLOPES
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES	60	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
21	SMYRNA FINE SAND	69	PALMETTO-ZEPHYR-SELLERS COMPLEX
22	BASINGER FINE SAND	70	MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
23	BASINGER FINE SAND, DEPRESSIONAL	73	FLACID FINE SAND
26	NARCOSSEE FINE SAND	99	ZOLFO FINE SAND



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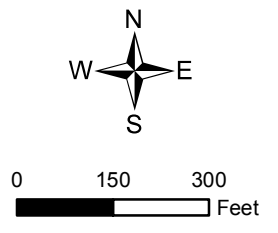
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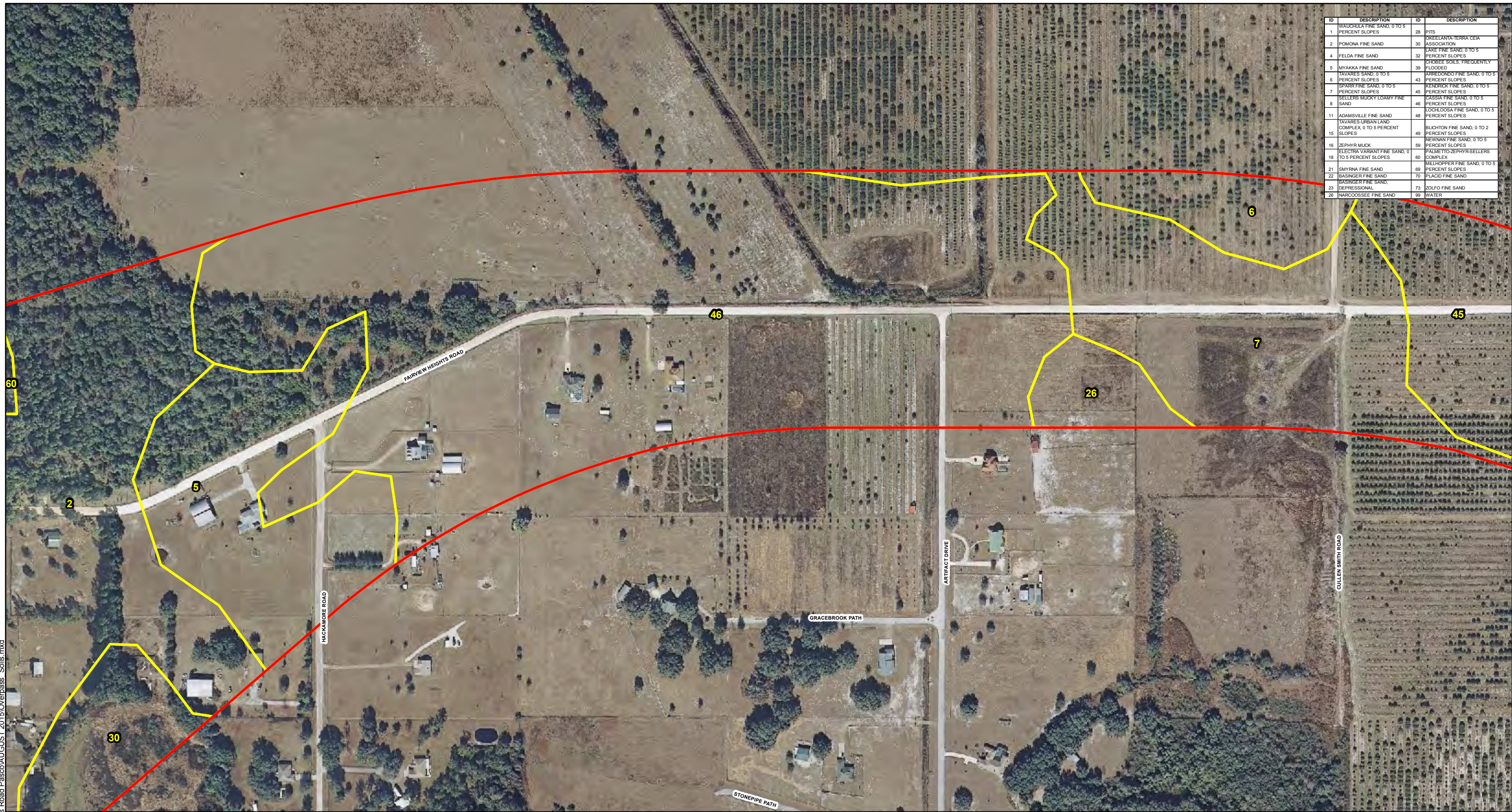
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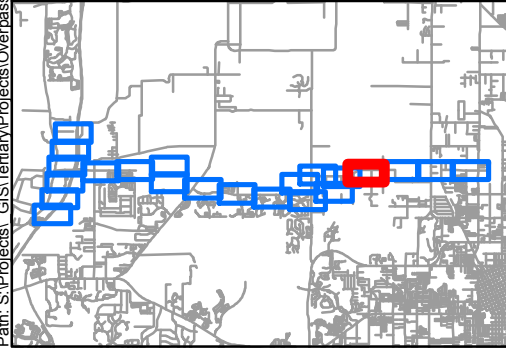
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to US 301 PD+E Study**
NRCS Soils Map
Pasco County, FL
Sheet 18 of 22



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2	POMONA FINE SAND	30	ORKEELANTA-TERRA CEIA ASSOCIATION LAKE FINE SAND, 0 TO 5 PERCENT SLOPES
4	FELDA FINE SAND	32	CHOBEE SOILS, FREQUENTLY FLOODED
5	MYAKKA FINE SAND	39	CHOBEE SOILS, FREQUENTLY FLOODED
6	MYAKKA FINE SAND, 0 TO 5 PERCENT SLOPES	43	PERDORF FINE SAND, 0 TO 5 PERCENT SLOPES
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	CASSIN FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	LOCHLOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
15	YAVARES URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	BLUGHTON FINE SAND, 0 TO 2 PERCENT SLOPES
16	ZEPHYR MUCK	59	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES	60	PALMETTO-ZEPHYR-SELLERS COMPLEX
21	SMYRNA FINE SAND	69	MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
22	BASINGER FINE SAND	70	PLACID FINE SAND
23	BASINGER FINE SAND, DEPRESSIONAL	73	ZOLFO FINE SAND
26	NARCOSSEE FINE SAND	99	WATER



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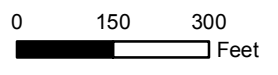


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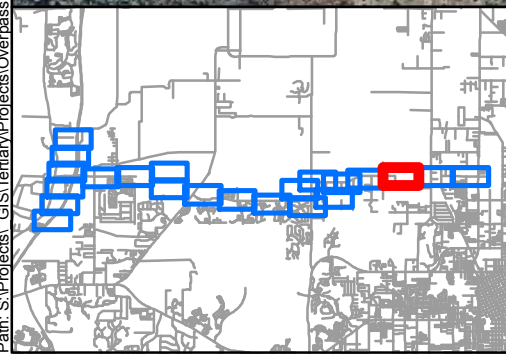
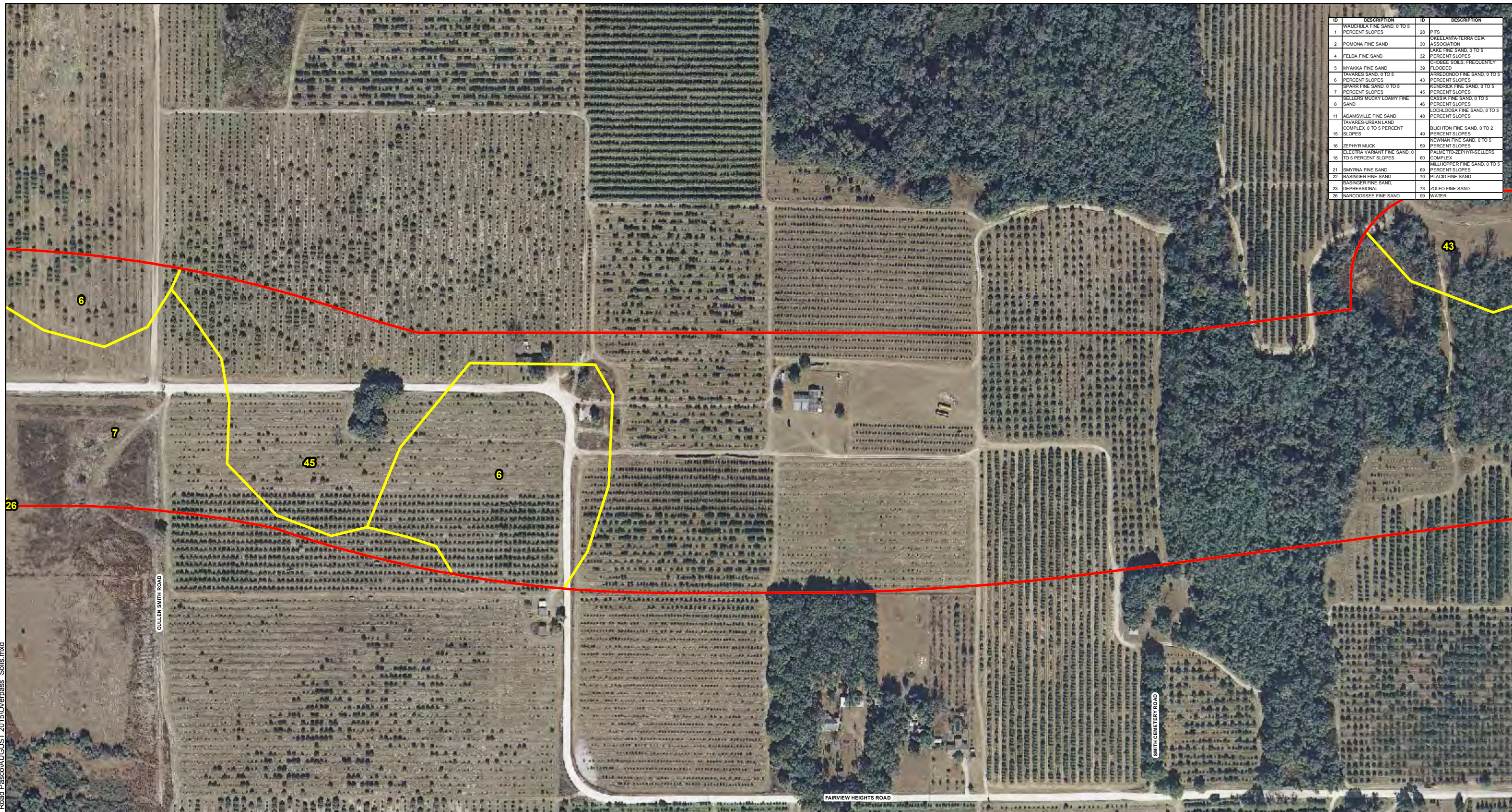
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Soils- NRCS, 2010

**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
NRCS Soils Map
Pasco County, FL
Sheet 19 of 22



ID	DESCRIPTION	ID	DESCRIPTION
1	WALDOOLA FINE SAND, 0 TO 5 PERCENT SLOPES	28	PITS
2	POMONA FINE SAND	30	ORIELANTA-TERRA CEIA ASSOCIATION
4	FELDA FINE SAND	32	LAKE FINE SAND, 0 TO 5 PERCENT SLOPES
5	MYAKKA FINE SAND	39	FLOODED
6	TAYLORS SAND, 0 TO 5 PERCENT SLOPES	43	ARRINGTON FINE SAND, 0 TO 5 PERCENT SLOPES
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	CASSIN FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	LOGHOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
15	TAYLORS URGENT LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	BLUGHTON FINE SAND, 0 TO 2 PERCENT SLOPES
16	ZEPHYR MUCK	59	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES	60	PALMETTO-ZEPHYR-SELLERS COMPLEX
21	SMYRNA FINE SAND	69	MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
22	BASINGER FINE SAND	70	PLACID FINE SAND
23	BASINGER FINE SAND, DEPRESSIONAL	73	ZOLFO FINE SAND
26	NARCOSSEE FINE SAND	99	WATER



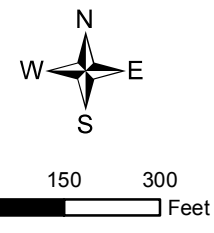
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Project Study Area

NRCS Soils

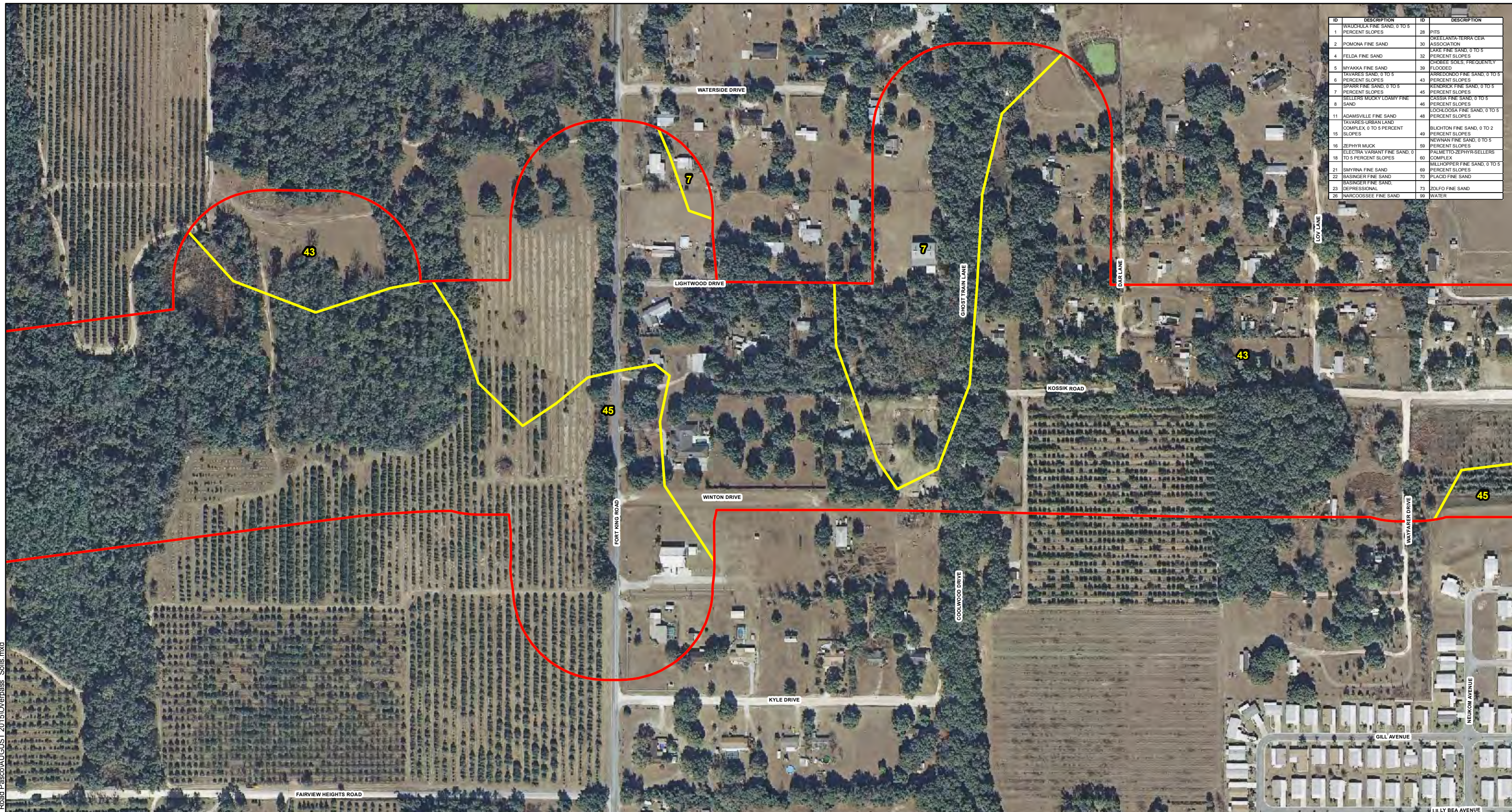
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Soils- NRCS, 2010

Overpass Road from Old Pasco Road to US 301 PD+E Study
NRCS Soils Map
 Pasco County, FL
 Sheet 20 of 22

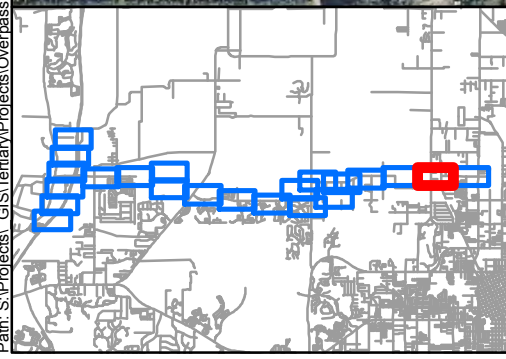


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ID	DESCRIPTION	ID	DESCRIPTION
1	WALDOUGHA FINE SAND, 0 TO 5 PERCENT SLOPES	28	PITS
2	POMONA FINE SAND	30	ORIELANTA-TERRA CEIA ASSOCIATION LAKE FINE SAND, 0 TO 5 PERCENT SLOPES
4	FELDA FINE SAND	32	CHOCHEE SOILS, FREQUENTLY FLOODED
5	MYAKKA FINE SAND	39	FLOODED
6	TAYLORS SAND, 0 TO 5 PERCENT SLOPES	43	WINDORF FINE SAND, 0 TO 5 PERCENT SLOPES
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	CASSA FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	LOGHOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
15	TAYLORS URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	BLUGHTON FINE SAND, 0 TO 2 PERCENT SLOPES
16	ZEPHYR MUCK	59	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES	60	PALMETTO-ZEPHYR-SELLERS COMPLEX
21	SMYRNA FINE SAND	69	MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
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26	NARCOSSEE FINE SAND	99	WATER



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- Project Study Area
- NRCS Soils

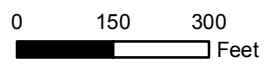
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Overpass Road from Old Pasco Road to US 301 PD+E Study

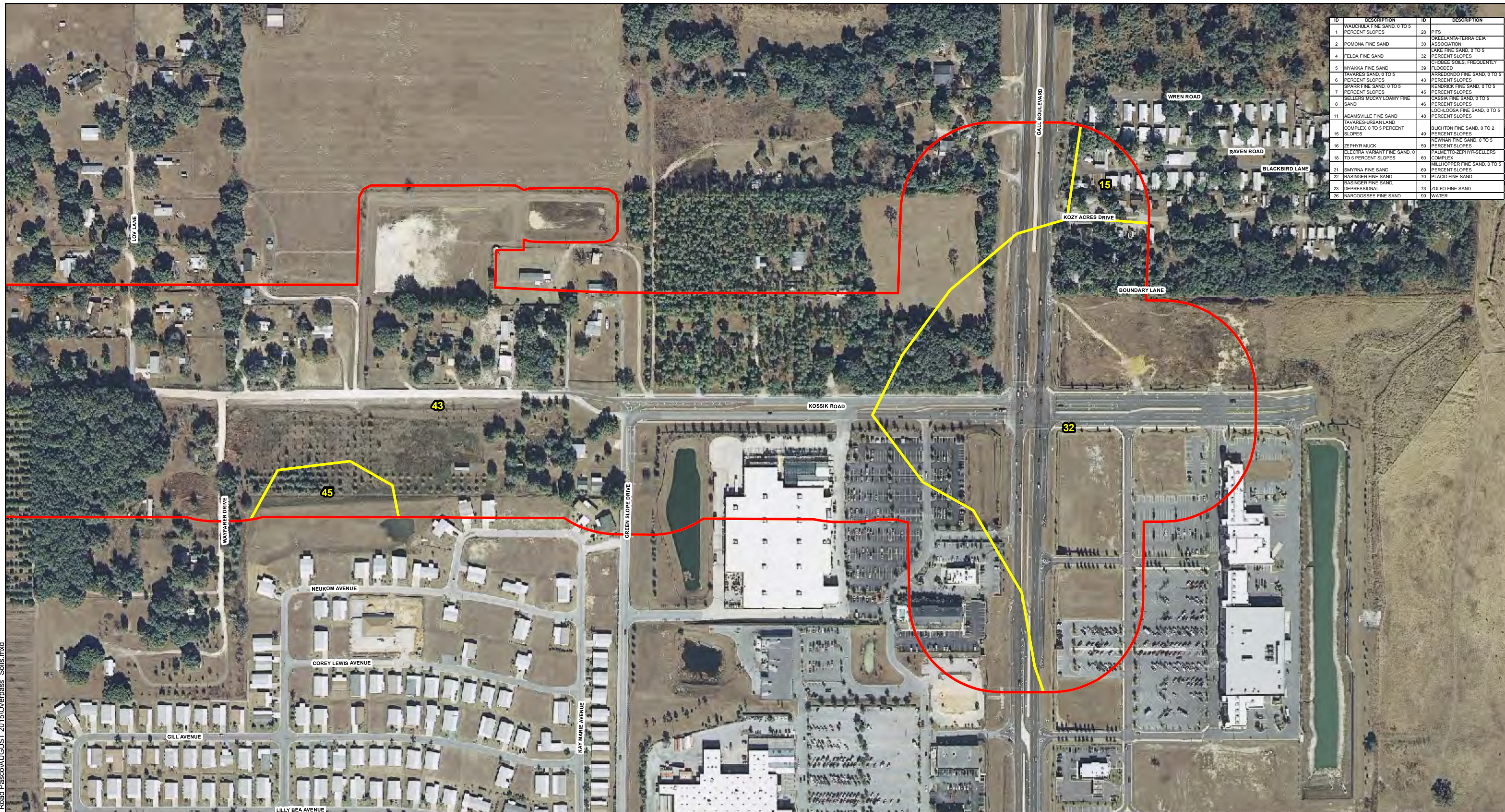
NRCS Soils Map

Pasco County, FL

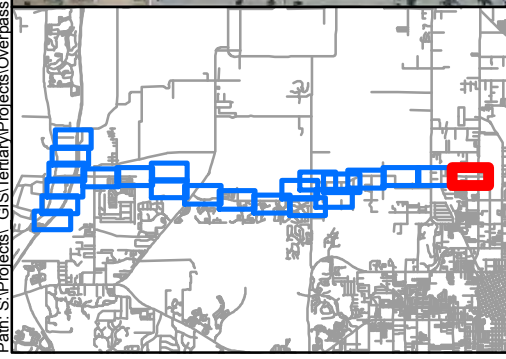
Sheet 21 of 22



ID	DESCRIPTION	ID	DESCRIPTION
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2	POMONA FINE SAND	30	OKEELANTA-TERRA CEIA ASSOCIATION
4	FELDA FINE SAND	32	LAKE FINE SAND, 0 TO 5 PERCENT SLOPES
5	MYAKKA FINE SAND	39	CHOBEE SOILS, FREQUENTLY FLOODED
6	TAVARES SAND, 0 TO 5 PERCENT SLOPES	43	BERNARDINE FINE SAND, 0 TO 5 PERCENT SLOPES
7	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	45	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES
8	SELLERS MUCKY LOAMY FINE SAND	46	CASSIA FINE SAND, 0 TO 5 PERCENT SLOPES
11	ADAMSVILLE FINE SAND	48	LOGHOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
15	TAVARES URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	49	BLUCHTON FINE SAND, 0 TO 2 PERCENT SLOPES
16	ZEPHYR MUCK	59	NEWMAN FINE SAND, 0 TO 5 PERCENT SLOPES
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES	60	PALMETTO-ZEPHYR-SELLERS COMPLEX
21	SMYRNA FINE SAND	69	MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
22	BASINGER FINE SAND	70	FLACID FINE SAND
23	BASINGER FINE SAND, DEPRESSIONAL	73	ZOLFO FINE SAND
26	NARCOSSEE FINE SAND	99	WATER



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- NRCS Soils

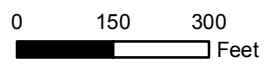
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Soils- NRCS, 2010

Overpass Road from Old Pasco Road to US 301 PD+E Study

NRCS Soils Map

Pasco County, FL

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APPENDIX B

Land Use Maps and Descriptions

Appendix B - Existing Land Use and Vegetative Cover within the Project Study Area

Upland Community Types

Developed Areas

Residential, Low Density

FLUCFCS: 110

Residential, low density land use consists of rural areas with less than two dwelling units per acre. These residences often are found among other land uses such as agriculture. Residential, low density land use covers 234.0 acres of the project study area and is comprised of single-family homes on large lots. This land use is located throughout the project study area, including the west side of I-75 south of Overpass Road, the west side of Old Pasco Road, along Boyette Road north of Overpass Road, along Atkins Road west of Handcart Road, and along Handcart Road and Fairview Heights Road. This land use is also located in areas east of Fort King Boulevard, along Kossik Road in the eastern portion of the project study area, and along portions of the I-75 intersection near Overpass Road.

Residential, Medium Density

FLUCFCS: 120

Residential, medium density land use consists of rural areas with two to five dwelling units per acre. Residential, medium density land use comprises 57.9 acres of the project study area. This land use is comprised of single-family homes located along Boyette Road south of Overpass Road, within the Watergrass Subdivision east of Curley Road, along Fort King Road and Coolwood Drive, and on the north side of Kossik Drive.

Residential, High Density

FLUCFCS: 130

Residential, high density land use consists of areas with multiple dwelling units per acre. Residential, high density land use comprises 29.3 acres of the project study area and is comprised of single-family or town homes located south of Overpass Road in Palm Cove Subdivision, along US 301, and the Quail Run RV Resort located along Old Pasco Road.

Commercial and Services

FLUCFCS: 140

Commercial and services areas are predominantly associated with the distribution of products and services. This land use type includes all secondary structures associated with an enterprise in addition to the main building such as sheds, warehouses, office buildings, driveways, parking lots, and landscaped areas. This land use comprises 20.2 acres of the project study area and is located in the North Town Centre (Lowe's and Publix shopping centers) at the intersection of Kossik Road and US 301.

Cemeteries

FLUCFCS: 148

Smith Cemetery is located on Smith Cemetery Road between Fairview Heights Road and Fort King Road. This cemetery was established by James C. Smith in 1885 as a burial ground for the Smith family and their descendants (Horgan *et al* 1992). This land use comprises less than 0.1 acre of the project study area and contains gravestones and a covered building with seating.

Educational

FLUCFCS: 171

This land use type includes all supporting facilities including parking lots, stadiums, and all buildings and other features that can be related to an educational facility. This land use includes the Kids R Kids Daycare east of Boyette Road and Watergrass Elementary School east of Curley Road. Educational land use covers 6.0 acres of the project study area.

Religious

FLUCFCS: 172

This land use is associated with buildings that are related to religious facilities. This land use also includes associated church daycare centers. Within the project area, Water's Edge Church is located east of Boyette Road, south of Overpass Road and comprises 3.2 acres of the project study area.

Recreational

FLUCFCS: 180

This land use type includes all supporting facilities that indicate user-oriented recreation, including golf courses, parks, and swimming activities. Wesley Chapel District Park is owned by Pasco County and is located south of Overpass Road east of I-75. The park covers 5.0 acres of the project study area.

Roads and Highways

FLUCFCS: 814

Roads and highways refer to facilities that are used for the movement of people and goods and encompass all areas used for interchanges and limited access right-of-way including pavement, medians, and buffers. This land use comprises 133.2 acres of the project study area, and includes major interstates, highways and roads, grassed shoulders, and embankments. The shoulders consist of herbaceous species including bahia grass (*Paspalum notatum*) that are routinely mowed and maintained along the entire project study area. Major roads and highways within the project study area include I-75, Overpass Road, Curley Road, Handcart Road, Boyette Road, Fairview Heights Road, Fort King Road, Kossik Road, and US 301. Other minor roads (paved and unpaved) are located throughout the project study area.

Communications

FLUCFCS: 820

The communications land use includes airwave communications, radar and television antennas, and associated structures. Within the project study area, a cellular tower is located east of Old Pasco Road along I-75. This land use comprises 0.2 acre of the project study area.

Utilities

FLUCFCS: 830

This land use description includes power-generating facilities and water treatment plants, including transmission lines and aeration fields for sewage treatment sites. Within the project area, water facilities owned by Pasco County are located to the east and west of I-75 south of Overpass Road and at the intersection of Boyette Road and Overpass Road. This land use comprises 59.5 acres of the project study area.

Undeveloped Upland Habitats

Open Land

FLUCFCS: 190

Open land includes undeveloped land within urban areas and inactive land with street patterns but without structures. Open land does not exhibit indications of intended use. Open land is located throughout the project study area and includes areas at the intersection of Old Pasco Road and Overpass Road, north and south of Overpass Road near I-75, east and west of Curley Road, at the terminus of Overpass Road east of Watergrass subdivision, at the intersection of US 301 and Kossik Road, and west of Handcart Road. Wildlife observed within this vegetative cover type includes Florida sandhill cranes. This land use type comprises 224.4 acres of the project study area.

Improved Pasture

FLUCFCS: 211

Improved pasture includes land which has been cleared, tilled, reseeded with specific grass types and periodically improved with brush control and fertilizer application. Improved pasture is located throughout the project study area and consists of large areas of land that comprise 189.0 acres. Improved pastures within the project study area are utilized by horses, cattle, and goats. Dominant vegetation within the improved pastures include bahia grass, bushy broomgrass (*Andropogon glomeratus*), and scattered live oak (*Quercus virginiana*), with forested and herbaceous wetlands throughout. Wildlife observed within this land use includes Florida sandhill cranes. Within the project study area, this vegetative cover type is located between Old Pasco Road and I-75; on the east side of I-75; north of Overpass Road in the western portion of the project study area; in the central portion of the project study area west of Handcart Road; and north and south of Fairview Heights Road.

Citrus Groves

FLUCFCS: 221

Citrus groves may include orange, grapefruit, and tangerine trees planted in rows. Citrus groves within the project study area are located south of the Fairview Heights Road and Artifact Drive intersection and near the Cullen Smith and Fairview Heights Road intersection. Citrus groves are also located west of Fort King Road and south of Kossik Road and cover 49.1 acres of the project study area.

Abandoned Groves

FLUCFCS: 224

Abandoned citrus groves generally show signs of overgrowth and tree mortality. This vegetative cover type comprises 108.6 acres of the project study area and is located at the terminus of Overpass Road east of the Palm Cove subdivision, and at the end of Atkins Road west of Handcart Road.

Other Open Lands (Rural)

FLUCFCS: 260

Other open lands (rural) include undeveloped land within urban areas and do not normally exhibit any indication of intended use. Other open lands comprise 87.5 acres of the project study area and is located on the east side of Old Pasco Road; on the west side of I-75 north of Overpass Road; at the Curley Road and Overpass Road intersection; at the Cullen Smith and Fairview Heights Road intersection; between Fairview Heights Road and Fort King Boulevard; and south of Kossik Road. Dominant vegetation within these open land areas consists of bahia grass, bushy broomgrass, and other low-lying herbaceous species.

Shrub and Brushland

FLUCFCS: 320

This vegetative cover type includes scrub and other brushy areas where woody plants are the prevalent cover type. Various species of herbs and grasses are also usually present. Within the project study area, shrub and brushland occurs at the Overpass Road terminus east of the Watergrass subdivision. This vegetative cover type is dominated by wax myrtle (*Myrica cerifera*), saltbush (*Baccharis halimifolia*) and associated herbaceous species. This vegetative cover type comprises 1.3 acres of the project study area.

Pine Flatwoods

FLUCFCS: 411

This category is dominated by either slash pine (*Pinus elliottii*), longleaf pine (*Pinus palustris*), or both. The common flatwoods understory species include saw palmetto (*Serenoa repens*), wax myrtle, gallberry (*Ilex* spp.), saltbush, bushy broomgrass, and wiregrass (*Aristida stricta*). Pine flatwoods are located east of the Overpass Road terminus and the Watergrass subdivision, east of Handcart Road surrounding a freshwater marsh, and north of Fairview Heights Road. Pine flatwoods comprise 29.2 acres of the project study area.

Pine-Mesic Oak

FLUCFCS: 414

Pine-mesic oak vegetative cover type is typically found on moister sites and contains a combination of slash, longleaf and loblolly pine (*Pinus taeda*) with various oak species, including water (*Quercus nigra*) and laurel oak (*Quercus laurifolia*). Other hardwoods such as hickories (*Carya* spp.), dogwood (*Cornus* spp.) and sweetgum (*Liquidambar styraciflua*) may also be found. Understory species include gallberry, wax myrtle and saw palmetto. Within the project study area, pine-mesic oak is found east of the Overpass Road terminus and the Watergrass subdivision and west of Handcart Road. This vegetative cover type comprises 2.8 acres of the project study area.

Temperate Hardwood

FLUCFCS: 425

Temperate hardwoods generally consist of various oak species with red bay (*Persea borbonia*), sweet bay (*Magnolia virginiana*), cabbage palm (*Sabal palmetto*), and hickory as associate species. Pine tree species are minor associates. This vegetative cover type comprises 24.3 acres of the project study area and is located west of I-75 north of Overpass Road and within a large area west of Fort King Road north of Fairview Heights Road.

Live Oak

FLUCFCS: 427

The live oak vegetative cover type is upland forest in which live oak is either pure or predominant. Associates include sweetgum, holly (*Ilex* spp.) and laurel oak. This vegetative cover type comprises 7.2 acres of the project study area and is located at the terminus of Overpass Road east of the Watergrass subdivision and south of Kossik Road.

Hardwood-Conifer Mixed

FLUCFCS: 434

This vegetative cover type is reserved for those forested areas in which neither upland conifers nor hardwoods achieve a 66-percent crown canopy dominance. This vegetative cover type comprises 14.8 acres of the project study area and is located at the terminus of Overpass Road east of the Watergrass subdivision surrounding a freshwater marsh and wetland scrub area. Hardwood-conifer mixed is also located north of Overpass Road west of I-75.

Coniferous Plantations

FLUCFCS: 441

Coniferous plantations are pine forests artificially planted using seeding stock or seeds. Density is high per acre and trees are uniform in appearance. Row patterns are common, although not required for this land use. This vegetative cover type comprises 132.7 acres of the project study area and is located north and south of Overpass Road at the Old Pasco Road and Overpass Road intersection, north and south of I-75 near the Overpass intersection, at the intersection of Overpass Road and Boyette Road, between the Watergrass subdivision and Handcart Road in the central portion of the project study area, and east of Handcart Road.

Wetland and Other Surface Water Habitat Types

Streams and Waterways

FLUCFCS: 510

FWS: PEM1Jx – Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated

Streams and waterways include rivers, creeks, canals, and other linear water bodies. Linear bodies of water are located throughout the project study area. These linear bodies of water include drainage ditches and depressions that carry water to and from wetlands. The plant species found in these linear bodies of water predominantly include maidencane (*Panicum hemitomon*) and primrose willow (*Ludwigia peruviana*). Streams and waterways comprise 27.8 acres of the project study area.

Lakes

FLUCFCS: 520

FWS: L2OWH – Lacustrine, Littoral, Open Water, Permanently Flooded

Lakes include extensive inland water bodies, excluding reservoirs. A small, natural lake is located on the south side of Overpass Road near the center of the project study area and is connected to larger areas of freshwater marsh and cypress swamps. This lake has been altered during previous development. Lakes comprise 4.6 acres of the project study area.

Reservoirs Less than 10 Acres

FLUCFCS: 534

FWS: POWHx – Palustrine, Open Water, Permanently Flooded, Excavated

Reservoirs are artificial impoundments of water used for irrigation, flood control, and rural/municipal water supplies. Reservoirs are located throughout the project study area and the banks are typically devoid of any vegetation. This surface water type comprises 24.4 acres of the project study area.

Bay Swamps

FLUCFCS: 611

FWS: PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

Bay swamps are composed of dominant trees such as loblolly bay (*Gordonia lasianthus*), sweet bay, swamp bay (*Persea palustris*), with slash pine and loblolly pine as an associated component at times. A small portion of a bay swamp wetland is located on in the central portion of the project study area connected to wet prairie and pasture. Bay swamps comprise 0.4 acre of the project study area.

Stream and Lake Swamps (Bottomland)

FLUCFCS: 615

FWS: PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

Streams and lake swamps are usually found on but not restricted to river, creek and lake floodplain or overflow areas. This community type is located throughout the project study area and comprises 111.3 acres of the project study area. Dominant canopy species found in this wetland habitat type include sweet bay, red maple (*Acer rubrum*), and sweetgum. Herbaceous species found in this wetland habitat type predominantly include Virginia chain fern (*Woodwardia virginica*), maidencane, and elderberry (*Sambucus canadensis*).

Mixed Wetland Hardwoods

FLUCFCS: 617

FWS: PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

Wetland hardwood forests are dominated by hardwood species adapted to live in saturated soils. Wetland hardwood forests are located in the central and east end of the project study area. Dominant canopy species found in this wetland habitat type include sweetgum, red maple, and sweet bay. Herbaceous species predominantly found in this wetland habitat type include yellow-eyed grass (*Xyris* spp.) and St. John's wort (*Hypericum* spp.). Mixed wetland hardwoods comprise 3.0 acres of the project study area.

Cypress

FLUCFCS: 621

FWS: PFO2C – Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded

Cypress describes a community in which bald cypress (*Taxodium distichum*) and/or pond cypress (*Taxodium ascendens*) is predominant. Cypress wetlands are located throughout the center of the project study area. Along with cypress, other tree species found in these wetlands include red maple, persimmon (*Diospyros virginiana*), and laurel oak. Herbaceous species within this wetland typically include cinnamon fern (*Osmunda cinnamomea*) and shield fern (*Thelypteris* spp.). Cypress wetlands comprise 5.5 acres of the project study area.

Wetland Forested Mixed

FLUCFCS: 630

FWS: PFO1/4C – Palustrine, Forested, Broad-Leaved Deciduous/Needle-Leaved Evergreen, Seasonally Flooded

Wetland forested mixed includes wetland forested communities in which neither hardwoods nor conifers achieve a 66 percent dominance of the crown canopy composition. Dominant vegetative species found within this wetland community type include slash pine, red maple, and sweetgum. Wetland forested mixed is found near the center of the project study area and comprises 5.1 acres of the project study area.

Wetland Scrub

FLUCFCS: 631

FWS: PSS1C – Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded

Wetland scrub is associated with topographic depressions and poorly drained soils. Dominant vegetative species within this wetland community include Carolina willow (*Salix caroliniana*), elderberry, and red maple. Wetland scrub is located throughout the project study area and comprises 51.7 acres of the project study area.

Freshwater Marsh

FLUCFCS: 641

FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Freshwater marshes are habitats dominated by herbaceous vegetation that is usually confined to relatively level, low-lying areas. Freshwater marshes are located throughout the project study area and predominantly include buttonbush (*Cephalanthus occidentalis*), arrowhead (*Sagittaria lancifolia*), maidencane, pickerelweed (*Pontederia cordata*), and soft rush (*Juncus effusus*). Freshwater marshes comprise 51.4 acres of the project study area.

Wet Prairie

FLUCFCS: 643

FWS: PEM1J – Palustrine, Emergent, Persistent, Intermittently Flooded

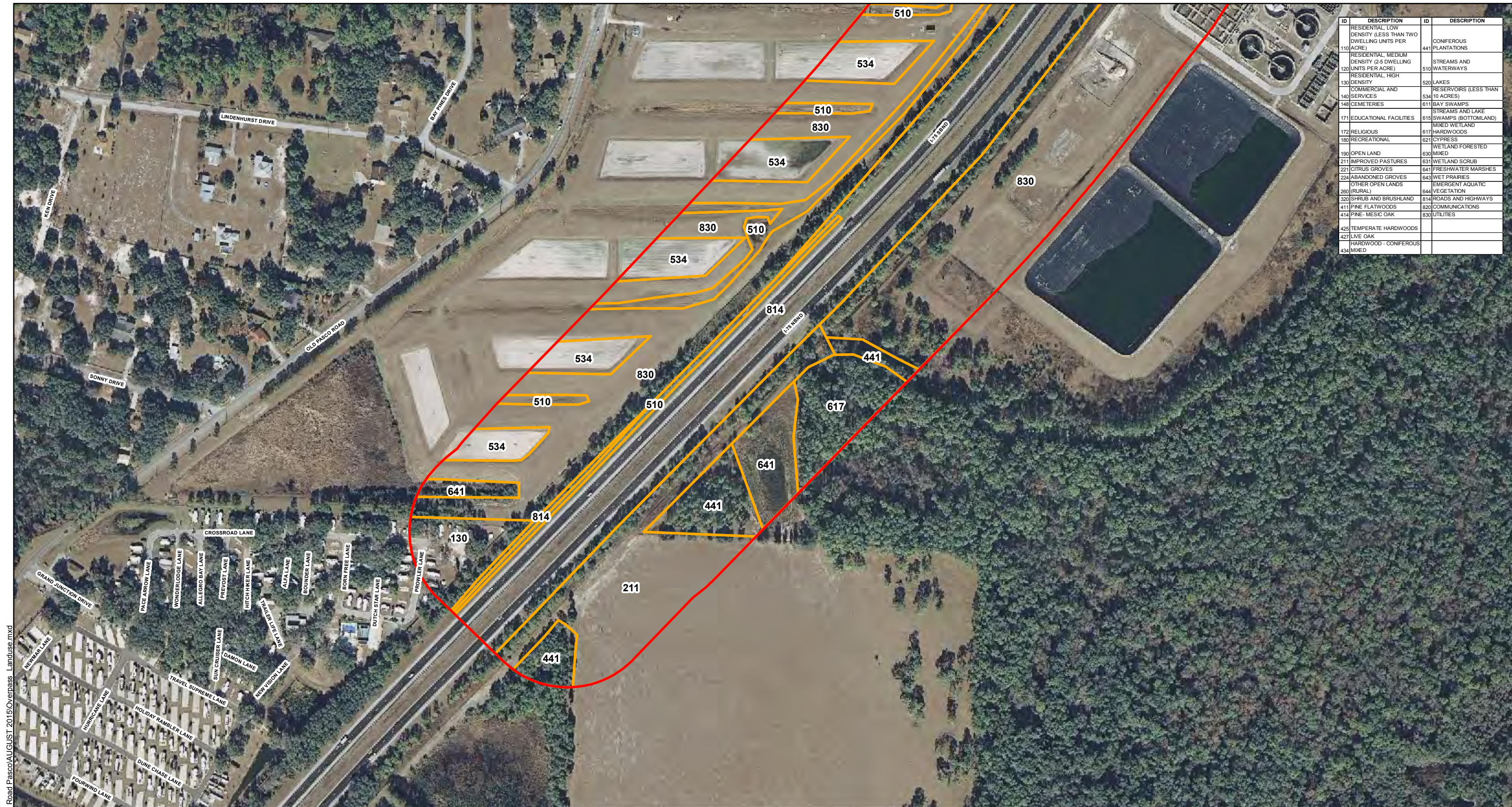
Wet prairies are composed of grassy vegetation and are distinguished from a marsh by a reduced hydroperiod and more transitional wetland species. Within the project study area, wet prairies are typically located near cypress and mixed hardwood wetlands and are concentrated near the center of the project study area. Dominant species found in the wet prairies include maidencane, flat sedge (*Cyperus* spp.), yellow-eyed grass, beakrush (*Rhynchospora* sp.), and St. Johns wort. Wet prairies comprise 40.5 acres of the total project study area.

Emergent Aquatic Vegetation

FLUCFCS: 644

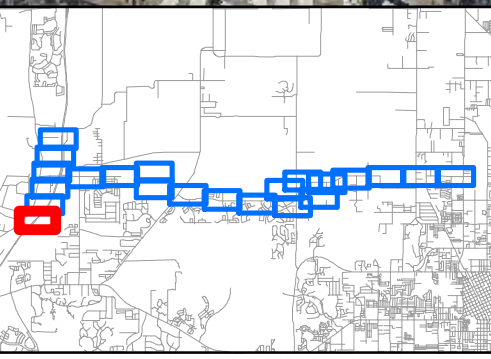
FWS: PAB4H – Palustrine, Aquatic Bed, Floating Vascular, Permanently Flooded

This wetland habitat type includes both floating vegetation and vegetation which is found either partially or completely above the surface of the water. One area consisting of this habitat type is located on the south side of Overpass Road within the western end of the project study area. Dominant vegetation consists of spatterdock (*Nuphar* sp.) and torpedo grass (*Panicum repens*). Emergent aquatic vegetation comprises 1.5 acres of the project study area.



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130	RESIDENTIAL HIGH DENSITY	520	LAKES
140	COMMERCIAL AND SERVICES	534	RESERVOIRS (LESS THAN 10 ACRES)
148	CEMETERIES	611	BAY SWAMPS
171	EDUCATIONAL FACILITIES	615	STREAMS AND LAKE SWAMPS (BOTTOMLAND)
172	RELIGIOUS	617	MIXED WETLAND HARDWOODS
180	RECREATIONAL	621	CYPRESS
190	OPEN LAND	630	WETLAND FORESTED MIXED
211	IMPROVED PASTURES	631	WETLAND SCRUB
221	CITRUS GROVES	641	FRESHWATER MARSHES
224	ABANDONED GROVES	643	WET PRAIRIES
280	OTHER OPEN LANDS (RURAL)	644	EMERGENT AQUATIC VEGETATION
320	SHRUB AND BRUSHLAND	814	ROADS AND HIGHWAYS
411	PINE FLATWOODS	820	COMMUNICATIONS
414	PINE- MESIC OAK	830	UTILITIES
425	TEMPERATE HARDWOODS		
427	LIVE OAK		
434	HARDWOOD - CONIFEROUS MIXED		

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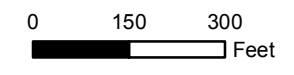


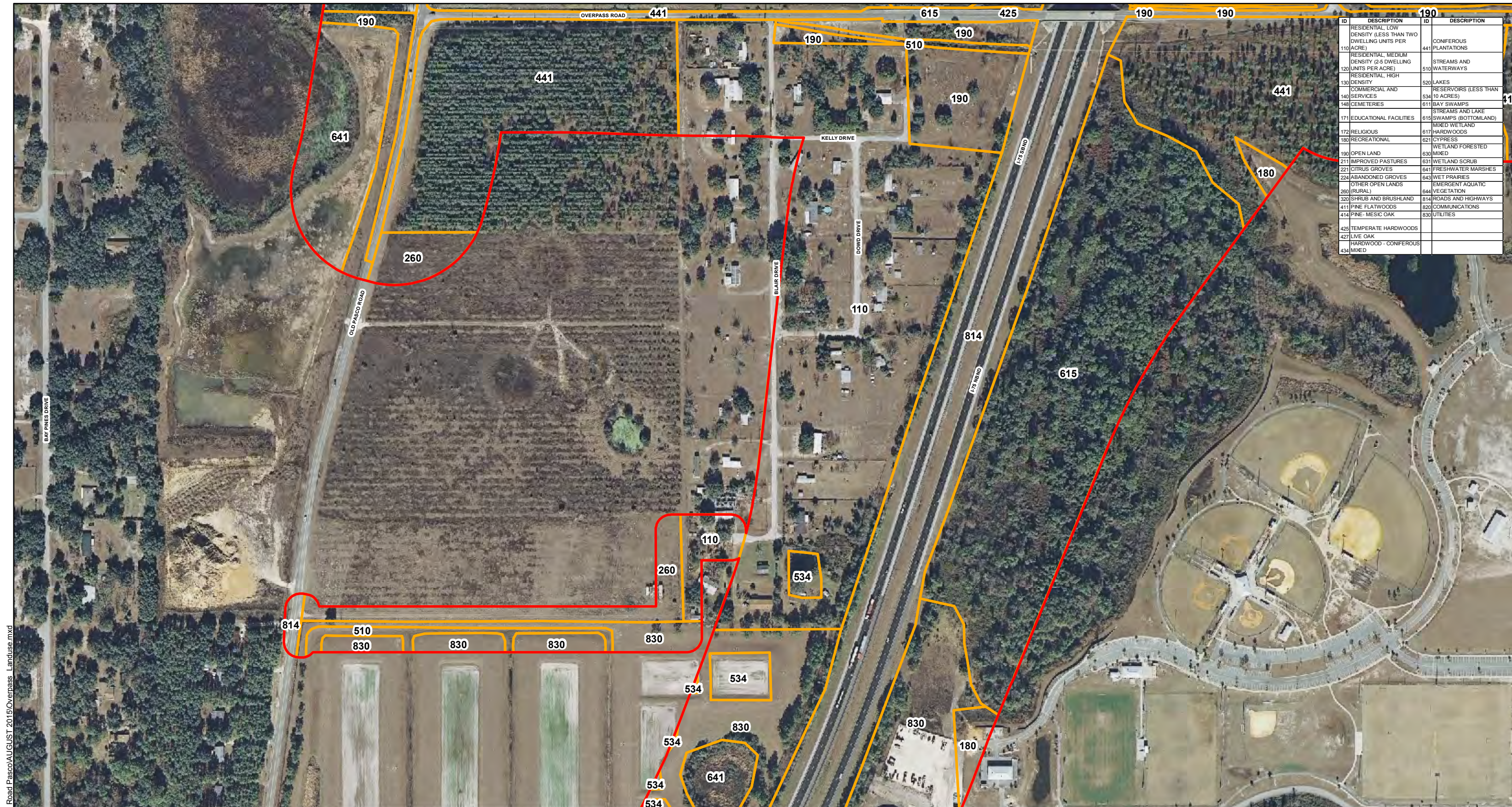
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- Project Study Area
- Land Use/ Vegetative Cover

Source:
Aerials- FDOT, 2011
Land Use- SWFWMD, 2009/ URS, 2011/ FDOT, 1999

**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
Land Use/ Vegetative Cover Type
Pasco County, FL
Sheet 1 of 22





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425	LIVE OAK		
427	HARDWOOD - CONIFEROUS		
434	MIXED		

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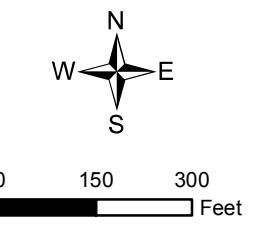
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Project Study Area

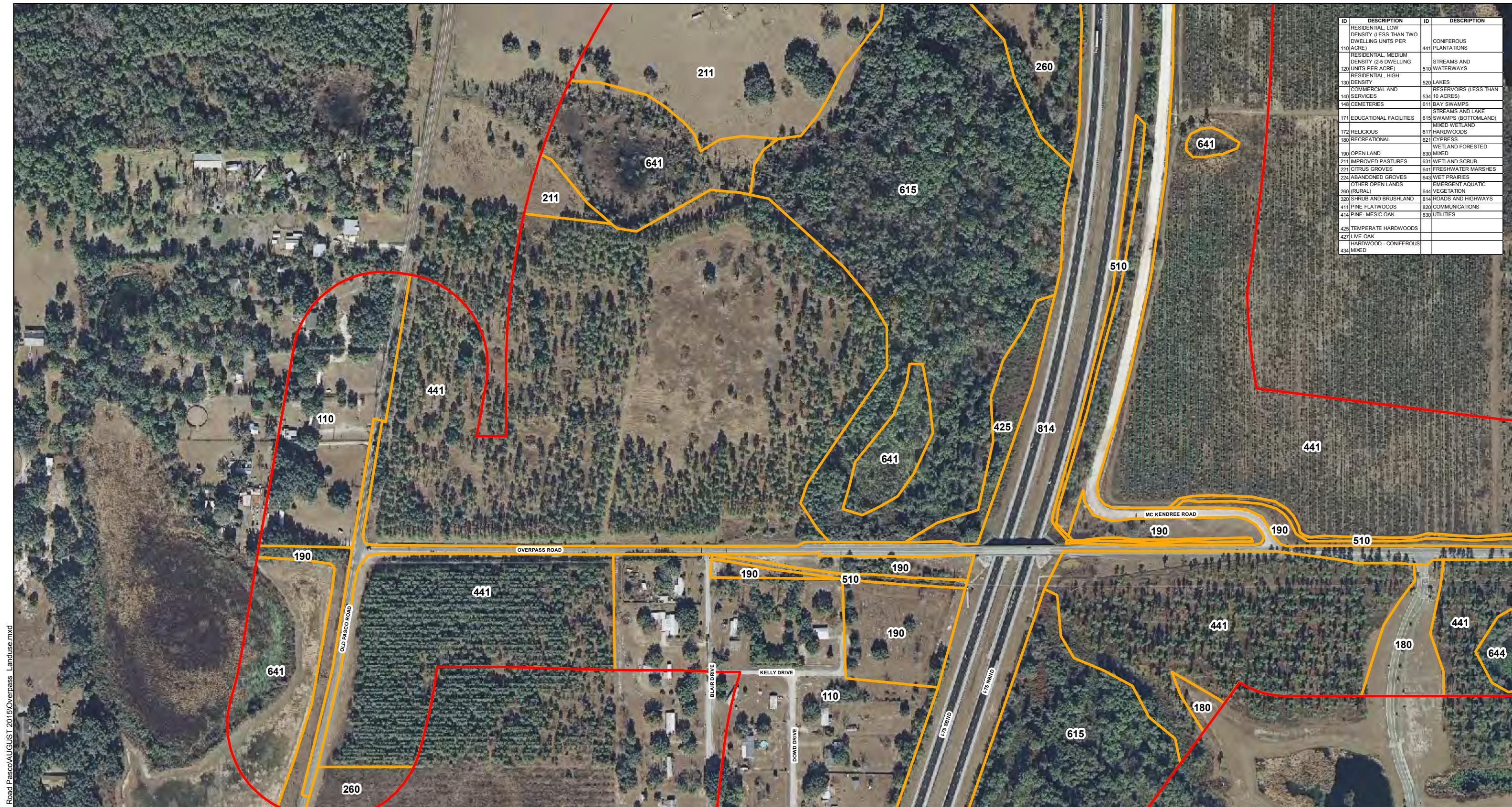
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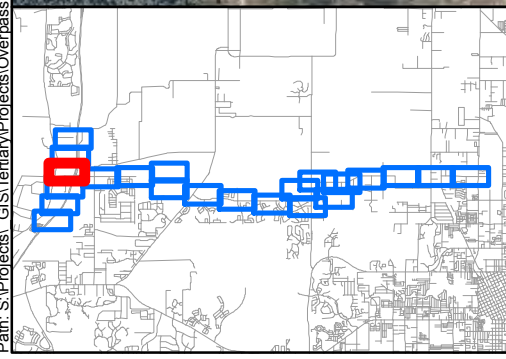
**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
Land Use/ Vegetative Cover Type
Pasco County, FL
Sheet 3 of 22



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427	LIVE OAK		
434	HARDWOOD - CONIFEROUS MIXED		



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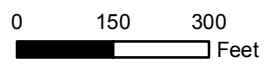


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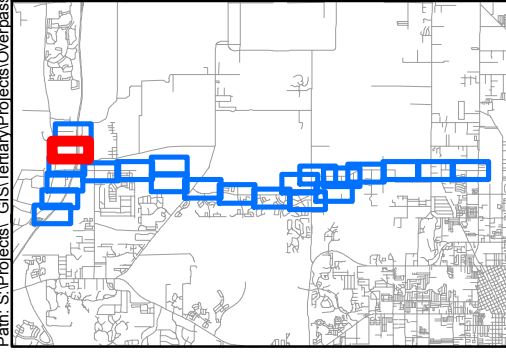
**Overpass Road from Old Pasco Road
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Land Use/ Vegetative Cover Type
Pasco County, FL
Sheet 4 of 22



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434	MIXED		



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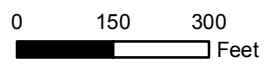


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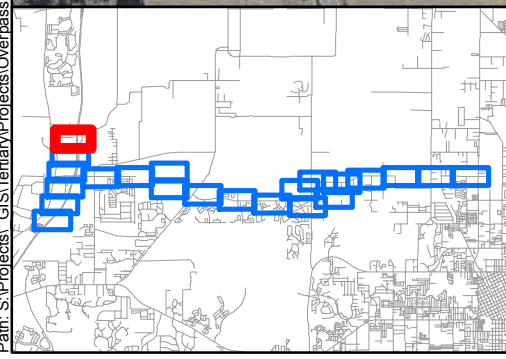
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Pasco County, FL
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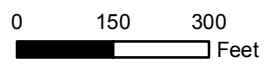


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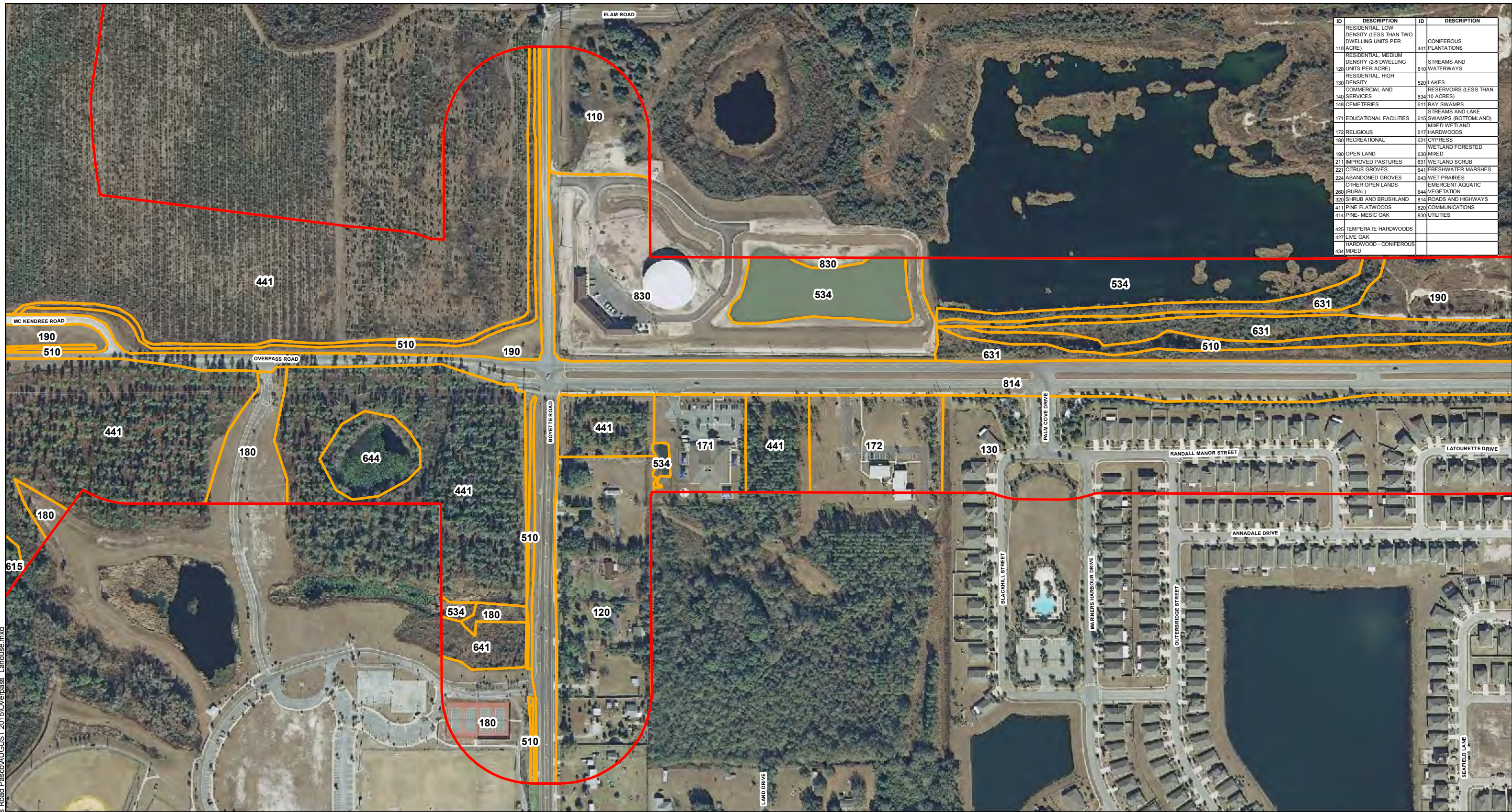
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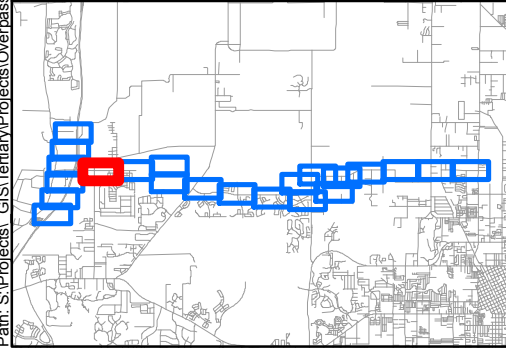
**Overpass Road from Old Pasco Road
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Land Use/ Vegetative Cover Type
Pasco County, FL
Sheet 6 of 22



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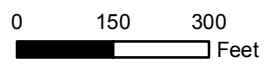


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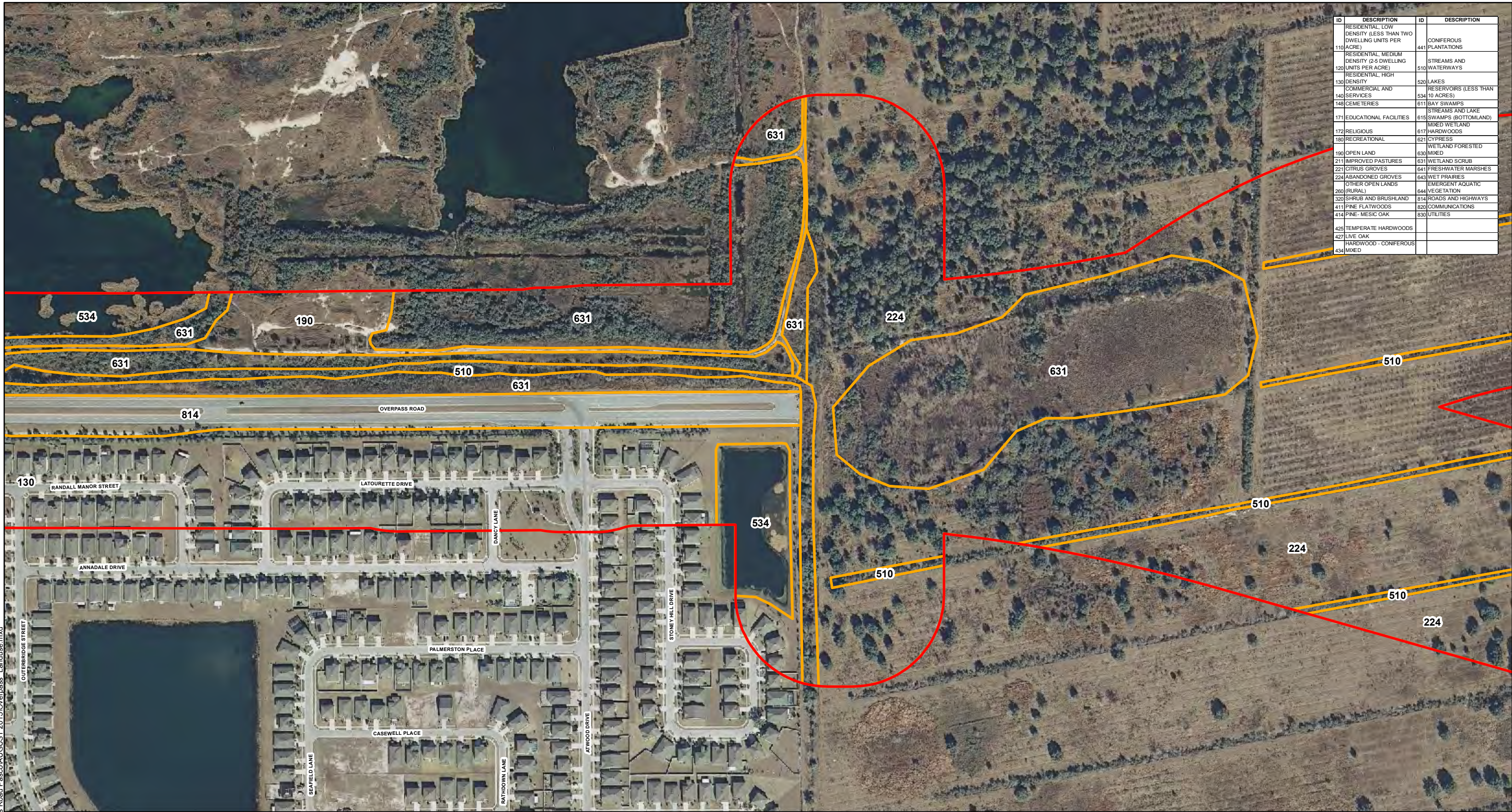
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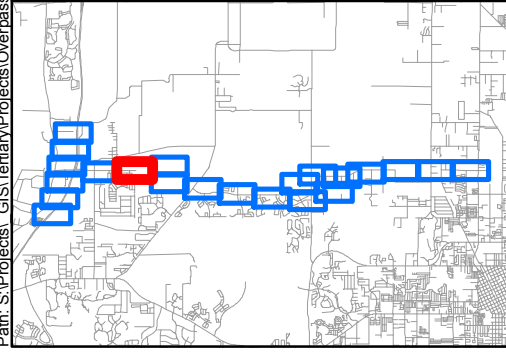
**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
Land Use/ Vegetative Cover Type
Pasco County, FL
Sheet 7 of 22



ID	DESCRIPTION	ID	DESCRIPTION
110	RESIDENTIAL LOW DENSITY (LESS THAN TWO DWELLING UNITS PER ACRE)	441	CONIFEROUS PLANTATIONS
120	RESIDENTIAL MEDIUM DENSITY (2-5 DWELLING UNITS PER ACRE)	510	STREAMS AND WATERWAYS
130	RESIDENTIAL HIGH DENSITY	520	LAKES
140	COMMERCIAL AND SERVICES	534	RESERVOIRS (LESS THAN 10 ACRES)
148	CEMETERIES	611	BAY SWAMPS
171	EDUCATIONAL FACILITIES	615	STREAMS AND LAKE SWAMPS (BOTTOMLAND)
172	RELIGIOUS	617	MIXED WETLAND HARDWOODS
180	RECREATIONAL	621	CYPRESS
190	OPEN LAND	630	WETLAND FORESTED MIXED
211	IMPROVED PASTURES	631	WETLAND SCRUB
221	CITRUS GROVES	641	FRESHWATER MARSHES
224	ABANDONED GROVES	643	WET PRAIRIES
280	OTHER OPEN LANDS (RURAL)	644	EMERGENT AQUATIC VEGETATION
320	SHRUB AND BRUSHLAND	814	ROADS AND HIGHWAYS
411	PINE FLATWOODS	820	COMMUNICATIONS
414	PINE- MESIC OAK	830	UTILITIES
425	TEMPERATE HARDWOODS		
427	LIVE OAK		
434	HARDWOOD - CONIFEROUS MIXED		



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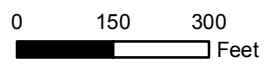


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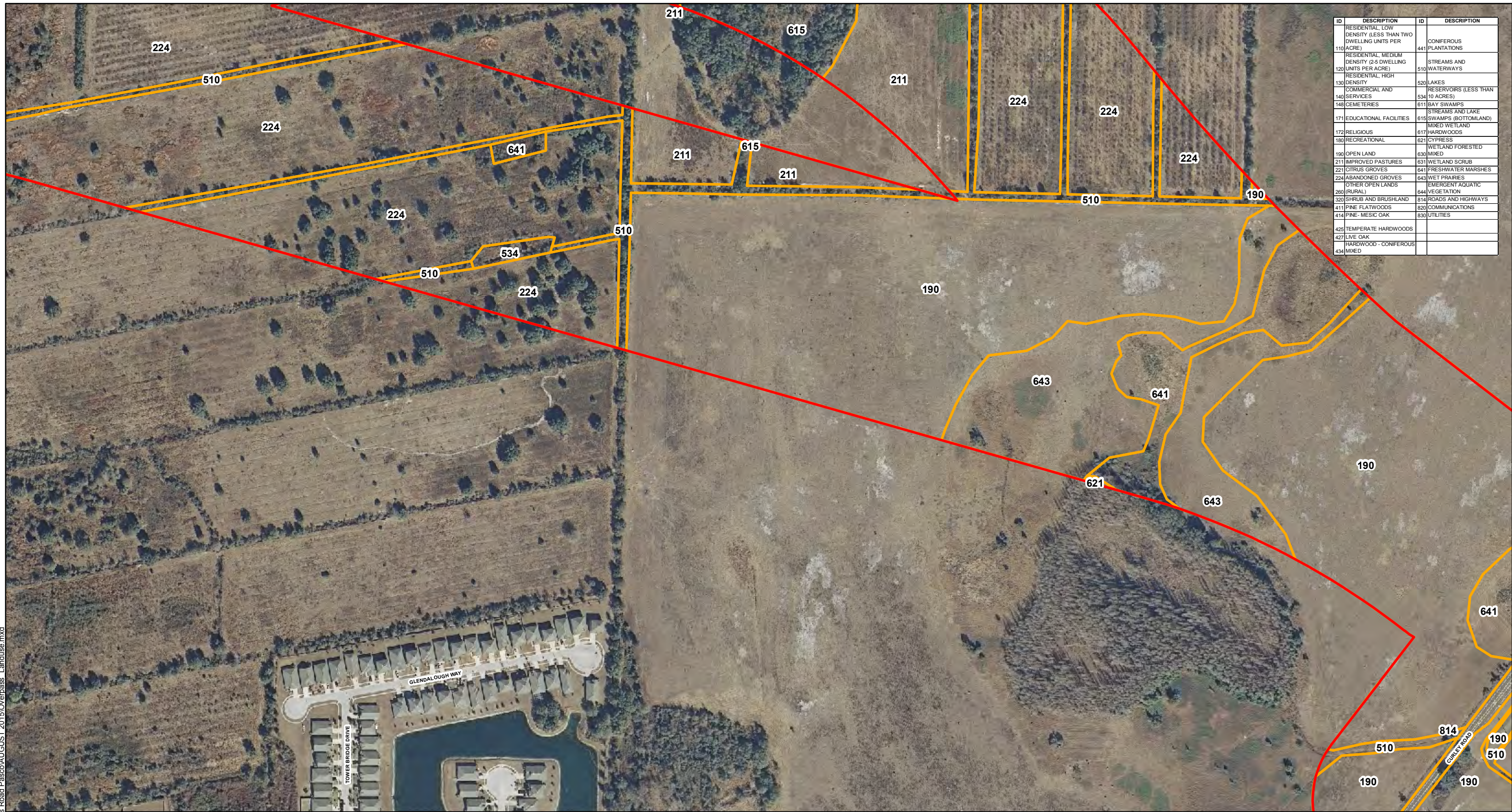
- Project Study Area
- Land Use/ Vegetative Cover

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Land Use- SWFWMD, 2009/ URS, 2011/ FDOT, 1999

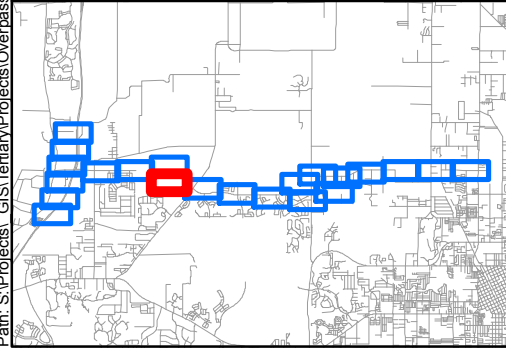
**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
Land Use/ Vegetative Cover Type
Pasco County, FL
Sheet 8 of 22



ID	DESCRIPTION	ID	DESCRIPTION
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120	RESIDENTIAL MEDIUM DENSITY (2-5 DWELLING UNITS PER ACRE)	510	STREAMS AND WATERWAYS
130	RESIDENTIAL HIGH DENSITY	520	LAKES
140	COMMERCIAL AND SERVICES	534	RESERVOIRS (LESS THAN 10 ACRES)
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172	RELIGIOUS	617	HARDWOODS
180	RECREATIONAL	621	CYPRESS
190	OPEN LAND	630	WETLAND FORESTED MIXED
211	IMPROVED PASTURES	631	WETLAND SCRUB
221	CITRUS GROVES	641	FRESHWATER MARSHES
224	ABANDONED GROVES	643	WET PRAIRIES
290	OTHER OPEN LANDS (RURAL)	844	EMERGENT AQUATIC VEGETATION
320	SHRUB AND BRUSHLAND	814	ROADS AND HIGHWAYS
411	PINE FLATWOODS	820	COMMUNICATIONS
414	PINE - MESIC OAK	830	UTILITIES
425	TEMPERATE HARDWOODS		
427	LIVE OAK		
434	HARDWOOD - CONIFEROUS MIXED		



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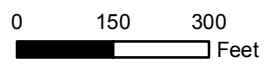


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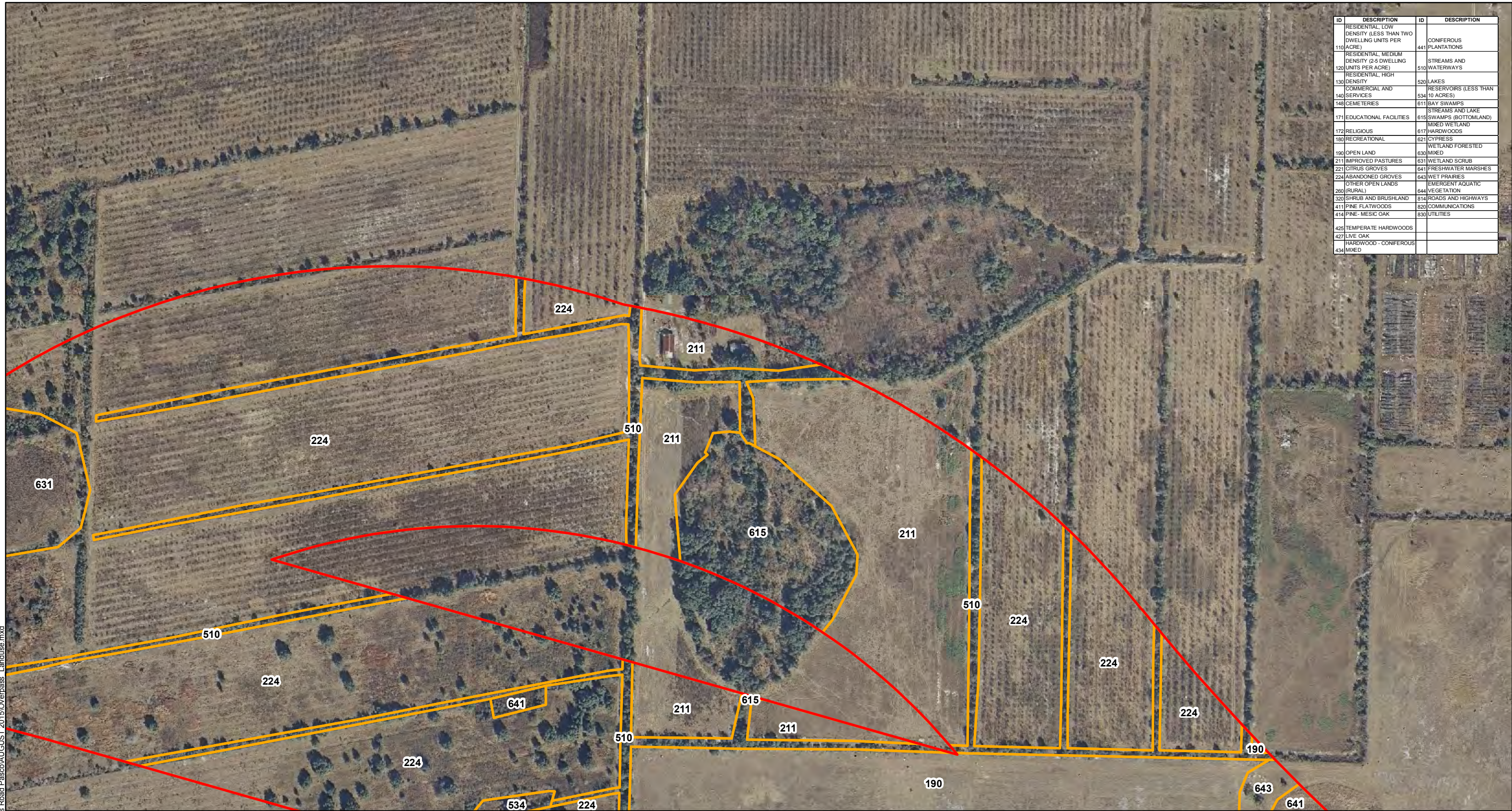
- Project Study Area
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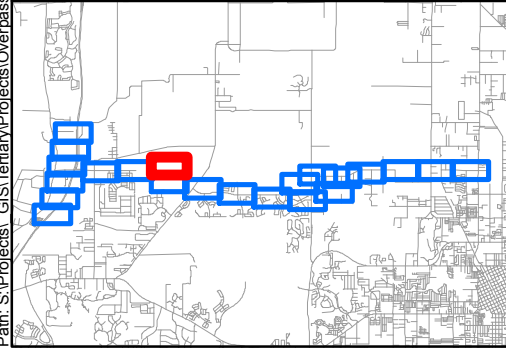
**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
Land Use/ Vegetative Cover Type
Pasco County, FL
Sheet 9 of 22



ID	DESCRIPTION	ID	DESCRIPTION
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120	RESIDENTIAL, MEDIUM DENSITY (2-5 DWELLING UNITS PER ACRE)	510	STREAMS AND WATERWAYS
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190	OPEN LAND	630	CYPRESS
211	IMPROVED PASTURES	631	WETLAND FORESTED MIXED
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224	ABANDONED GROVES	643	FRESHWATER MARSHES
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427	LIVE OAK		
434	HARDWOOD - CONIFEROUS MIXED		



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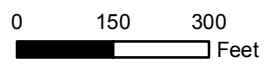


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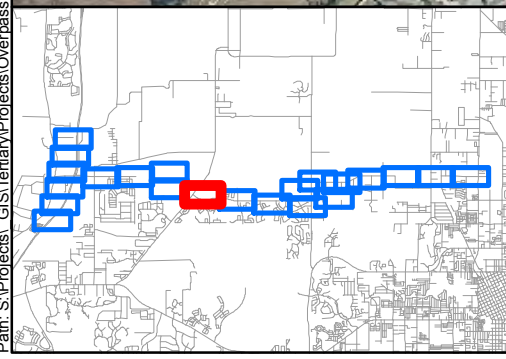
**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
Land Use/ Vegetative Cover Type
Pasco County, FL
Sheet 10 of 22



ID	DESCRIPTION	ID	DESCRIPTION
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427	LIVE OAK		
434	HARDWOOD - CONIFEROUS MIXED		



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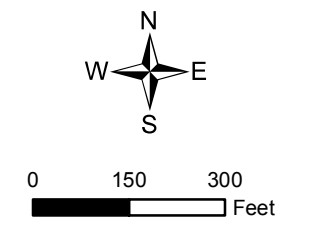


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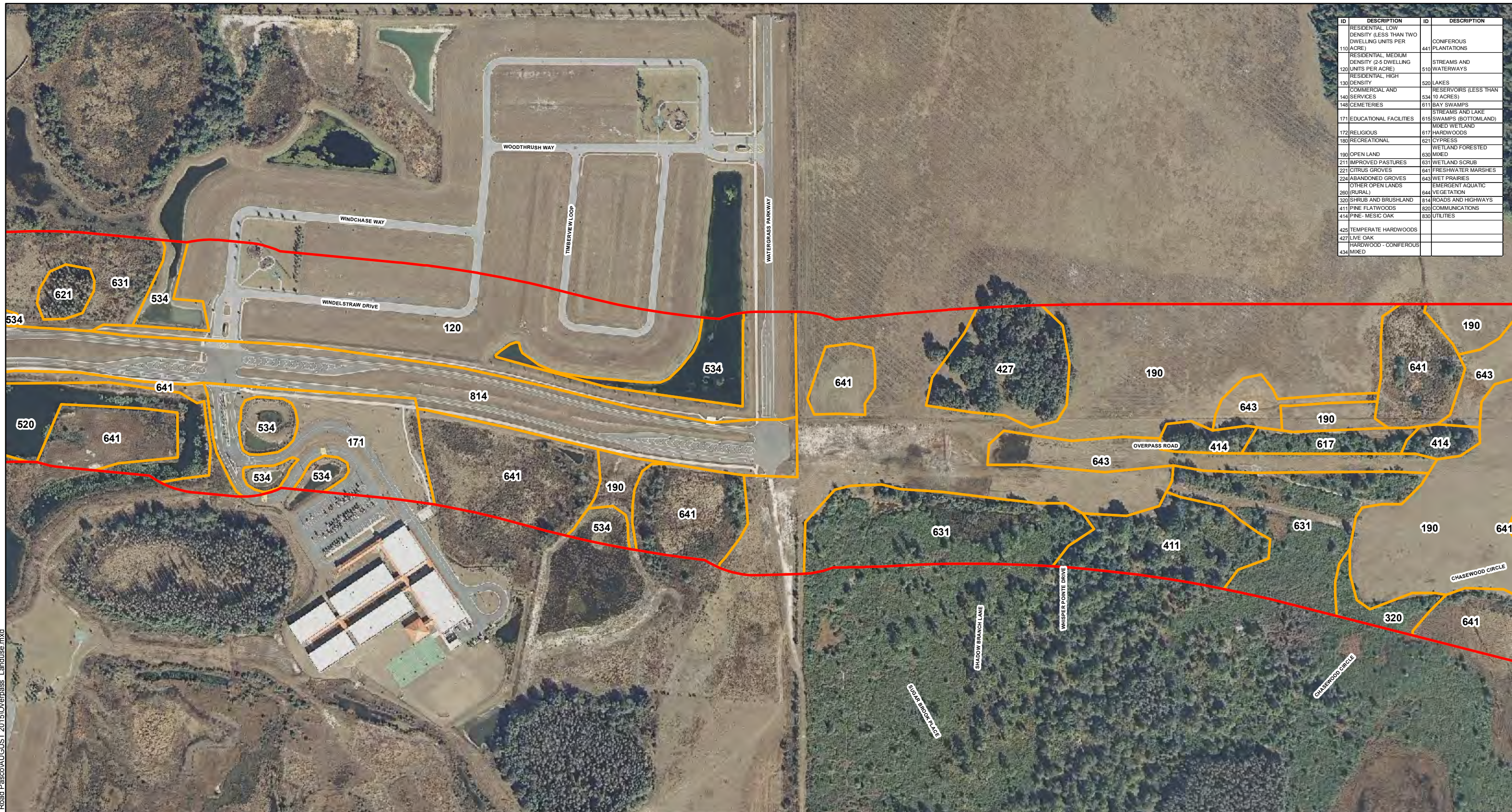
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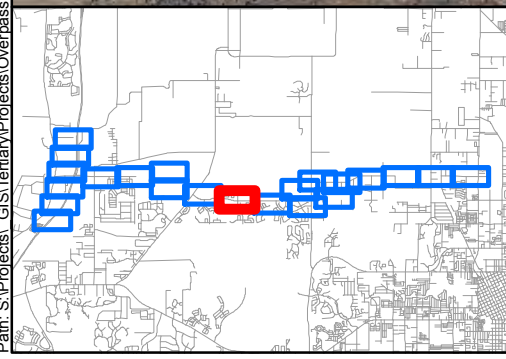
**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
Land Use/ Vegetative Cover Type
Pasco County, FL
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ID	DESCRIPTION	ID	DESCRIPTION
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434	HARDWOOD - CONIFEROUS MIXED		



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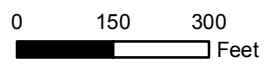


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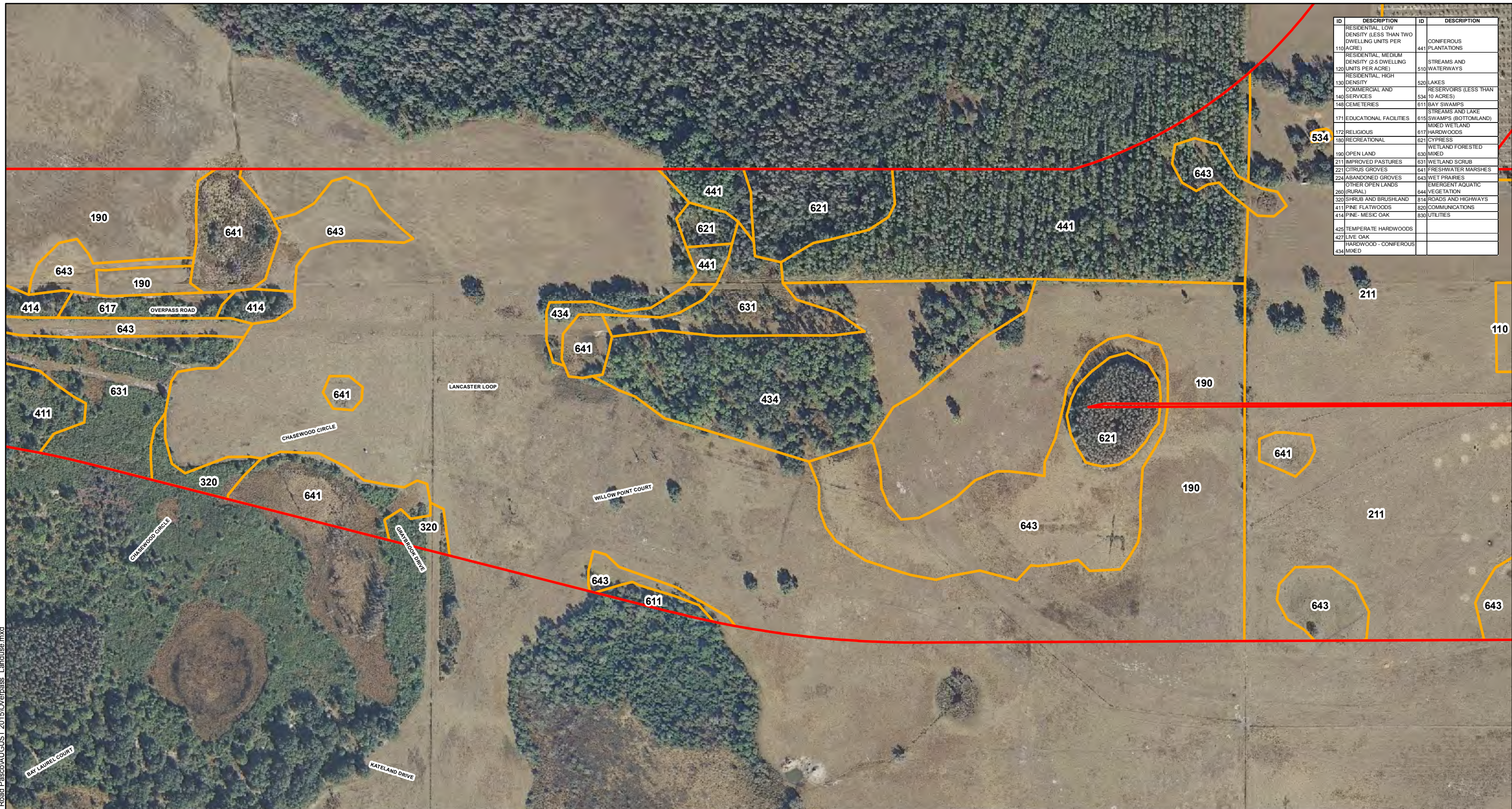
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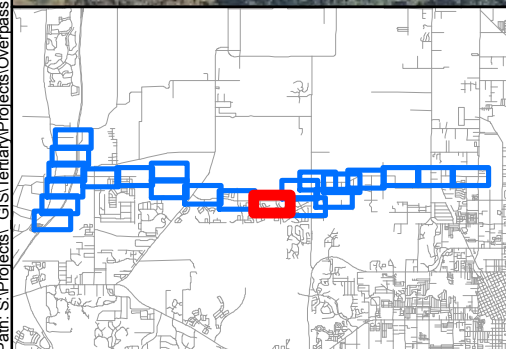
**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
Land Use/ Vegetative Cover Type
Pasco County, FL
Sheet 12 of 22



ID	DESCRIPTION	ID	DESCRIPTION
110	RESIDENTIAL, LOW DENSITY (LESS THAN TWO DWELLING UNITS PER ACRE)	441	CONIFEROUS PLANTATIONS
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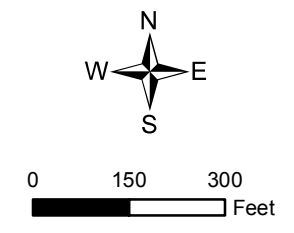


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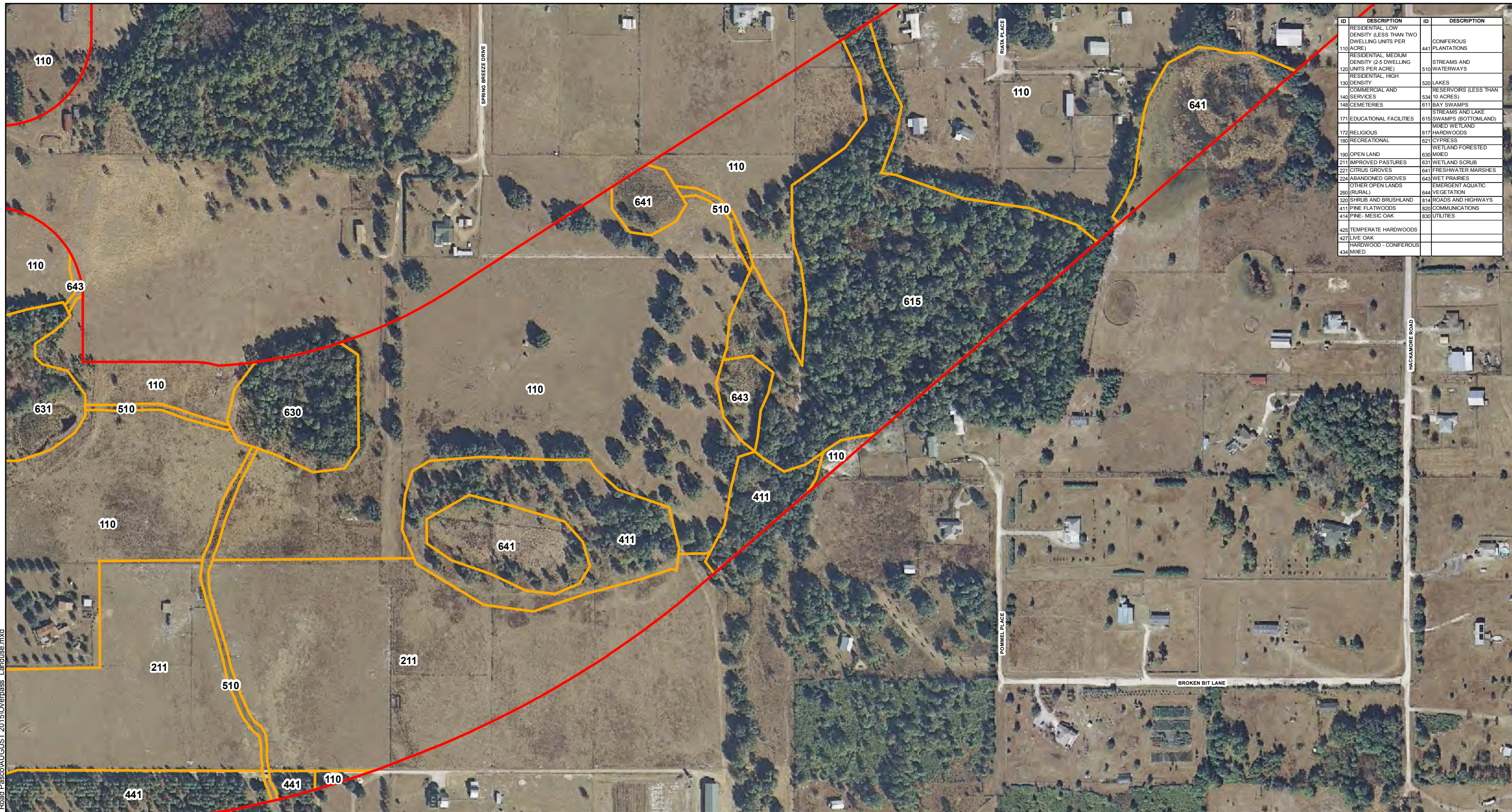
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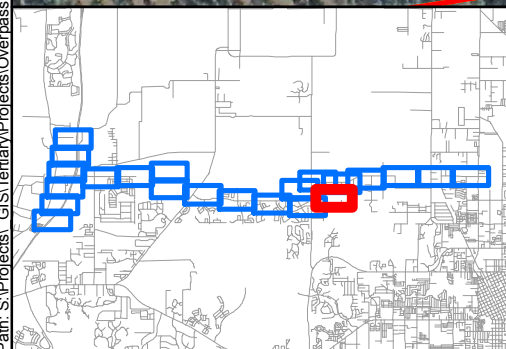
**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
Land Use/ Vegetative Cover Type
Pasco County, FL
Sheet 13 of 22



ID	DESCRIPTION	ID	DESCRIPTION
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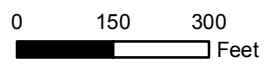


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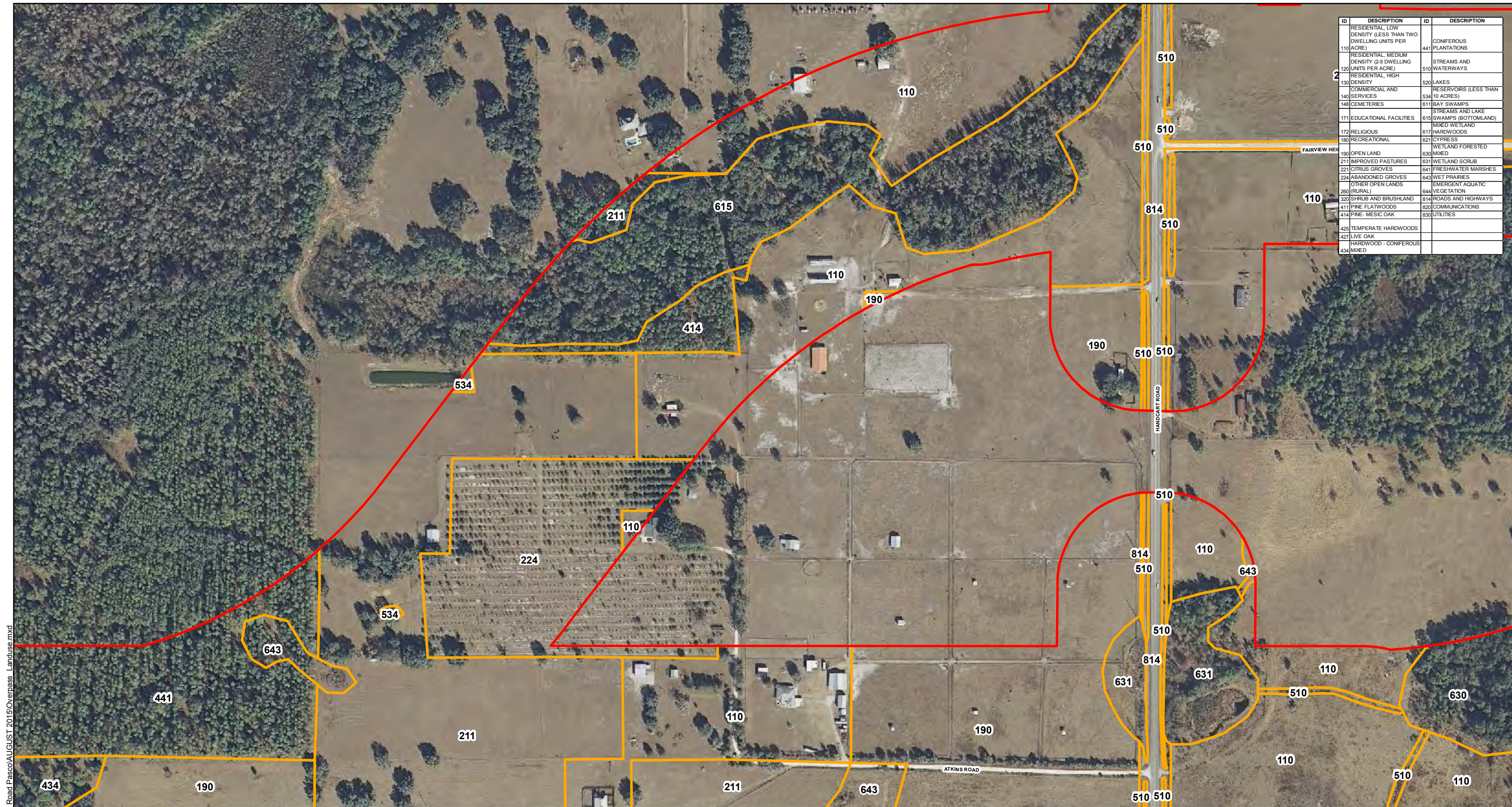
- Project Study Area
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Land Use- SWFWMD, 2009/ URS, 2011/ FDOT, 1999

**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
Land Use/ Vegetative Cover Type
Pasco County, FL
Sheet 15 of 22



ID	DESCRIPTION	ID	DESCRIPTION
110	RESIDENTIAL LOW DENSITY (LESS THAN TWO DWELLING UNITS PER ACRE)	441	CONIFEROUS PLANTATIONS
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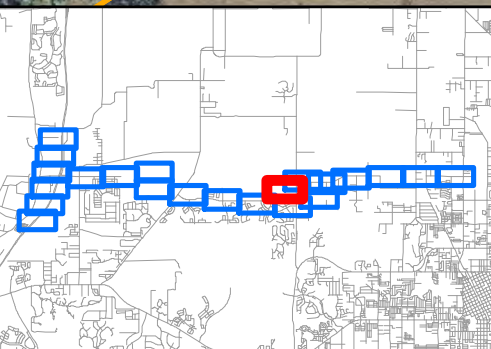
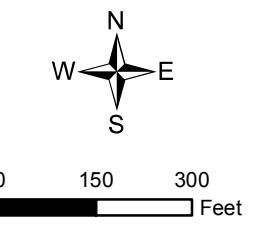
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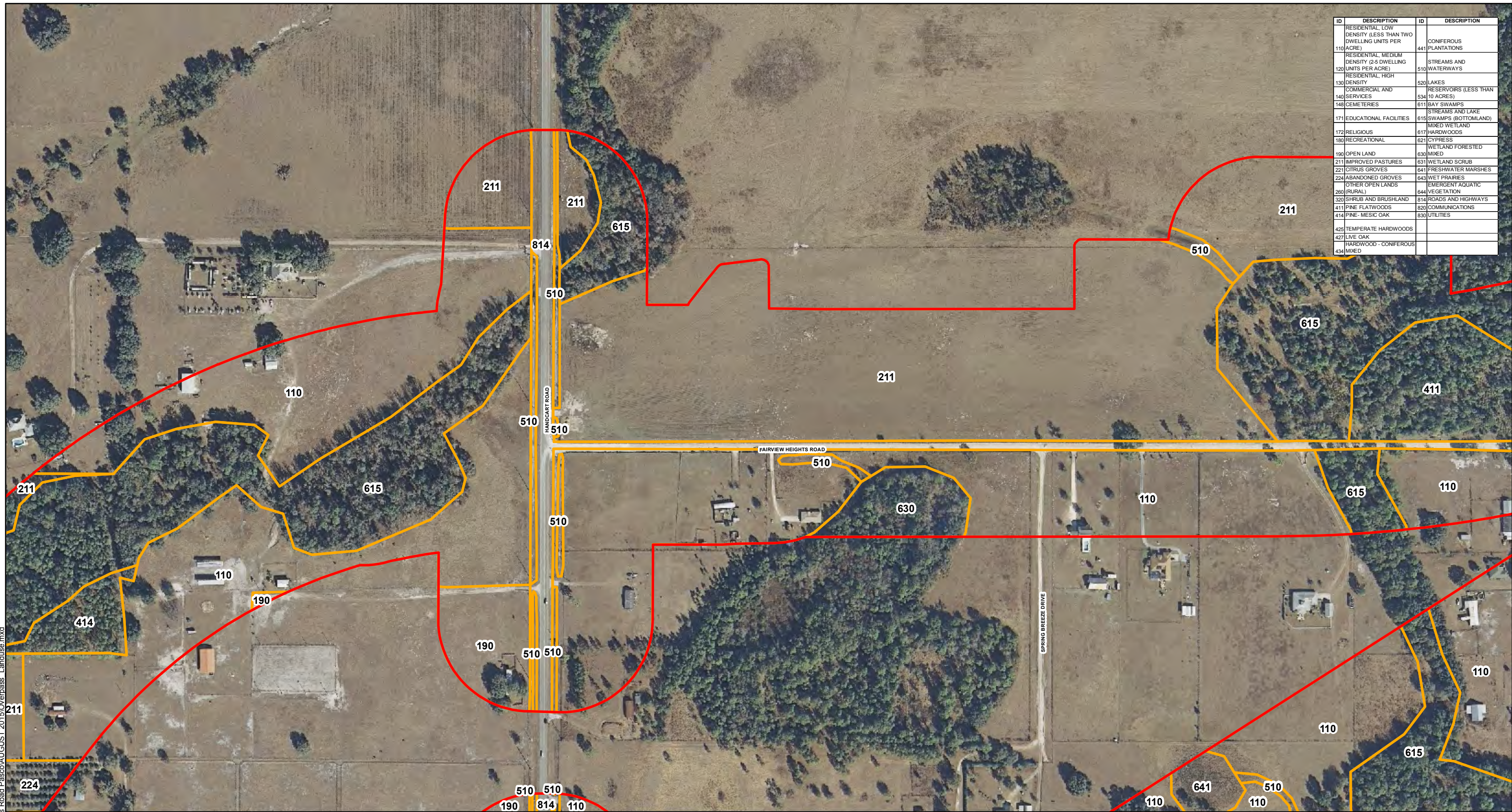
Land Use/ Vegetative Cover

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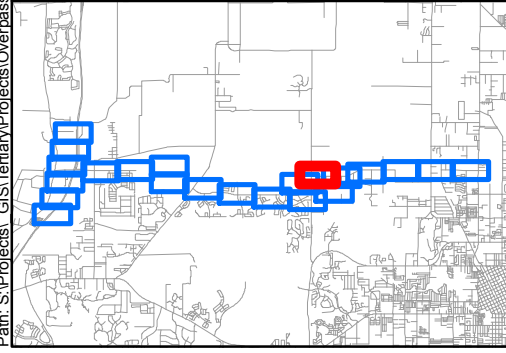
**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
Land Use/ Vegetative Cover Type
Pasco County, FL
Sheet 16 of 22



ID	DESCRIPTION	ID	DESCRIPTION
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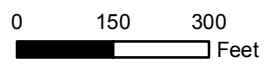


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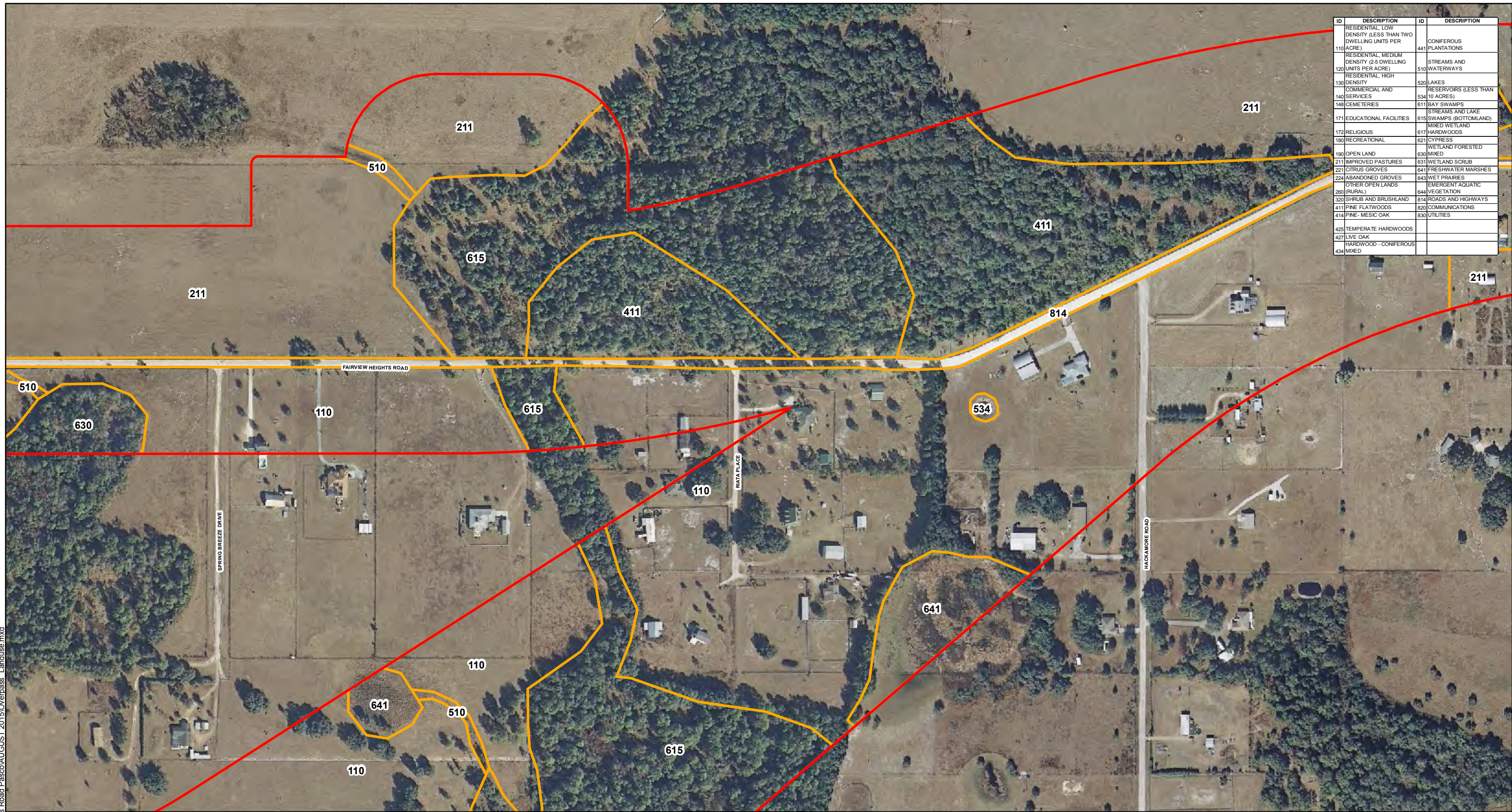
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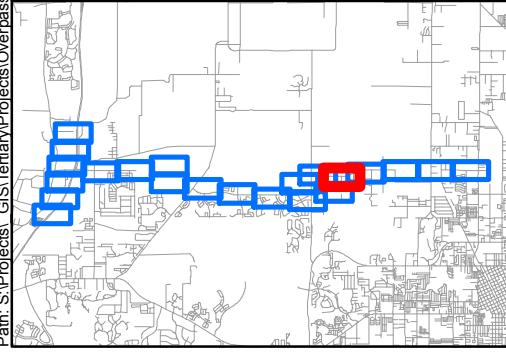
**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
Land Use/ Vegetative Cover Type
Pasco County, FL
Sheet 17 of 22



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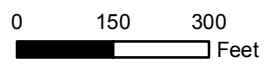


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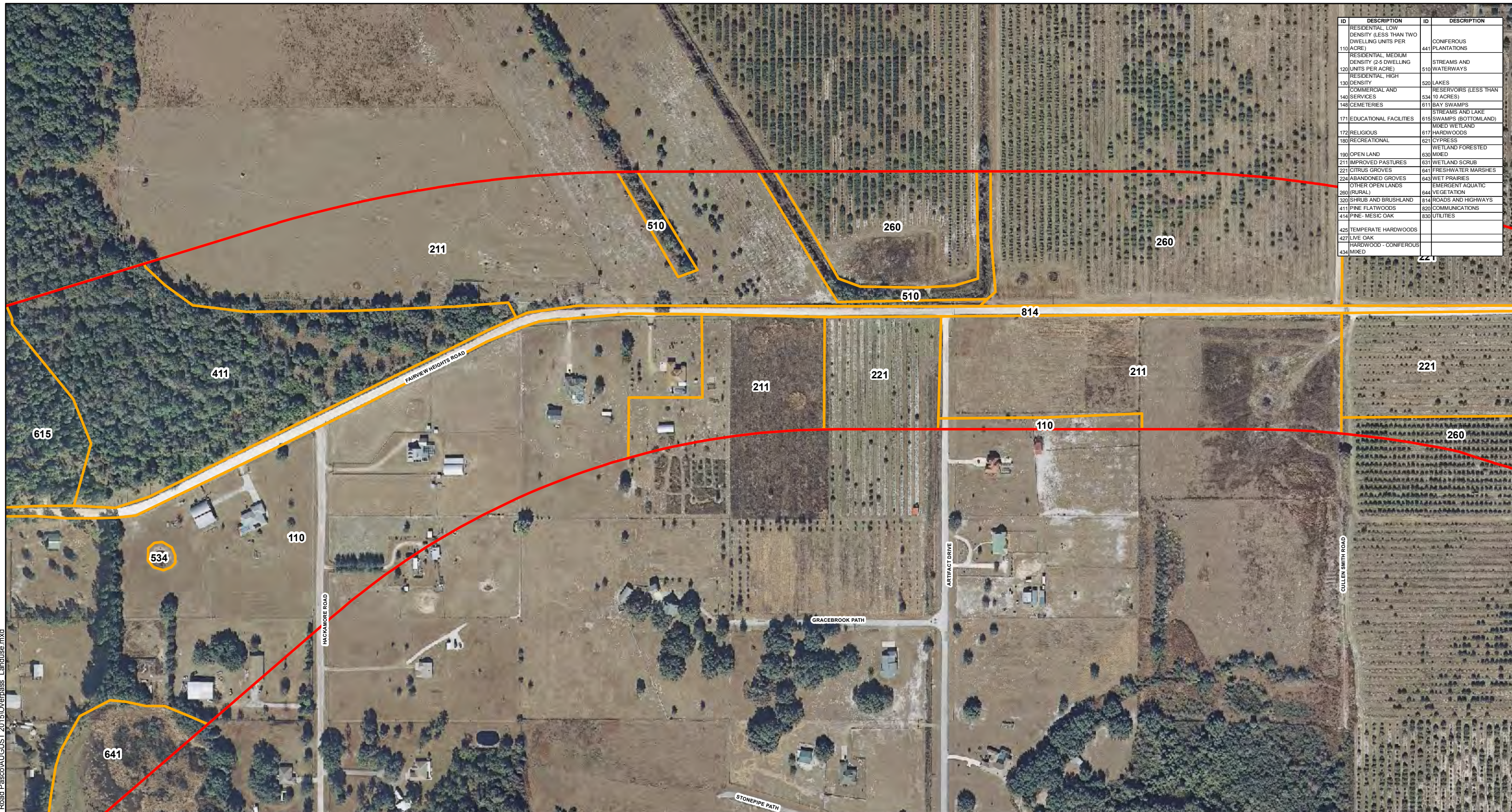
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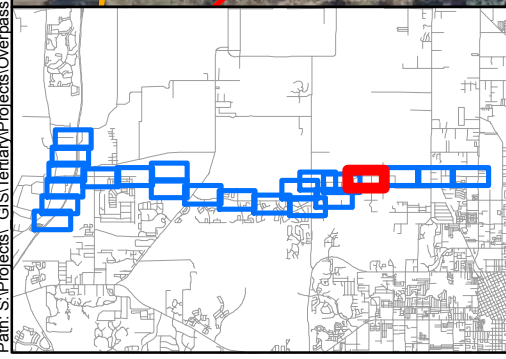
**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
Land Use/ Vegetative Cover Type
Pasco County, FL
Sheet 18 of 22



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190	OPEN LAND	630	WETLAND FORESTED MIXED
211	IMPROVED PASTURES	631	WETLAND SCRUB
221	CITRUS GROVES	641	FRESHWATER MARSHES
224	ABANDONED GROVES	643	WET PRAIRIES
280	OTHER OPEN LANDS (RURAL)	644	EMERGENT AQUATIC VEGETATION
320	SHRUB AND BRUSHLAND	814	ROADS AND HIGHWAYS
411	PINE FLATWOODS	820	COMMUNICATIONS
414	PINE- MESIC OAK	830	UTILITIES
425	TEMPERATE HARDWOODS		
427	LIVE OAK		
434	HARDWOOD - CONIFEROUS MIXED	441	



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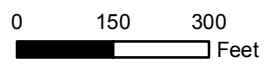


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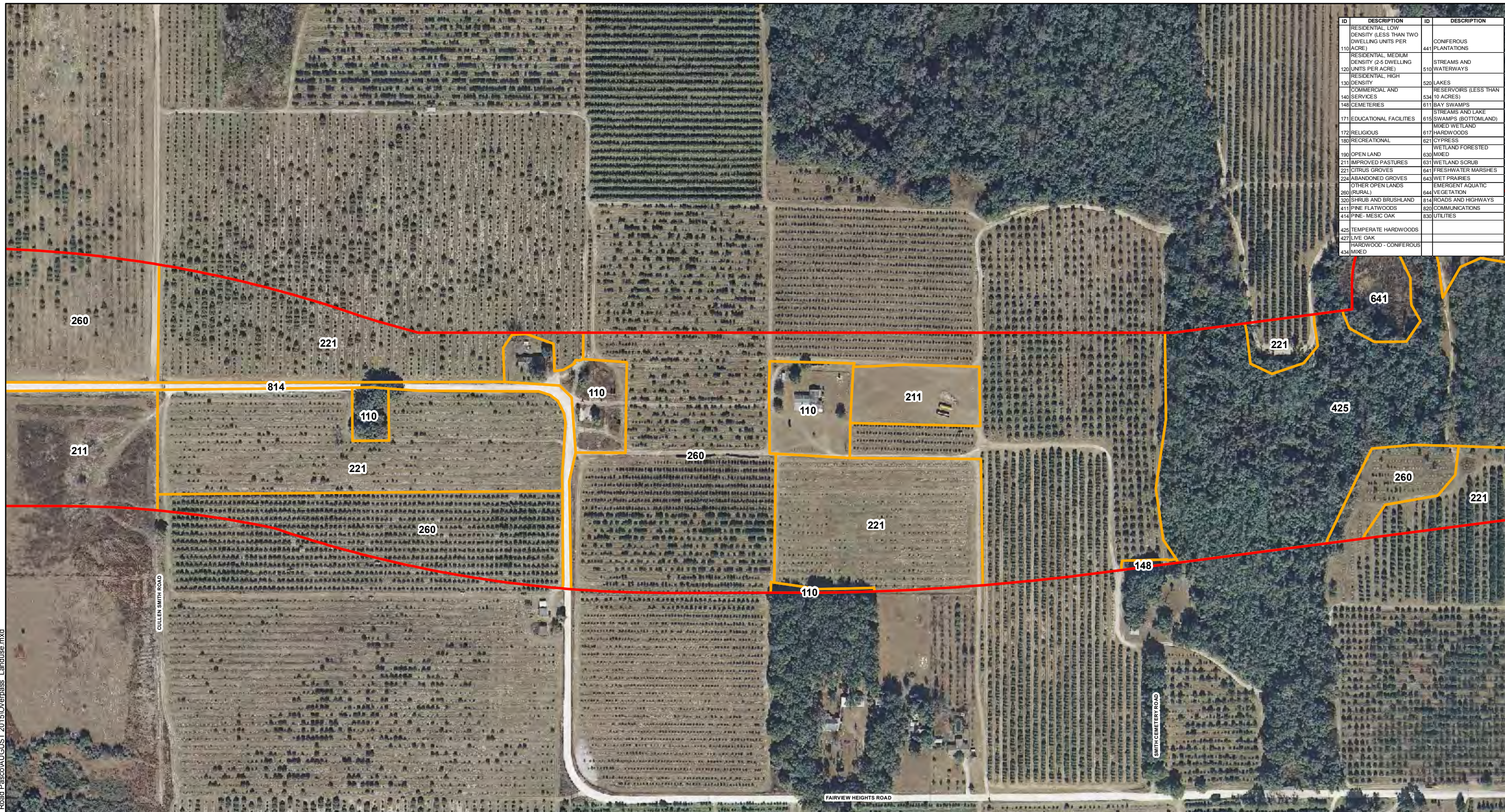
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- Land Use/ Vegetative Cover

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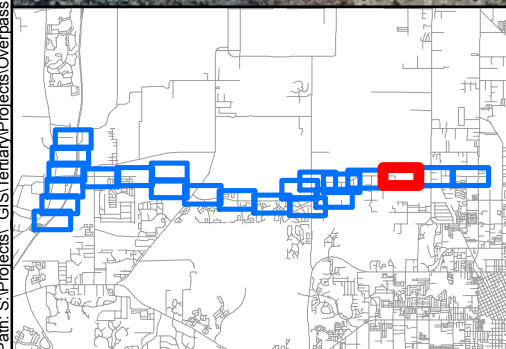
**Overpass Road from Old Pasco Road
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120	RESIDENTIAL MEDIUM DENSITY (2-5 DWELLING UNITS PER ACRE)	510	STREAMS AND WATERWAYS
130	RESIDENTIAL HIGH DENSITY	520	LAKES
140	COMMERCIAL AND SERVICES	534	RESERVOIRS (LESS THAN 10 ACRES)
148	CEMETERIES	611	BAY SWAMPS
171	EDUCATIONAL FACILITIES	615	STREAMS AND LAKE SWAMPS (BOTTOMLAND)
172	RELIGIOUS	617	MIXED WETLAND
180	RECREATIONAL	621	HARDWOODS
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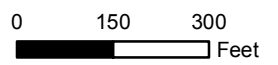


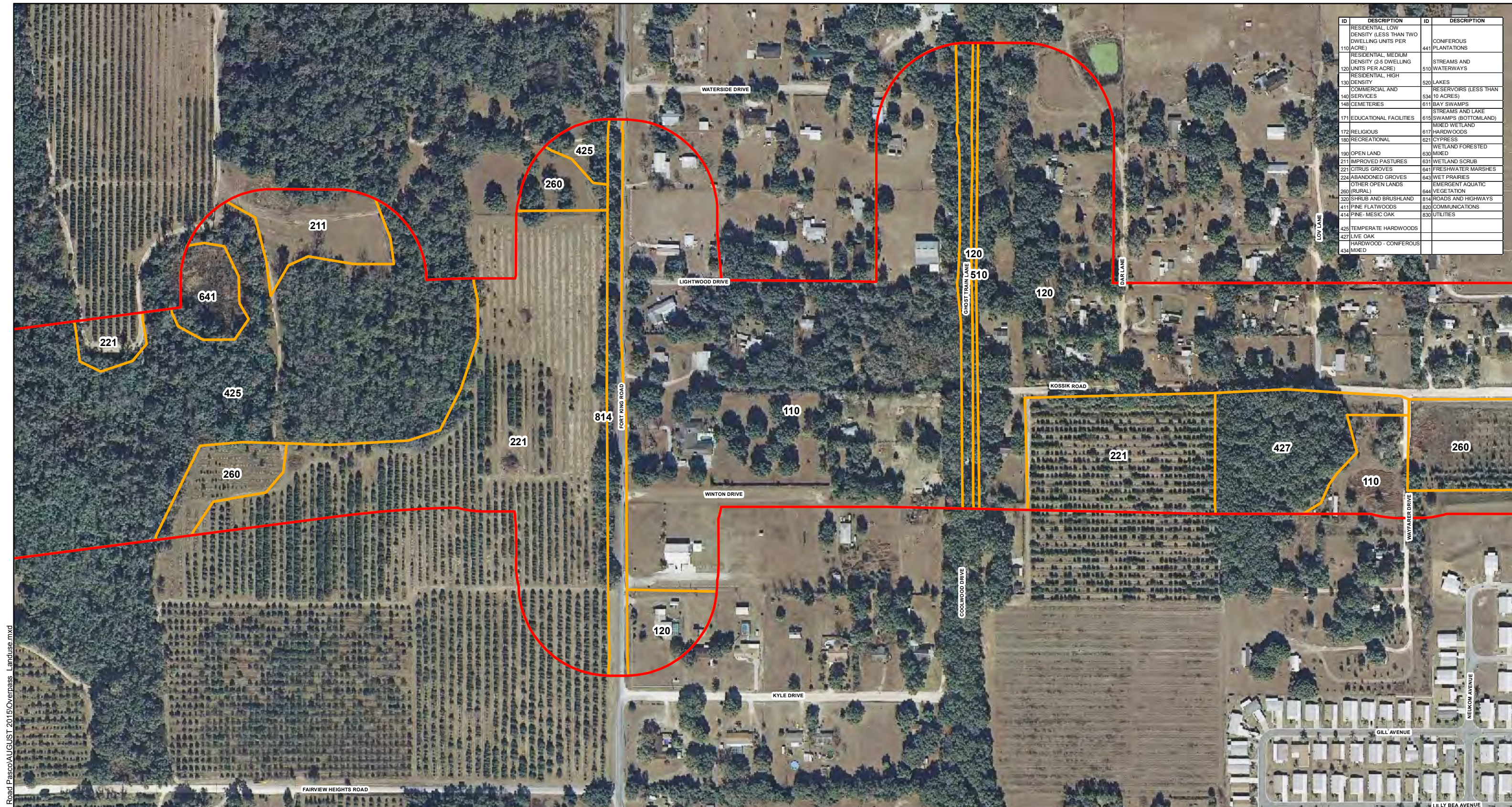
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**Overpass Road from Old Pasco Road
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425	TEMPERATE HARDWOODS	820	COMMUNICATIONS
427	LIVE OAK	830	UTILITIES
434	MIXED		

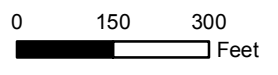
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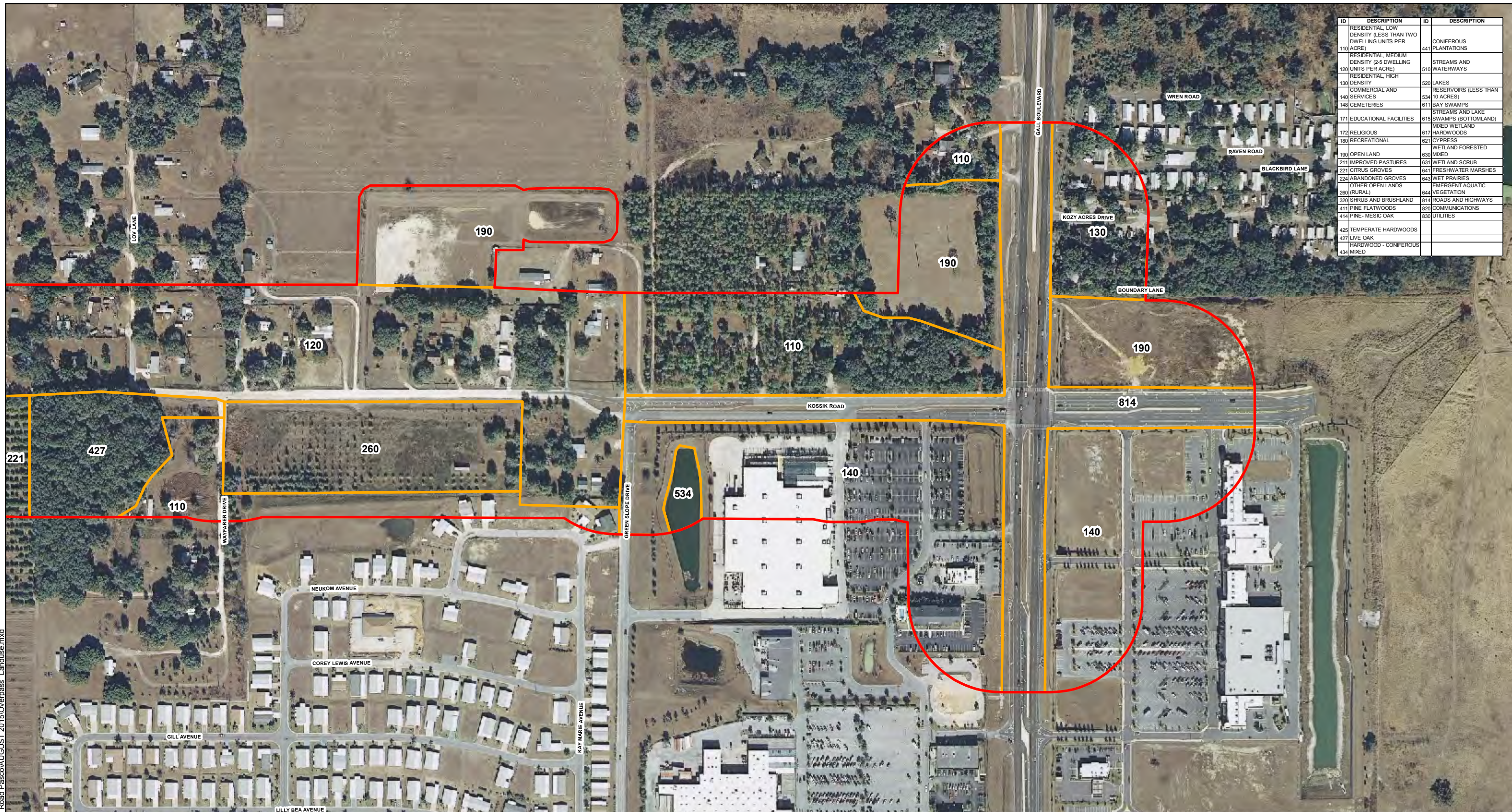
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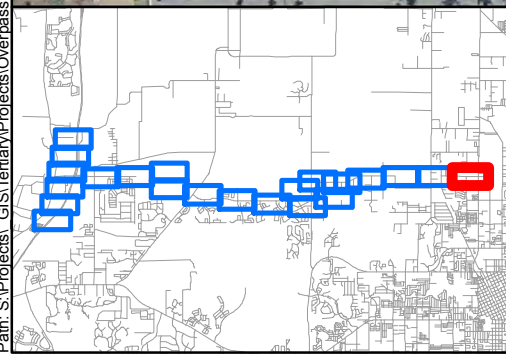
**Overpass Road from Old Pasco Road
to US 301 PD+E Study**
Land Use/ Vegetative Cover Type
Pasco County, FL
Sheet 21 of 22



ID	DESCRIPTION	ID	DESCRIPTION
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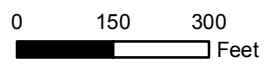
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Overpass Road from Old Pasco Road to US 301 PD+E Study

Land Use/ Vegetative Cover Type
Pasco County, FL
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APPENDIX C

**Wetland and Other Surface Water
Location Maps and Descriptions**

Appendix C – Individual Wetland and Other Surface Water Descriptions

Below are brief descriptions of the 80 individual wetland and other surface water habitats identified within the project study area. Included within the wetland descriptions are the FLUCFCS and FWS wetland classifications, listings of dominant vegetation, observed evidence of wildlife utilization, and the acreage coverage of each within the project study area.

Wetlands

Wetland 1

FLUCFCS: 641 – Freshwater Marsh

FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 1 is part of a freshwater marsh overlaying mapped hydric soil and extending outside of the project area west of Old Pasco Road at the western terminus of the project study area. Within the project study area, dominant vegetation within this wetland consists of primrose willow, arrowhead, soft rush, pickerelweed, saltbush, and sesbans (*Sesbania* spp.). During the September 2012 field review, standing water was present. WL 1 comprises 4.2 acres of the project study area.

Wetland 2

FLUCFCS: 615/641 – Stream and Lake Swamps/Freshwater Marsh

FWS: PFO1C/PEM1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded/Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 2 is a large forested wetland with few areas comprised of freshwater marsh overlaying mapped hydric soils. WL 2 is located within the north side of Overpass Road west of I-75. Within the project study area, dominant vegetation within the forested portion of the wetland consists of sweet bay, black gum (*Nyssa sylvatica*), elderberry, sugarberry (*Celtis laevigata*), red maple, Virginia chain fern, and primrose willow. Dominant vegetation within the freshwater marsh portion of the wetland consists of soft rush. During the September 2012 field review, standing water was present throughout WL 2. WL 2 comprises 38.1 acres of the project study area.

Wetland 3

FLUCFCS: 615 – Stream and Lake Swamps

FWS: PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 3 is a large forested wetland overlaying mapped hydric soils that extends east outside of the project study area. This wetland is located on the south side of Overpass Road east of I-75. Within the project study area, dominant vegetation within the canopy consists of red maple, sweet bay, slash pine, cabbage palm, and Carolina willow. Ground cover is dominated by elderberry, primrose willow, dogfennel (*Eupatorium capillifolium*), beggarticks (*Bidens* spp.), and water pennywort (*Hydrocotyle umbellata*). During the September 2012 field review, water was flowing through a small culvert off of I-75 into this wetland. WL 3 comprises 19.3 acres of the project study area.

Wetland 4

FLUCFCS: 644 – Emergent Aquatic Vegetation

FWS: PAB4H – Palustrine, Aquatic Bed, Floating Vascular, Permanently Flooded

Wetland 4 is an isolated, open water wetland overlaying mapped hydric soils and located on the south side of Overpass Road less than 0.10 mile west of Boyette Road. Within the project study area, this wetland consists predominantly of spatterdock and torpedo grass. During the September 2012 field review, this wetland was inundated throughout with water. WL 4 comprises 1.5 acres of the project study area.

Wetland 5

FLUCFCS: 631 – Wetland Scrub

FWS: PSS1C – Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 5 is a wetland scrub area overlaying mapped hydric soils and located approximately 0.90 mile east of Boyette Road. Within the project study area, dominant vegetation within this wetland consists of red maple, Carolina willow, red bay, elderberry, and primrose willow. Standing water was present within this wetland at the time of the September 2012 field review. WL 5 comprises 13.4 acres of the project study area.

Wetland 6

FLUCFCS: 641 – Freshwater Marsh

FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 6 is a freshwater marsh not overlaying mapped hydric soils but is connected to a series of drainage ditches (Ditch 5). This wetland is located approximately 0.50 mile south of Elam Road and 0.7 mile west of County Road 577 (Curley Road). Dominant vegetation consists of maidencane and primrose willow. During the September 2012 field review, standing water was present within this wetland. WL 6 comprises 0.3 acre of the project study area.

Wetland 7

FLUCFCS: 615 – Stream and Lake Swamps

FWS: PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 7 is a forested wetland connected to a series of ditches (Ditch 5) within pasture land and overlays mapped hydric soils. This wetland is located approximately 0.50 mile south of Elam Road and 0.7 mile west of Curley Road. Within the project study area, dominant vegetation within the canopy consists of water oak, sweetgum, and red maple while the ground cover is dominated by maidencane and Virginia chain fern. WL 7 comprises 5.5 acres of the project study area.

Wetland 8

FLUCFCS: 621/641/643 – Cypress/Freshwater Marsh/Wet Prairie

FWS: PFO2C/PEM1C/PEM1J – Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded/Palustrine, Emergent, Persistent, Seasonally Flooded/Palustrine, Emergent, Persistent, Intermittently Flooded

Wetland 8 is comprised of cypress, freshwater marsh and wet prairie and overlays mapped hydric soils. WL 8 is located approximately 0.2 mile northwest of Curley Road and Overpass Road. Within the project study area, dominant vegetation within the forested portion of the wetland consists of bald cypress. The freshwater marsh portion of the wetland is dominated by

soft rush, cattail (*Typha* spp.), Carolina willow, and primrose willow. Dominant vegetation within the wet prairie portion of the wetland consists of dogfennel, flatsedge, bristle grass (*Setaria geniculata*), and bushy broomsedge. WL 8 comprises 13.8 acres of the project study area.

Wetland 9

FLUCFCS: 641 – Freshwater Marsh

FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 9 is a small freshwater marsh located at Curley Road and Overpass Road on the northwest side of Curley Road. This marsh does not overlay mapped hydric soils. Dominant vegetation consists of Carolina willow, elderberry, and primrose willow. During the September 2012 field review, standing water was present within this wetland. WL 9 comprises 2.3 acres of the project study area.

Wetland 10

FLUCFCS: 631 – Wetland Scrub

FWS: PSS1C – Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 10 is a wetland scrub area not overlaying mapped hydric soils and located on the south side of Overpass Road directly west of Angelstem Boulevard. Within the project study area, dominant vegetation within this scrub wetland consists of wax myrtle, saltbush, juvenile sweet bay, primrose willow, sand cordgrass (*Spartina bakeri*), and dogfennel. During the September 2012 field review, standing water was present near the center of the wetland and a great egret was observed foraging within this wetland. WL 10 comprises 1.0 acres of the project study area.

Wetland 11

FLUCFCS: 641 – Freshwater Marsh

FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 11 is a freshwater marsh that does not overlay mapped hydric soils but is hydrologically connected to Lake 1. WL 11 is located on the south side of Overpass Road directly east of Angelstem Boulevard. Within the project study area, dominant vegetation within this marsh consists of saltbush, cattail, primrose willow, sesbans, and dogfennel. During the September 2012 field review, standing water was present in this wetland. WL 11 comprises 7.8 acres of the project study area.

Wetland 12

FLUCFCS: 621/631 – Cypress/Wetland Scrub

FWS: PFO2C/PSS1C – Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded/Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 12 is a wetland scrub area with a small area of bald cypress that overlays mapped hydric soils and is located on the north side of Overpass Road directly west of Windchase Way. Within the project study area, dominant vegetation within this scrub wetland consists of saltbush, primrose willow, and persimmon. During the September 2012 field review, standing water was present throughout this wetland. WL 12 comprises 4.7 acres of the project study area.

Wetland 13

FLUCFCS: 641 – Freshwater Marsh

FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 13 is a freshwater marsh that overlays mapped hydric soils and is located on the south side of Overpass Road directly east of the Watergrass Elementary School. Within the project study area, dominant vegetation within this marsh consists of primrose willow, dogfennel, bushy broomsedge, soft rush, saltbush, and fire flag (*Thalia geniculata*). During the September 2012 field review, standing water was present throughout this wetland and a little blue heron was observed foraging within the wetland. WL 13 comprises 3.7 acres of the project study area.

Wetland 14

FLUCFCS: 641 – Freshwater Marsh

FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 14 is a freshwater marsh that overlays mapped hydric soils and is located on the south side of Overpass Road less than 0.10 mile east of Watergrass Elementary. Within the project study area, dominant vegetation consists of primrose willow, soft rush, cattail, Carolina willow, pickerelweed, arrowhead, saltbush, and muscadine grape (*Vitis rotundifolia*). During the September 2012 field review, standing water was present within this wetland. WL 14 comprises 2.3 acres of the project study area.

Wetland 15

FLUCFCS: 641 – Freshwater Marsh

FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 15 is a freshwater marsh that does not overlay mapped hydric soils and is located directly east of Watergrass Parkway and Overpass Road. Within the project study area, dominant vegetation within this marsh consists of primrose willow, dogfennel, and saltbush. During the September 2012 field review, standing water was present within this wetland and two sandhill cranes were observed foraging throughout this wetland. WL 15 comprises 1.0 acre of the project study area.

Wetland 16

FLUCFCS: 631 – Wetland Scrub

FWS: PSS1C – Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 16 is a wetland scrub overlaying mapped hydric soils and is located northeast of Watergrass Parkway. Within the project study area, dominant vegetation consists of saltbush, juvenile sweet bay, dogfennel, wax myrtle, and muscadine grape. Standing water was present within this wetland during the September 2012 field review. WL 16 comprises 4.6 acres of the project study area.

Wetland 17

FLUCFCS: 617/631/641/643 – Mixed Wetland Hardwoods/Wetland Scrub/

Freshwater Marsh/Wet Prairie

FWS: PFO1C/PSSC1/PEM1C/PEM1J – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded/ Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/Palustrine, Emergent, Persistent, Seasonally Flooded/Palustrine, Emergent, Persistent, Intermittently Flooded

Wetland 17 consists of forested, scrub, and herbaceous wetland features and overlays mapped hydric soils. This wetland is located within open land near the eastern terminus of the existing Overpass Road. Dominant vegetation within the forested portion of the wetland consists of red maple, sweetgum, and wax myrtle. The wetland scrub area consists predominantly of chalky bluestem (*Andropogon virginicus*), saltbush, muscadine grape, Carolina willow, dahoon holly (*Ilex cassine*), and dogfennel. The herbaceous wetland areas consists predominantly of red ludwigia (*Ludwigia octovalvis*), Indian joint-vetch (*Aeschynomene indica*), maidencane, primrose willow, bahia grass, soft rush, water pennywort, and spike rush (*Eleocharis* spp.). During the September 2012 field review, this wetland was inundated throughout with water. WL 17 comprises 12.2 acres of the total project area.

Wetland 18

FLUCFCS: 641 – Freshwater Marsh

FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

WL 18 is an isolated, soft rush-dominated freshwater marsh that does not overlay mapped hydric soils; however, during the September 2012 field review, this wetland was inundated with water. WL 18 is located approximately 0.50 mile east of the eastern terminus of the existing Overpass Road. Dominant vegetation within WL 18 consists of soft rush and maidencane. WL 18 comprises 0.3 acre of the project study area.

Wetland 19

FLUCFCS: 641 – Freshwater Marsh

FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 19 is a portion of a freshwater marsh that extends south of the project study area and overlays mapped hydric soils. This marsh is located approximately 0.50 mile southeast of the eastern terminus of the existing Overpass Road. Within the project study area, dominant vegetation consists of scattered bald cypress, maidencane, soft rush, and primrose willow. During the September 2012 field review, standing water was present throughout this wetland. WL 19 comprises 2.4 acres of the project study area.

Wetland 20

FLUCFCS: 621/631/641 – Cypress/Wetland Scrub/Freshwater Marsh

FWS: PFO2C/PSS1C/PEM1C – Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded/Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 20 consists of a forested wetland dominated by bald cypress along with an area of wetland scrub and freshwater marsh. WL 20 is located approximately 0.30 mile west of Atkins Road and the majority of it overlays mapped hydric soils. Dominant vegetation within the scrub portion of the wetland consists of wax myrtle, live oak, dogfennel, and maidencane. Dominant

vegetation within the freshwater marsh consists of soft rush and maidencane. WL 20 comprises 6.1 acres of the project study area.

Wetland 21

FLUCFCS: 621/643 – Cypress/Wet Prairie

FWS: PFO2C/PEM1J – Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded/Palustrine, Emergent, Persistent, Intermittently Flooded

Wetland 21 consists of a wetland prairie with a cypress dome on the north side of it. WL 21 does overlay mapped hydric soils and is located approximately 0.25 mile west of Atkins Road. Dominant vegetation consists of maidencane, primrose willow, bahia grass, soft rush, and spike rush. Wetland 21 comprises 10.0 acres of the project study area.

Wetland 22

FLUCFCS: 641 – Freshwater Marsh

FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 22 consists of a small freshwater marsh that is located approximately 0.25 mile west of Atkins Road and does not overlay hydric soils. Dominant vegetation consists of soft rush and maidencane. During the September 2012 field review, standing water was present throughout this wetland. WL 22 comprises 0.5 acre of the project study area.

Wetland 23

FLUCFCS: 643 – Wet Prairie

FWS: PEM1J – Palustrine, Emergent Persistent, Intermittently Flooded

Wetland 23 is a wet prairie that lies within a pine plantation and does not overlay mapped hydric soils. This wetland is located approximately 0.25 mile west of Atkins Road. Dominant vegetation within WL 23 consists of red ludwigia, milkweed (*Asclepias* spp.), camphorweed (*Pluchea rosea*), buttonweed (*Diodia virginiana*), and maidencane. During the September 2012 field review, standing water was present throughout this wetland. WL 23 comprises 0.9 acre of the project study area.

Wetland 24

FLUCFCS: 643 – Wet Prairie

FWS: PEM1J – Palustrine, Emergent Persistent, Intermittently Flooded

Wetland 24 is a wet prairie that lies within a pine plantation and overlays mapped hydric soils. This wetland is located approximately 0.25 mile west of Atkins Road. Dominant vegetation within WL 24 consists of red ludwigia, camphorweed, buttonweed, and maidencane. WL 24 comprises 1.3 acres of the project study area.

Wetland 25

FLUCFCS: 643 – Wet Prairie

FWS: PEM1J – Palustrine, Emergent Persistent, Intermittently Flooded

Wetland 25 is a wet prairie that mostly overlays mapped hydric soils and is located on the south side of Atkins Road approximately 0.15 mile west of Handcart Road. Within the project study area, dominant vegetation consists of smut grass (*Sporobolus indicus*), saltbush, flatsedges, and bristle grass. WL 25 was inundated with water at the time of the September 2012 field review. WL 25 comprises 13.9 acres of the project study area.

Wetland 26

FLUCFCS: 630/631 – Wetland Scrub/Wetland Forested Mixed

FWS: PFO1/4C/PSS1C – Palustrine, Forested, Broad-Leaved Deciduous/Needle-Leaved Evergreen, Seasonally Flooded/Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 26 consists of a wetland scrub area and a forested wetland area. The wetland scrub and forested areas are connected by agriculture ditches (Ditch 10). WL 26 is located on both sides of Handcart Road directly north of Atkins Road. This wetland does overlay mapped hydric soils. Dominant vegetation within the wetland scrub portion of WL 26 consists of Carolina willow, saltbush, Chinese tallow (*Sapium sebiferum*), and wild taro (*Colocasia esculenta*). Dominant vegetation within the forested portion of WL 26 consists of longleaf pine, slash pine, red maple, sweetgum, and saltbush. Standing water was present throughout the wetland during the September 2012 field review. WL 26 comprises 6.8 acres of the project study area.

Wetland 27

FLUCFCS: 641 – Freshwater Marsh

FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 27 consists of a freshwater marsh that lies within pine flatwoods and overlays mapped hydric soils. This wetland is located approximately 0.28 mile east of the Handcart Road and Atkins Road intersection. Dominant vegetation within WL 27 consists of soft rush, duck potato (*Sagittaria latifolia*), primrose willow, and maidencane. WL 27 comprises 2.5 acres of the project study area.

Wetland 28

FLUCFCS: 615/641/643 – Stream and Lake Swamps/Freshwater Marsh/Wet Prairie

FWS: PFO1C/PEM1C/PEM1J – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded/Palustrine, Emergent, Persistent, Seasonally Flooded/Palustrine, Emergent, Persistent, Intermittently Flooded

Wetland 28 consists of a large forested wetland with areas of wet prairie and freshwater marsh. A flowing channel of water runs through the forested portion of this wetland and the freshwater marsh is connected to the forested portion of the wetland through a ditch (Ditch 11). WL 28 does overlay mapped hydric soils and is located on both sides of Fairview Heights Road approximately 0.15 mile west from Hackamore Road. Dominant vegetation within the forested portion of WL 28 consists of sweetgum, black gum, sweet bay, longleaf pine, red maple, Carolina willow, wax myrtle, and Virginia chain fern. The herbaceous portion of this wetland consists predominantly of soft rush, duck potato, primrose willow, and maidencane. WL 28 comprises 34.9 acres of the project study area.

Wetland 29

FLUCFCS: 641 – Freshwater Marsh

FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded:

Wetland 29 is a freshwater marsh overlaying mapped hydric soils and located less than 0.10 mile west of Hackamore Road. Dominant vegetation within this wetland consists of soft rush, duck potato, primrose willow, and maidencane. WL 29 comprises 3.1 acres of the project study area.

Wetland 30

FLUCFCS: 615 – Stream and Lake Swamps

FWS: PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 30 consists of an unnamed creek and its associated floodplain and overlays mapped hydric soils. WL 30 is located on both the east and west side of Handcart Road north of Atkins Road. Within the project study area, dominant vegetation within the canopy consists of sweet bay, swamp bay, and Carolina willow. Ground cover is dominated by elderberry, primrose willow, dogfennel, beggarticks, and caesarweed (*Urena lobata*). WL 30 comprises 16.7 acres of the project study area.

Wetland 31

FLUCFCS: 630 – Wetland Forested Mixed

FWS: PFO1/4C – Palustrine, Forested, Broad-Leaved Deciduous/Needle-Leaved Evergreen, Seasonally Flooded

Wetland 31 is a forested wetland overlaying mapped hydric soils and located on the south side of Fairview Heights Road approximately 0.20 mile east of Handcart Road. Within the project study area, dominant vegetation consists of red maple, slash pine, sweetgum, and wax myrtle. WL 31 is connected to a cattail-dominated surface water that leads to Fairview Heights Road. WL 31 comprises 2.0 acres of the project study area.

Wetland 32

FLUCFCS: 641 – Freshwater Marsh

FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 32 is a freshwater marsh that does not overlay mapped hydric soils. This marsh is located within a temperate hardwood forest approximately 0.30 mile north of Fairview Heights Road and 0.25 mile west of Fort King Road. Dominant vegetation within this wetland consists of maidencane, buttonbush, and spatterdock. WL 32 was inundated during the September 2012 field review and comprises 1.3 acre of the project study area.

Wetland 38

FLUCFCS: 641 – Freshwater Marsh

FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 38 is a freshwater marsh that does not overlay mapped hydric soils; however, during the September 2012 field review, this wetland was inundated with water. This marsh is located on the northwest side of I-75 approximately 1.20 miles south of Overpass Road. Within the project study area, dominant vegetation with this marsh consists of cattail, primrose willow, and Carolina willow. WL 38 comprises 0.4 acre of the project study area.

Wetland 39

FLUCFCS: 617/641 – Mixed Wetland Hardwoods/ Freshwater Marsh

FWS: PFO1C/PEM1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded/Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 39 is part of a mitigation wetland preservation area and consists of a forested wetland and a freshwater marsh that was inundated during the September 2012 field review. The forested portion of the wetland overlays mapped hydric soils while the freshwater marsh portion does not. WL 39 is located on the southeast side of I-75 approximately 1 mile south of Overpass Road.

Dominant vegetation within the forested portion of this wetland consists of bald cypress, red maple, maidencane, elderberry, and beggarticks. The marsh portion of the wetland consists of a culvert and is dominated by soft rush, maidencane, and buttonbush. WL 39 comprises 3.5 acres of the project study area.

Wetland 40

FLUCFCS: 641 – Freshwater Marsh

FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 40 is a freshwater marsh that does not overlay mapped hydric soils and is located on the northwest side of I-75 approximately 0.50 mile south of Overpass Road. Dominant vegetation within this wetland consists of primrose willow, Carolina willow, cattail, and saltbush. During the September 2012 field review, this wetland was inundated with water. WL 40 comprises 1.1 acres of the project study area.

Wetland 41

FLUCFCS: 615 – Stream and Lake Swamps

FWS: PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 41 is a forested wetland overlaying mapped hydric soils that extends west of the project study area and located on the west side of I-75 approximately 0.60 mile north of Overpass Road. WL 41 is connected to a drainage ditch (Ditch 24). Within the project study area, dominant vegetation within the canopy consists of red maple, sweet bay, slash pine, and cabbage palm. The understory and groundcover is dominated by elderberry, muscadine grape, poison ivy (*Toxicodendron radicans*), and beggarticks. Standing water was present within this wetland during the September 2012 field review. WL 41 comprises 6.3 acres of the project study area.

Wetland 42

FLUCFCS: 641 – Freshwater Marsh

FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 42 is a freshwater marsh surrounded by planted pine that does not overlay mapped hydric soils. This marsh is located on the east side of I-75 approximately 0.25 mile north of Overpass Road. Within the project study area, dominant vegetation consists of sesbans, torpedo grass, saltbush, and Carolina willow. During the September 2012 field review, the marsh was inundated with water. WL 42 comprises 0.3 acre of the project study area.

Wetland 43

FLUCFCS: 641 – Freshwater Marsh

FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 43 is a freshwater marsh that overlays mapped hydric soils and is also connected to Ditch 3. This marsh is located on the west side of Boyette Road south of Overpass Road. Within the project study area, dominant vegetation within WL 43 consists of torpedo grass, primrose willow, and saltbush. During the September 2012 field review, standing water was present within the wetland. WL 43 comprises 0.9 acre of the project study area.

Wetland 44

FLUCFCS: 611/643 – Bay Swamps/Wet Prairie

FWS: PFO1C/PEM1J – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded/Palustrine, Emergent, Persistent, Intermittently Flooded

Wetland 44 consists of a large bay swamp forest surrounded by wet prairie. WL 44 is located approximately 0.30 mile west of Atkins Road and the majority of it overlays mapped hydric soils. Within the project study area, dominant vegetation within the canopy of the forested portion of this wetland consists of sweet bay, swamp bay, and slash pine. The herbaceous portion of this wetland predominantly consists of maiden cane. WL 44 comprises 0.9 acre of the project study area.

Wetland 45

FLUCFCS: 641 – Freshwater Marsh

FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 45 consists of a freshwater marsh overlaying mapped hydric soils and located on the east side of McKendree Road approximately 0.50 mile north of Overpass Road. Within the project study area, dominant vegetation within this wetland consists of soft rush, pickerelweed, and primrose willow. During the September 2012 field review, standing water was present within the wetland. WL 45 comprises 0.4 acre of the project study area.

Wetland 46

FLUCFCS: 631 – Wetland Scrub

FWS: PSS1C – Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 46 consists of a disturbed wetland scrub that is connected to Surface Water 3 which has been heavily excavated in the past. WL 46 is located on the north side of Overpass Road approximately 0.10 mile east of Boyette Road. Dominant vegetation with WL 46 consists of Brazilian pepper (*Schinus terebinthifolia*), saltbush, primrose willow, Carolina willow, caesarweed, and beggarticks. WL 46 comprises 18.2 acres of the project study area.

Other Surface Waters

Lake 1

FLUCFCS: 520 – Lakes

FWS: L2OWH – Lacustrine, Littoral, Open Water, Permanently Flooded

Lake 1 consists of a small, natural lake located on the south side of Overpass Road east of Angelstem Boulevard. Past development and installation of berms have altered the natural shape of Lake 1. Lake 1 is connected to WL 11 and consists predominantly of spatterdock, saltbush, sesbans, and cattail. Lake 1 comprises 4.6 acres of the project study area.

Surface Water 1

FLUCFCS: 534 – Reservoir less than 10 acres

FWS: POWHx – Palustrine, Open Water, Permanently Flooded, Excavated

Surface Water 1 is a reservoir located on the south side of Overpass Road less than 0.10 mile east of Boyette Road next to Kids R Kids daycare. The littoral edge of SW 1 consists predominantly of cattail and torpedo grass. SW 1 comprises 0.1 acre of the project study area.

Surface Water 2

FLUCFCS: 534 – Reservoir less than 10 acres

FWS: POWHx – Palustrine, Open Water, Permanently Flooded, Excavated

Surface Water 2 is a reservoir located on the north side of Overpass Road less than 0.10 mile east of Boyette Road. The littoral edge of SW 2 consists predominantly of pickerelweed, arrowhead, red ludwigia, soft rush, and cattail. SW 2 comprises 2.4 acres of the project study area.

Surface Water 3

FLUCFCS: 534 – Reservoir less than 10 acres

FWS: POWHx – Palustrine, Open Water, Permanently Flooded, Excavated

Surface Water 3 consists of a disturbed, excavated body of water as a result of previous excavations. SW 3 is located on the north side of Overpass Road approximately 0.10 mile east of Boyette Road. Dominant vegetation along the banks of SW 3 consists of Carolina willow, primrose willow, and cattail. SW 3 comprises 4.8 acres of the project study area.

Surface Water 4

FLUCFCS: 534 – Reservoir less than 10 acres

FWS: POWHx – Palustrine, Open Water, Permanently Flooded, Excavated

Surface Water 4 is a reservoir located within the Palm Cove subdivision on the south side of Overpass Road. The littoral edge of SW 4 consists predominantly of soft rush. During the September 2012 field review, an alligator was observed within SW 4. SW 4 comprises 2.5 acres of the project study area.

Surface Water 5

FLUCFCS: 534 – Reservoir less than 10 acres

FWS: POWHx – Palustrine, Open Water, Permanently Flooded, Excavated

Surface Water 5 is a reservoir located approximately 0.50 mile south of Elam Road and 0.70 mile west of Curley Road and is connected to a series of drainage ditches (Ditch 5). Dominant vegetation within the littoral edge of SW 5 consists of primrose willow. SW 5 comprises 0.3 acre of the project study area.

Surface Water 6

FLUCFCS: 534 – Reservoir less than 10 acres

FWS: POWHx – Palustrine, Open Water, Permanently Flooded, Excavated

Surface Water 6 is a reservoir located on the south side of Overpass Road west of Angelstem Boulevard. Dominant vegetation within the littoral edge of SW 6 consists of pickerelweed, torpedo grass, alligatorweed (*Alternanthera philoxeroides*), water pennywort, and arrowhead. SW 6 comprises 1.4 acres of the project study area.

Surface Water 7

FLUCFCS: 534 – Reservoir less than 10 acres

FWS: POWHx – Palustrine, Open Water, Permanently Flooded, Excavated

Surface Water 7 is a series of three reservoirs serving the Watergrass Elementary School property located on the south side of Overpass Road approximately 0.40 mile east of Angelstem Boulevard. The reservoirs are surrounded by planted bald cypress and sand cordgrass. The

littoral edges of the reservoirs consist predominantly of arrowhead, pickerelweed, primrose willow, and soft rush. SW 7 comprises 1.3 acres of the project study area.

Surface Water 8 and 9

FLUCFCS: 534 – Reservoir less than 10 acres

FWS: POWHx – Palustrine, Open Water, Permanently Flooded, Excavated

Surface Waters 8 and 9 are reservoirs located on the north side of Overpass Road west of Windchase Way and are adjacent to WL 12. Dominant vegetation within the littoral edges of the reservoirs consists of arrowhead, primrose willow, and smartweed (*Polygonum* spp.). SW 8 comprises 0.5 acre of the project study area. SW 9 comprises 0.8 acre of the project study area.

Surface Water 10

FLUCFCS: 534 – Reservoir less than 10 acres

FWS: POWHx – Palustrine, Open Water, Permanently Flooded, Excavated

Surface Water 10 is a reservoir located on the south side of Overpass Road east of Watergrass Elementary School. Vegetation within the littoral edge of SW 10 consists predominantly of fire flag and arrowhead. During the September 2012 field review, a red-winged blackbird was observed within the littoral edge of SW 10. SW 10 comprises 0.4 acre of the project study area.

Surface Water 11

FLUCFCS: 534 – Reservoir less than 10 acres

FWS: POWHx – Palustrine, Open Water, Permanently Flooded, Excavated

Surface Water 11 is a reservoir located on the north side of Overpass Road west of Watergrass Parkway. The banks of SW 11 consist of mowed and maintained bahia grass with no littoral edge. During the September 2012 field review, several wading birds were observed foraging within SW 11 including an anhinga, little blue heron, great egret, great blue heron, and a white ibis. SW 11 comprises 1.5 acres of the project study area.

Surface Water 12

FLUCFCS: 534 – Reservoir less than 10 acres

FWS: POWHx – Palustrine, Open Water, Permanently Flooded, Excavated

Surface Water 12 consists of a cow pond that appears to also serve as a means of drainage for a nearby orange grove east of the pond. SW 12 is located approximately 0.25 mile west of Atkins Road and is devoid of vegetation. SW 12 comprises 0.1 acre of the project study area.

Surface Water 13

FLUCFCS: 534 – Reservoir less than 10 acres

FWS: POWHx – Palustrine, Open Water, Permanently Flooded, Excavated

Surface Water 13 consists of a cow pond located on the south side of Fairview Heights Road approximately 0.10 mile west of Hackamore Road. SW 13 is devoid of vegetation. During the September 2012 field review, a wood stork was observed foraging within SW 13. SW 13 comprises 0.2 acre of the project study area.

Surface Water 14

FLUCFCS: 534 – Reservoir less than 10 acres

FWS: POWHx – Palustrine, Open Water, Permanently Flooded, Excavated

Surface Water 14 is a reservoir located approximately 0.40 mile west of Handcart Road north of Atkins Road and is devoid of vegetation. SW 14 comprises 0.1 acre of the project study area.

Surface Water 15

FLUCFCS: 534 – Reservoir less than 10 acres

FWS: POWHx – Palustrine, Open Water, Permanently Flooded, Excavated

Surface Water 15 is a reservoir with mowed and maintained banks located on the south side of Kossik Road east of Green Slope Drive. SW 15 serves property surrounding the Lowes Home Improvement store. SW 15 comprises 0.6 acre of the project study area.

Surface Water 16

FLUCFCS: 534 – Reservoir less than 10 acres

FWS: POWHx – Palustrine, Open Water, Permanently Flooded, Excavated

Surface Water 16 is a reservoir located on the west side of Boyette Road south of Overpass Road. The banks of this reservoir consist of bahia grass and beggarticks. SW 16 comprises 0.1 acre of the project study area.

Surface Water 17

FLUCFCS: 534 – Reservoir less than 10 acres

FWS: POWHx – Palustrine, Open Water, Permanently Flooded, Excavated

Surface Water 17 is a series of reservoirs located within a water treatment plant owned by Pasco County on the west side of I-75 approximately 0.50 mile south of Overpass Road. The banks of the reservoirs are mowed and maintained and collectively comprise 6.9 acres of the project study area.

Surface Water 18

FLUCFCS: 534 – Reservoir less than 10 acres

FWS: POWHx – Palustrine, Open Water, Permanently Flooded, Excavated

Surface Water 18 is a reservoir located on the west side of I-75 approximately 0.35 mile south of Overpass Road. Dominant vegetation within the banks of SW 18 consists of Carolina willow, beggarticks, and primrose willow. SW 18 comprises 0.4 acre of the project study area.

Ditch 1

FLUCFCS: 510 – Streams and Waterways

FWS: PEM1Jx – Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated

Ditch 1 is an upland-cut drainage ditch that runs parallel to the south side of Overpass Road west of I-75 and is connected to WL 3 through a series of culverts. During the September 2012 field review, this ditch was inundated with water. Dominant vegetation within Ditch 1 consists of primrose willow, rattlebox (*Crotalaria* spp.), sesbans, and Carolina willow. Ditch 1 comprises 0.4 acre of the project study area.

Ditch 2

FLUCFCS: 510 – Streams and Waterways

FWS: PEM1Jx – Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated

Ditch 2 is an upland-cut drainage ditch surrounded by planted pine on the north side of Overpass Road between I-75 and Elam Road. During the September 2012 field review, standing water was not observed within the ditch. Dominant vegetation within Ditch 2 consists of beggarticks. Ditch 2 comprises 1.1 acres of the project study area.

Ditch 3

FLUCFCS: 510 – Streams and Waterways

FWS: PEM1Jx – Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated

Ditch 3 is an upland-cut drainage ditch that runs parallel to the west side of Boyette Road south of Overpass Road and is connected to WL 43. During the September 2012 field review, standing water was observed within the ditch. Dominant vegetation within Ditch 3 consists of soft rush, beggarticks, torpedo grass, and bahia grass. Ditch 3 comprises 0.4 acre of the project study area.

Ditch 4

FLUCFCS: 510 – Streams and Waterways

FWS: PEM1Jx – Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated

Ditch 4 is an upland-cut drainage ditch that runs parallel to the north side of Overpass Road approximately 0.25 acre east of Elam Road. At the time of the September 2012 field review, Ditch 4 was inundated with water and a tricolored heron, brown thrasher, and a cardinal were observed foraging within the ditch. Dominant vegetation within this ditch consists of saltbush, Carolina willow, beggarticks, wax myrtle, Brazilian pepper, dogfennel, and muscadine grape. Ditch 4 comprises 3.5 acres of the project study area.

Ditch 5

FLUCFCS: 510 – Streams and Waterways

FWS: PEM1Jx – Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated

Ditch 5 consists of a series of upland-cut drainage ditches within abandoned orange groves east of the Palm Cove residential area. This series of ditches are connected to WL 6, WL 7, and WL 8. Dominant vegetation within the ditches consists of primrose willow and saltbush. Ditch 5 comprises 8.9 acres of the project study area.

Ditches 6 and 7

FLUCFCS: 510 – Streams and Waterways

FWS: PEM1Jx – Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated

Ditches 6 and 7 are a series of upland-cut drainage ditches within open land on both sides of Curley Road and both sides of Overpass Road. Dominant vegetation within this series of ditches consists of primrose willow, smartweed, cattail, sesbans, and ragweed (*Ambrosia artemisiifolia*). During the September 2012 field review, these ditches were inundated with water. Ditch 6 comprises 1.6 acres of the project study area. Ditch 7 comprises 0.4 acre of the project study area.

Ditches 8 and 9

FLUCFCS: 510 – Streams and Waterways

FWS: PEM1Jx – Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated

Ditches 8 and 9 are upland-cut drainage ditches that run parallel to Handcart Road and are connected to WL 26 and WL 30. Dominant vegetation within these ditches consists of chalky bluestem, torpedo grass, primrose willow, and maidencane and both were inundated with water at the time of the September 2012 field review. Ditch 8 comprises 1.0 acres of the project study area. Ditch 9 comprises 1.2 acres of the project study area.

Ditch 10

FLUCFCS: 510 – Streams and Waterways

FWS: PEM1Jx – Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated

Ditch 10 is an upland-cut drainage ditch on the east side of Handcart Road that connects to WL 26 within open pasture. Dominant vegetation within Ditch 10 consists of maidencane and bahia grass and flowing water was present at the time of the September 2012 field review. Ditch 10 comprises 0.9 acre of the project study area.

Ditch 11

FLUCFCS: 510 – Streams and Waterways

FWS: PEM1Jx – Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated

Ditch 11 is an upland-cut drainage ditch connected to WL 28 east of Spring Breeze Drive within open pasture. Dominant vegetation within this ditch consists of maidencane and bahia grass and no standing water was observed at the time of the September 2012 field review. Ditch 11 comprises 0.2 acre of the project study area.

Ditch 12

FLUCFCS: 510 – Streams and Waterways

FWS: PEM1Jx – Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated

Ditch 12 is an upland-cut drainage ditch located on the north side of Fairview Heights Road approximately 0.20 mile east of Handcart Road and is connected to WL 28. This ditch is dominated by bahia grass and maidencane with water present at the time of the September 2012 field review. Ditch 12 comprises 0.3 acre of the project study area.

Ditch 14

FLUCFCS: 510 – Streams and Waterways

FWS: PEM1Jx – Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated

Ditch 14 is an upland-cut drainage ditch located on the south side of Fairview Heights Road approximately 0.20 mile east of Handcart Road and is connected to WL 31. This ditch is dominated by bahia grass and was not inundated with water during the September 2012 field review. Ditch 14 comprises 0.2 acre of the project study area.

Ditch 15

FLUCFCS: 510 – Streams and Waterways

FWS: PEM1Jx – Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated

Ditch 15 is an upland-cut drainage ditch within improved pasture and open land located on the north side of Fairview Heights Road across from Artifact Drive. Ditch 15 was inundated with

water during the September 2012 field review and the banks consist predominantly of live oak and muscadine grape. Ditch 15 comprises 2.0 acres of the project study area.

Ditch 16

FLUCFCS: 510 – Streams and Waterways

FWS: PEM1Jx – Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated

Ditch 16 is an upland-cut drainage ditch that runs parallel to Ghost Train Lane east of Fort King Road. During the September 2012 field review, no water or vegetation was observed within the ditch. Ditch 16 comprises 0.6 acres of the project study area.

Ditch 20

FLUCFCS: 510 – Streams and Waterways

FWS: PEM1Jx – Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated

Ditch 20 is an upland-cut drainage ditch that runs parallel to the west side of I-75 south of Overpass Road. Dominant vegetation consists of maidencane and bahia grass and no water was present in the ditch during the September 2012 field review. Ditch 20 comprises 0.6 acre of the project study area.

Ditch 21

FLUCFCS: 510 – Streams and Waterways

FWS: PEM1Jx – Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated

Ditch 21 is a series of upland-cut drainage ditches within the water treatment plant owned by Pasco County on the west side of I-75 approximately 0.50 mile south of Overpass Road. These ditches were inundated at the time of the September 2012 field review and dominant vegetation within these ditches consists of primrose willow, soft rush, and torpedo grass. Ditch 21 comprises 3.3 acres of the project study area.

Ditch 22

FLUCFCS: 510 – Streams and Waterways

FWS: PEM1Jx – Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated

Ditch 22 is an upland-cut drainage ditch with a concrete substrate that runs parallel to the east side of I-75 and McKendree Road directly north of Overpass Road. No water was present within the ditch at the time of the September 2012 field reviews and vegetation predominantly consists of ragweed, beggarticks, and dogfennel. Ditch 22 comprises 0.9 acre of the project study area.

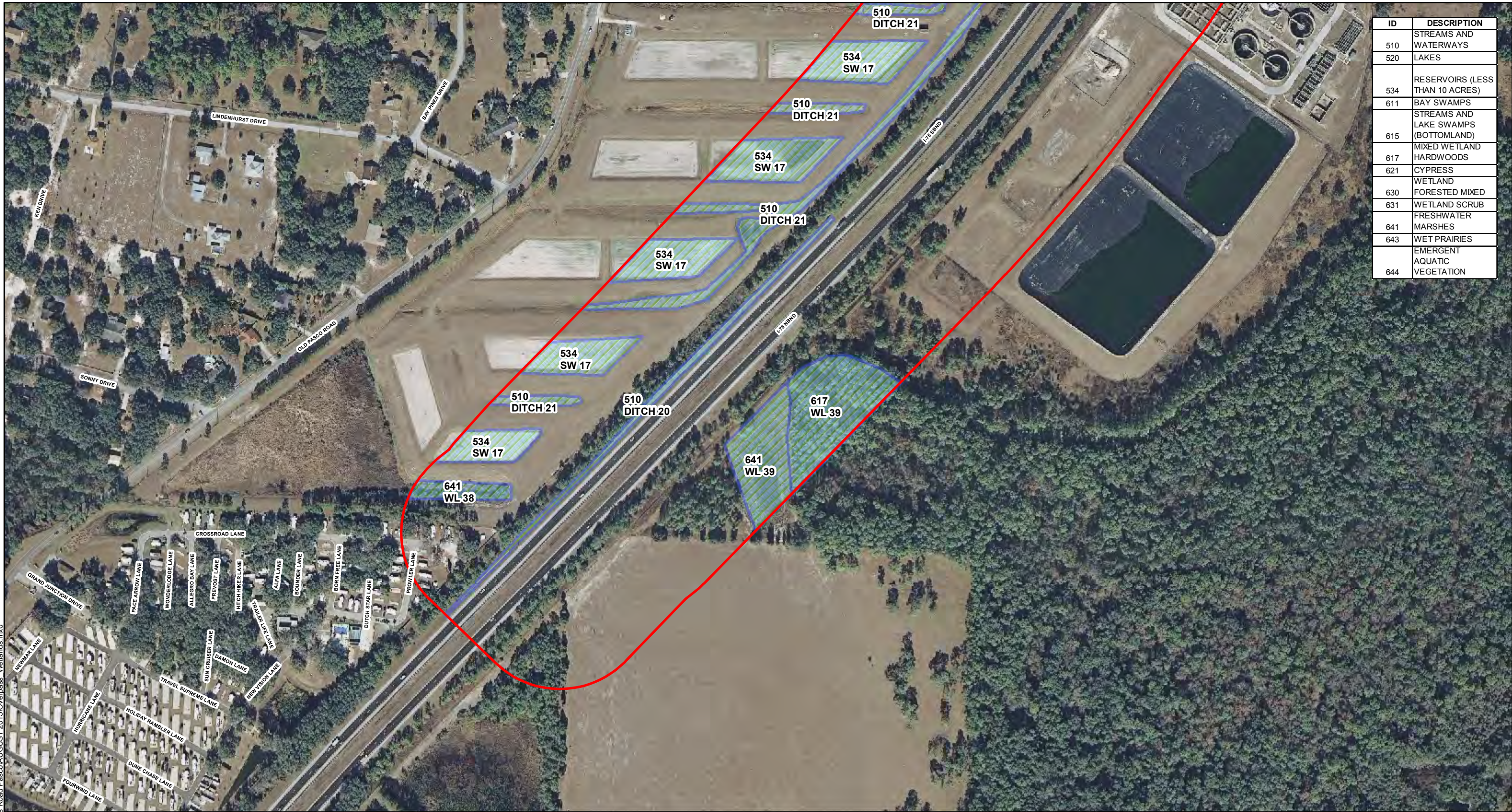
Ditch 23 and 24

FLUCFCS: 510 – Streams and Waterways

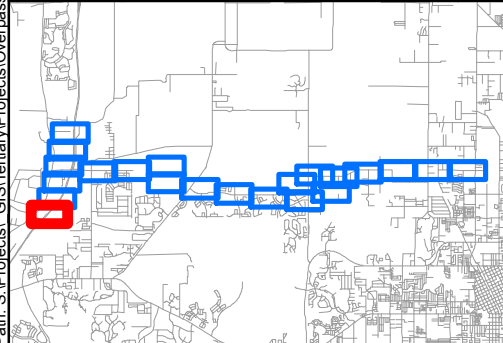
FWS: PEM1Jx – Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated

Ditches 23 and 24 are upland-cut drainage ditches with a concrete substrate that are connected to WL 41 through a series of culverts approximately 0.60 mile north of Overpass Road on the east and west side of I-75. Water was present within Ditch 24 at the time of the September 2012 field reviews and vegetation within both ditches predominantly consists of ragweed, beggarticks, and dogfennel. Ditch 23 comprises 0.2 acre of the project study area. Ditch 24 comprises 0.1 acre of the project study area.

ID	DESCRIPTION
510	STREAMS AND WATERWAYS
520	LAKES
534	RESERVOIRS (LESS THAN 10 ACRES)
611	BAY SWAMPS
615	STREAMS AND LAKE SWAMPS (BOTTOMLAND)
617	MIXED WETLAND HARDWOODS
621	CYPRESS WETLAND
630	FORESTED MIXED
631	WETLAND SCRUB
641	FRESHWATER MARSHES
643	WET PRAIRIES
644	EMERGENT AQUATIC VEGETATION



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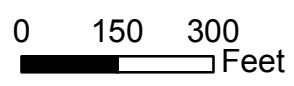


Legend

- Project Study Area
- Wetlands/ Other Surface Waters

Source:
Aerials- FDOT, 2011
Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

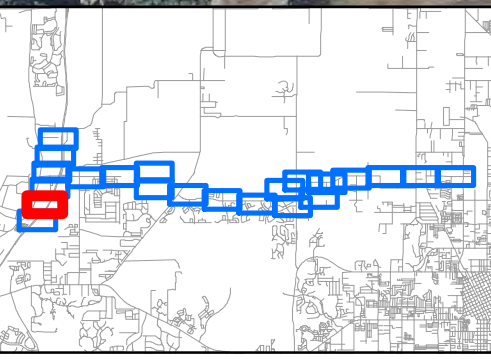
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 1 of 22





ID	DESCRIPTION
510	STREAMS AND WATERWAYS
520	LAKES
534	RESERVOIRS (LESS THAN 10 ACRES)
611	BAY SWAMPS
615	STREAMS AND LAKE SWAMPS (BOTTOMLAND)
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641	FRESHWATER MARSHES
643	WET PRAIRIES
644	EMERGENT AQUATIC VEGETATION

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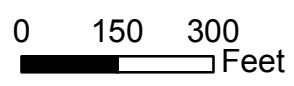


Legend

- Project Study Area
- Wetlands/ Other Surface Waters

Source:
Aerials- FDOT, 2011
Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

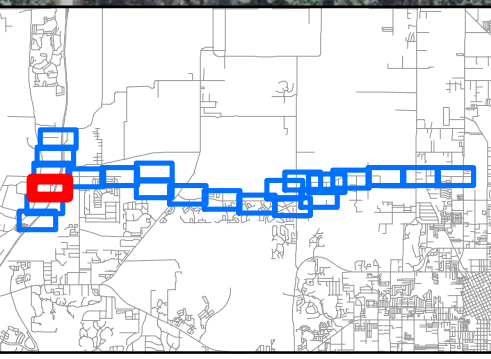
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 2 of 22





ID	DESCRIPTION
510	STREAMS AND WATERWAYS
520	LAKES
534	RESERVOIRS (LESS THAN 10 ACRES)
611	BAY SWAMPS
615	STREAMS AND LAKE SWAMPS (BOTTOMLAND)
617	MIXED WETLAND HARDWOODS
621	CYPRESS WETLAND
630	FORESTED MIXED
631	WETLAND SCRUB
641	FRESHWATER MARSHES
643	WET PRAIRIES
644	EMERGENT AQUATIC VEGETATION

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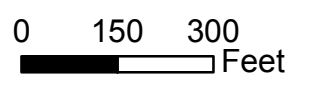


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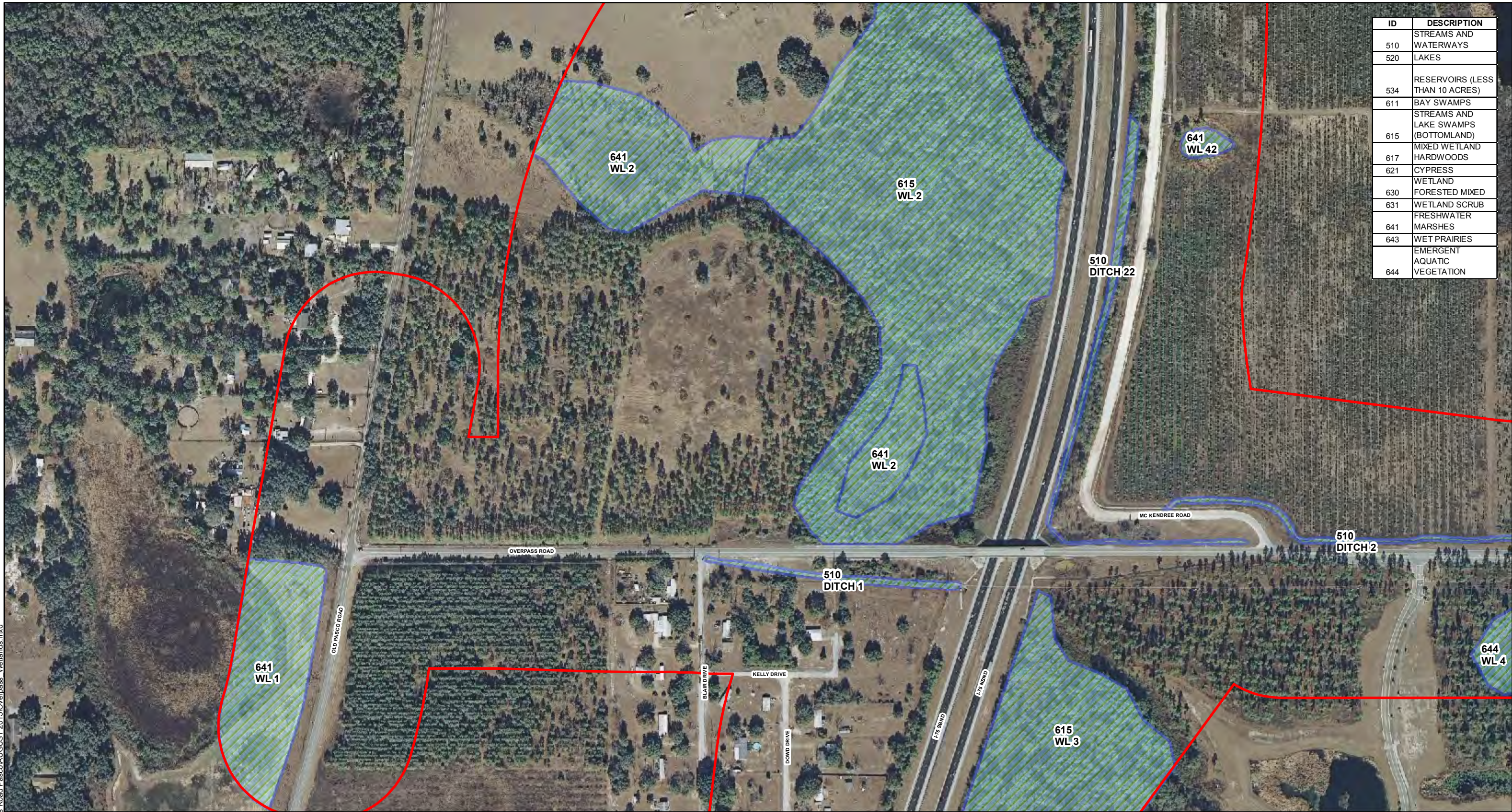
- Project Study Area
- Wetlands/ Other Surface Waters

Source:
Aerials- FDOT, 2011
Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

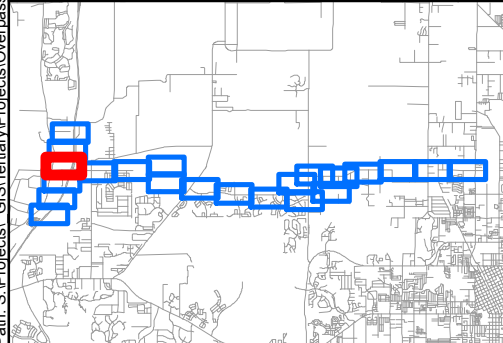
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 3 of 22



ID	DESCRIPTION
510	STREAMS AND WATERWAYS
520	LAKES
534	RESERVOIRS (LESS THAN 10 ACRES)
611	BAY SWAMPS
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644	EMERGENT AQUATIC VEGETATION



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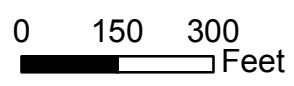


Legend

- Project Study Area
- Wetlands/ Other Surface Waters

Source:
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Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

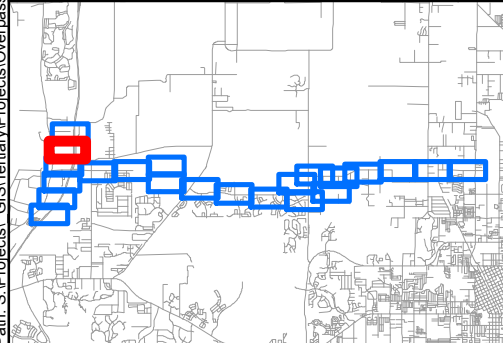
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 4 of 22



ID	DESCRIPTION
510	STREAMS AND WATERWAYS
520	LAKES
534	RESERVOIRS (LESS THAN 10 ACRES)
611	BAY SWAMPS
615	STREAMS AND LAKE SWAMPS (BOTTOMLAND)
617	MIXED WETLAND HARDWOODS
621	CYPRESS WETLAND
630	FORESTED MIXED
631	WETLAND SCRUB
641	FRESHWATER MARSHES
643	WET PRAIRIES
644	EMERGENT AQUATIC VEGETATION



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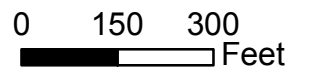


Legend

- Project Study Area
- Wetlands/ Other Surface Waters

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Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

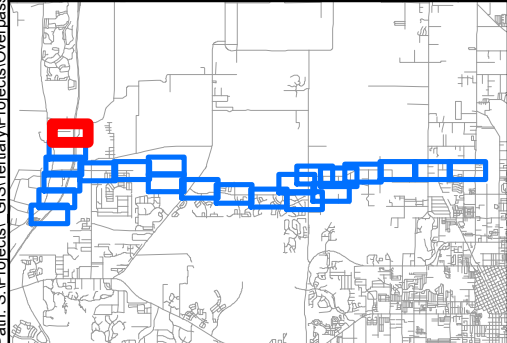
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 5 of 22



ID	DESCRIPTION
510	STREAMS AND WATERWAYS
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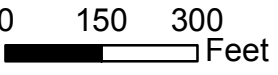


Legend

- Project Study Area
- Wetlands/ Other Surface Waters

Source:
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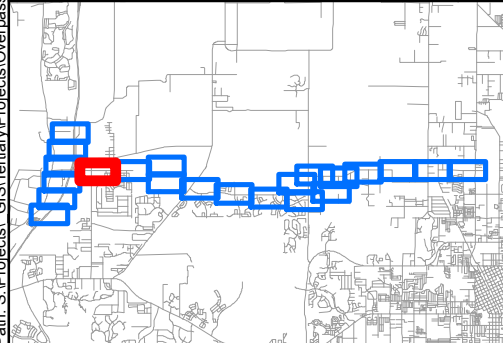
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 6 of 22



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644	EMERGENT AQUATIC VEGETATION



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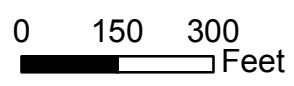


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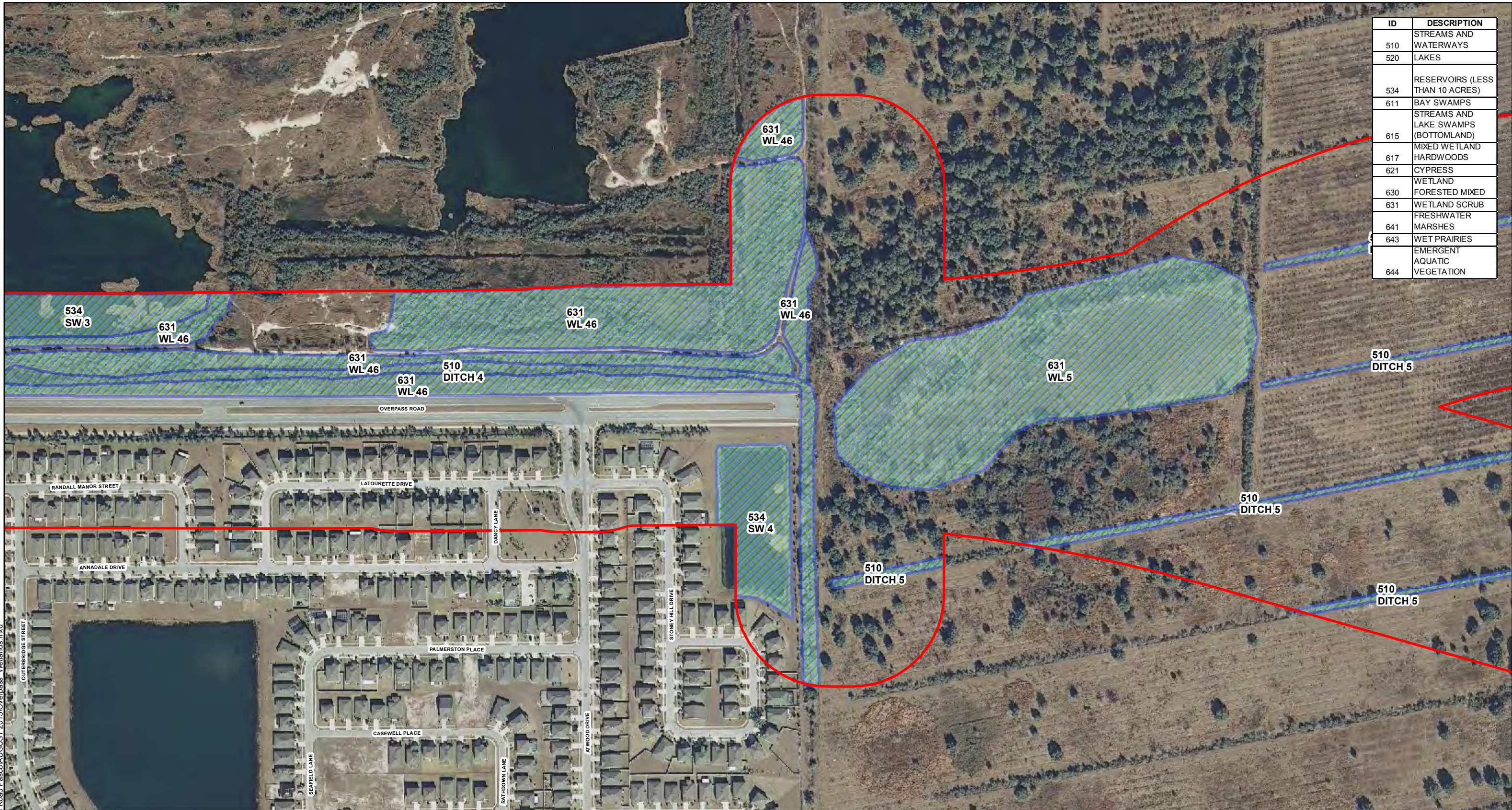
- Project Study Area
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Source:
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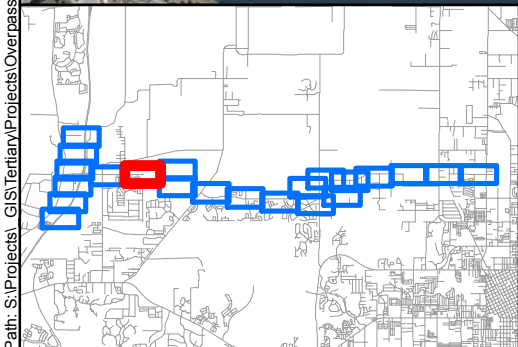
**Overpass Road from Old Pasco Road
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Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 7 of 22



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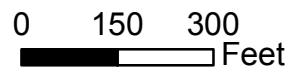


Legend

- Project Study Area
- Wetlands/ Other Surface Waters

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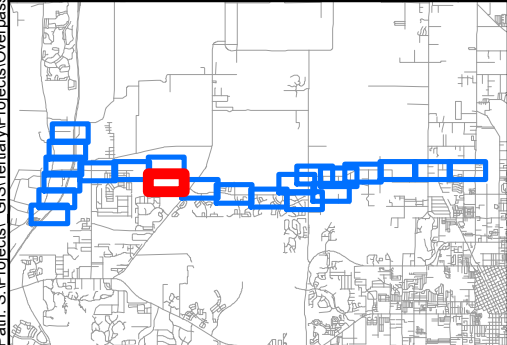
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 8 of 22



ID	DESCRIPTION
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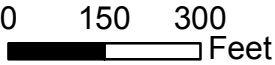


Legend

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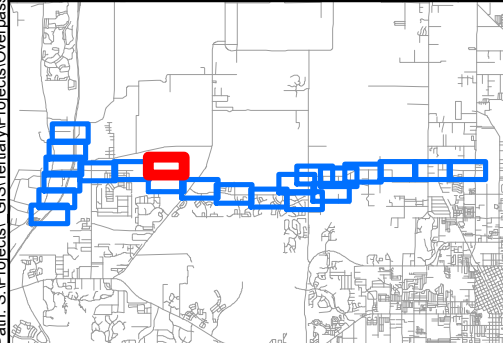
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 9 of 22



ID	DESCRIPTION
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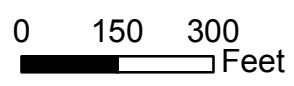


Legend

- Project Study Area
- Wetlands/ Other Surface Waters

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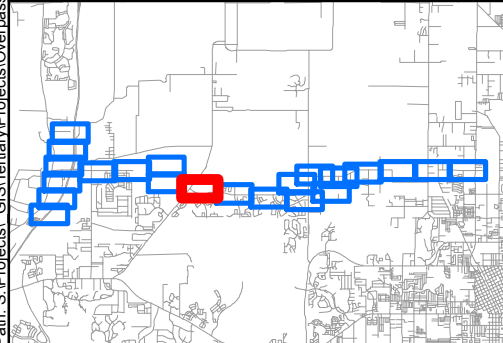
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 10 of 22



ID	DESCRIPTION
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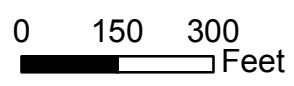


Legend

- Project Study Area
- Wetlands/ Other Surface Waters

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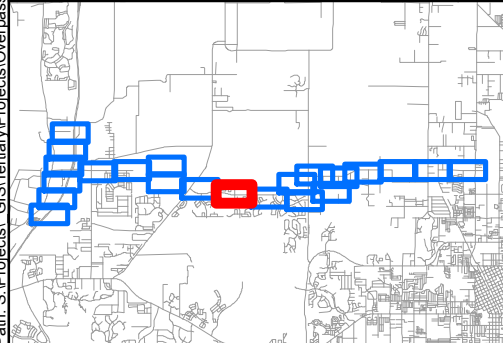
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 11 of 22



ID	DESCRIPTION
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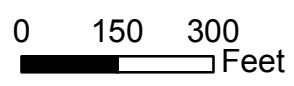


Legend

- Project Study Area
- Wetlands/ Other Surface Waters

Source:
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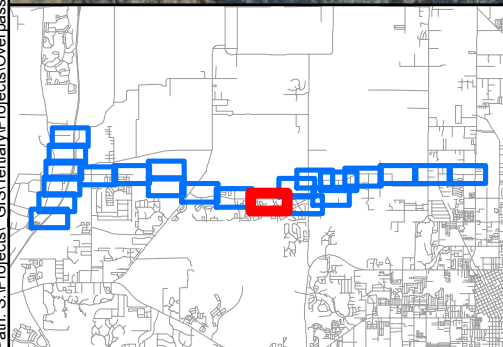
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 12 of 22



ID	DESCRIPTION
510	STREAMS AND WATERWAYS
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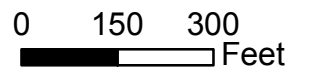


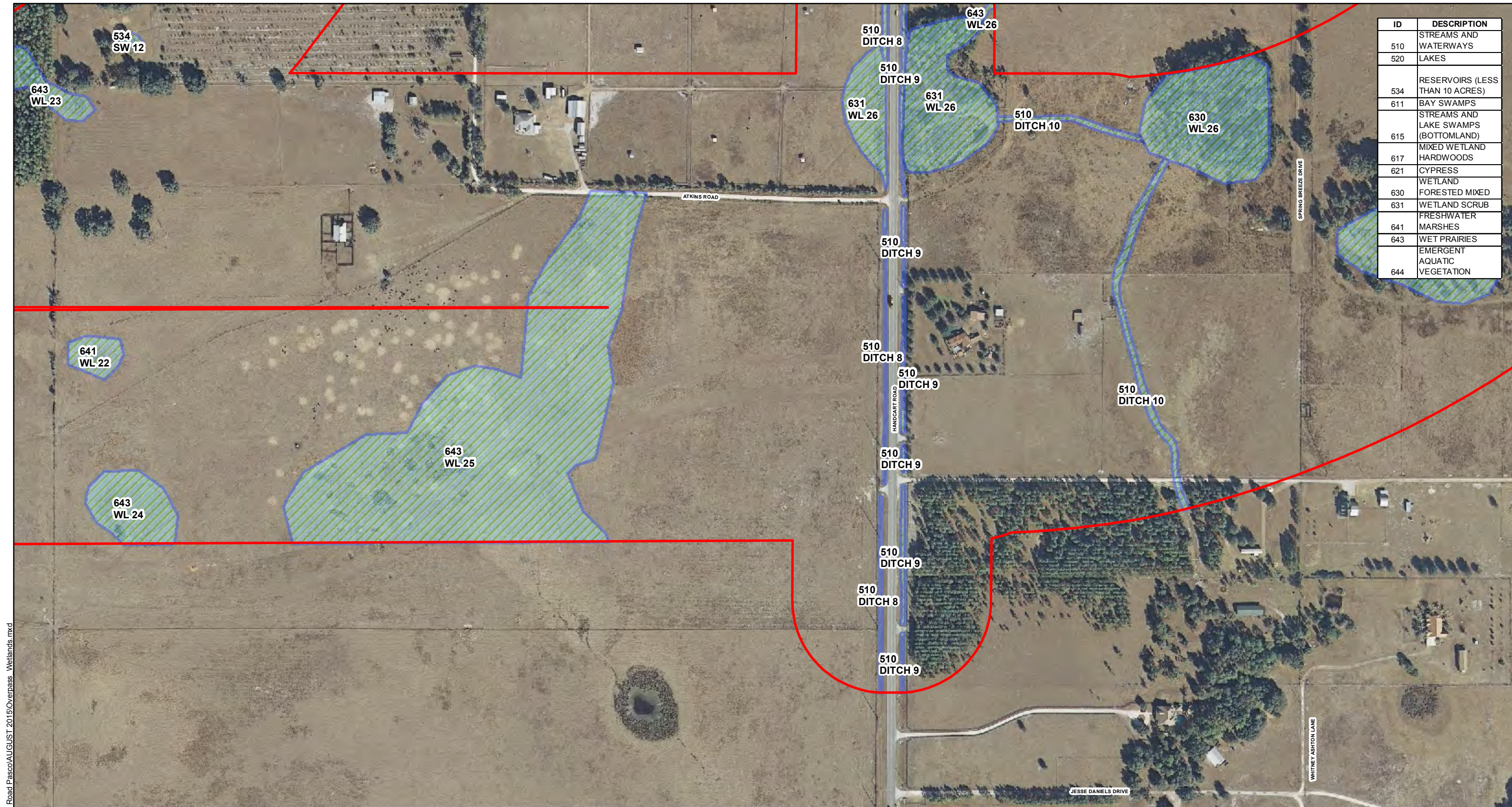
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- Project Study Area
- Wetlands/ Other Surface Waters

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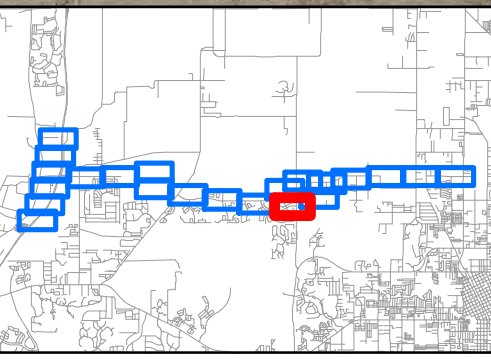
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 13 of 22





ID	DESCRIPTION
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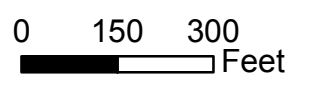


Legend

- Project Study Area
- Wetlands/ Other Surface Waters

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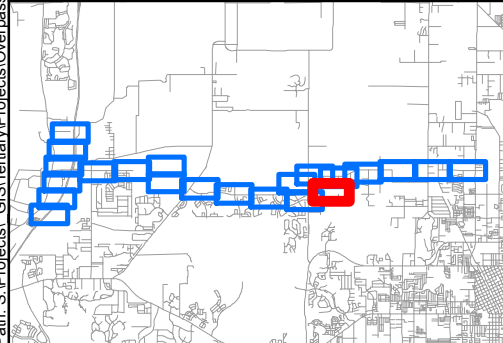
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 14 of 22



ID	DESCRIPTION
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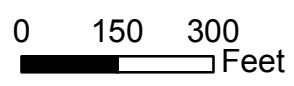


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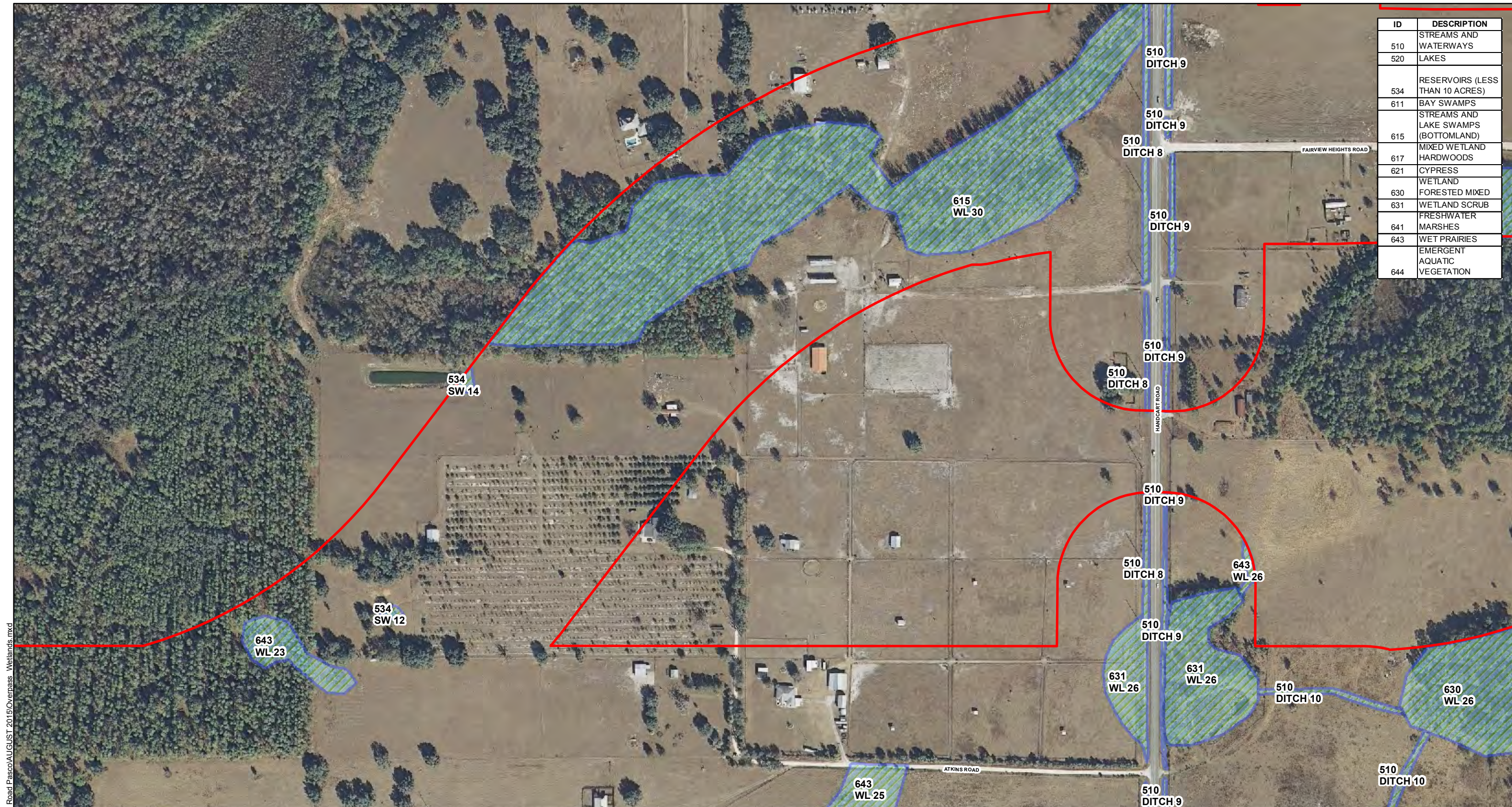
- Project Study Area
- Wetlands/ Other Surface Waters

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Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

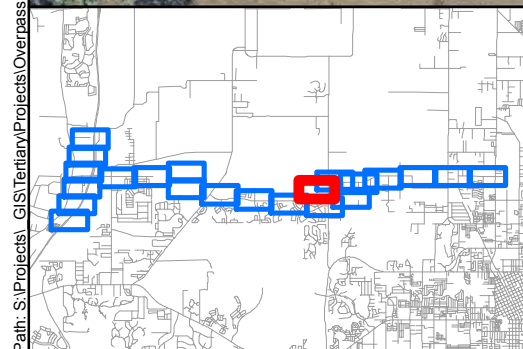
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 15 of 22



ID	DESCRIPTION
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644	WET PRAIRIES



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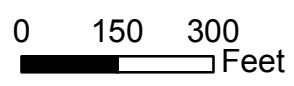


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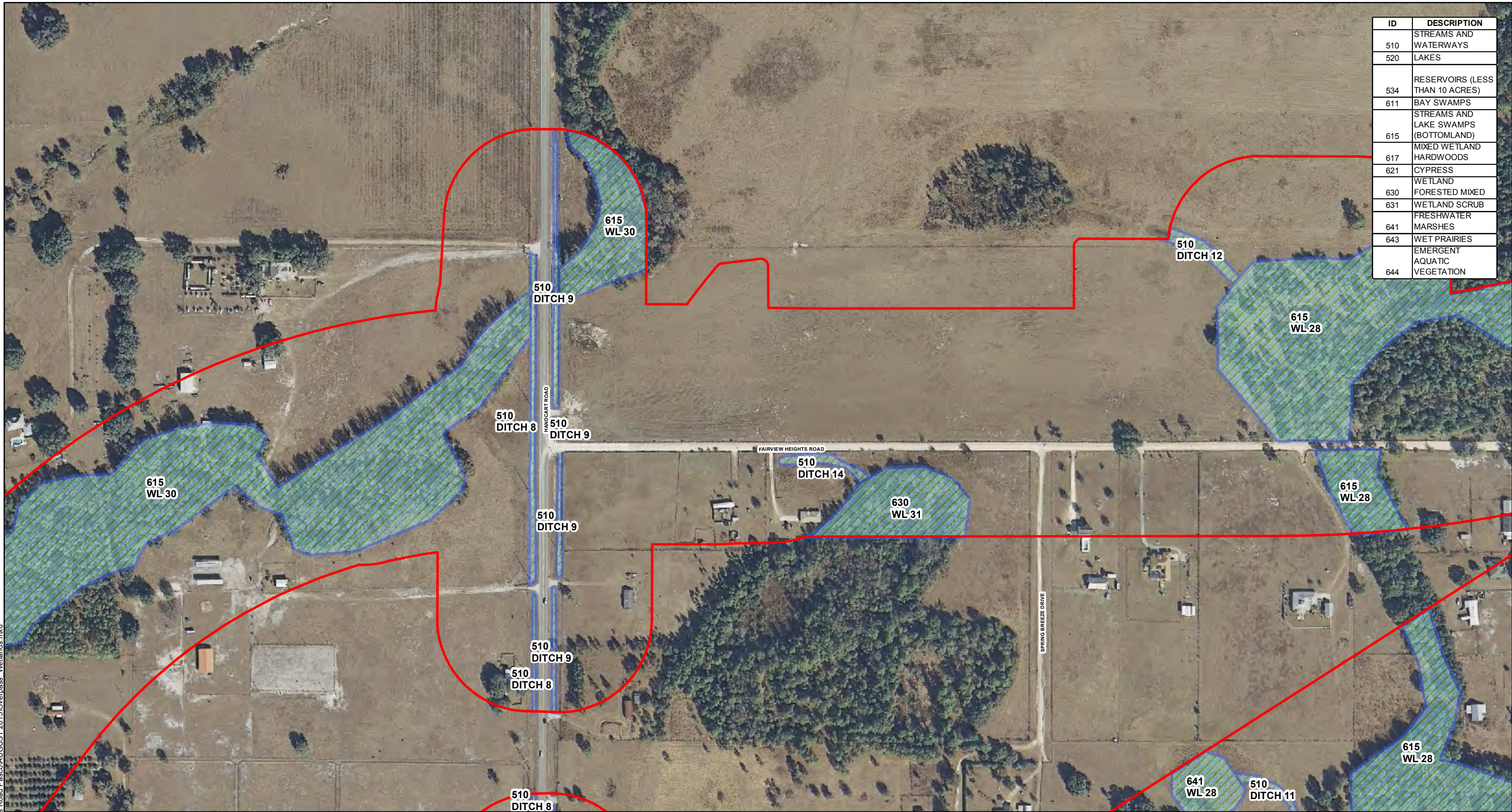
- Project Study Area
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Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

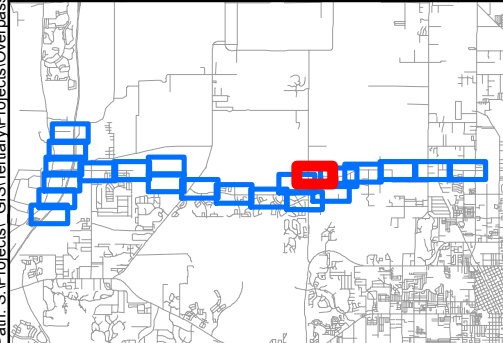
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Wetlands/ Other Surface Waters Location Map
Pasco County, FL
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ID	DESCRIPTION
510	STREAMS AND WATERWAYS
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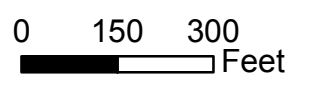


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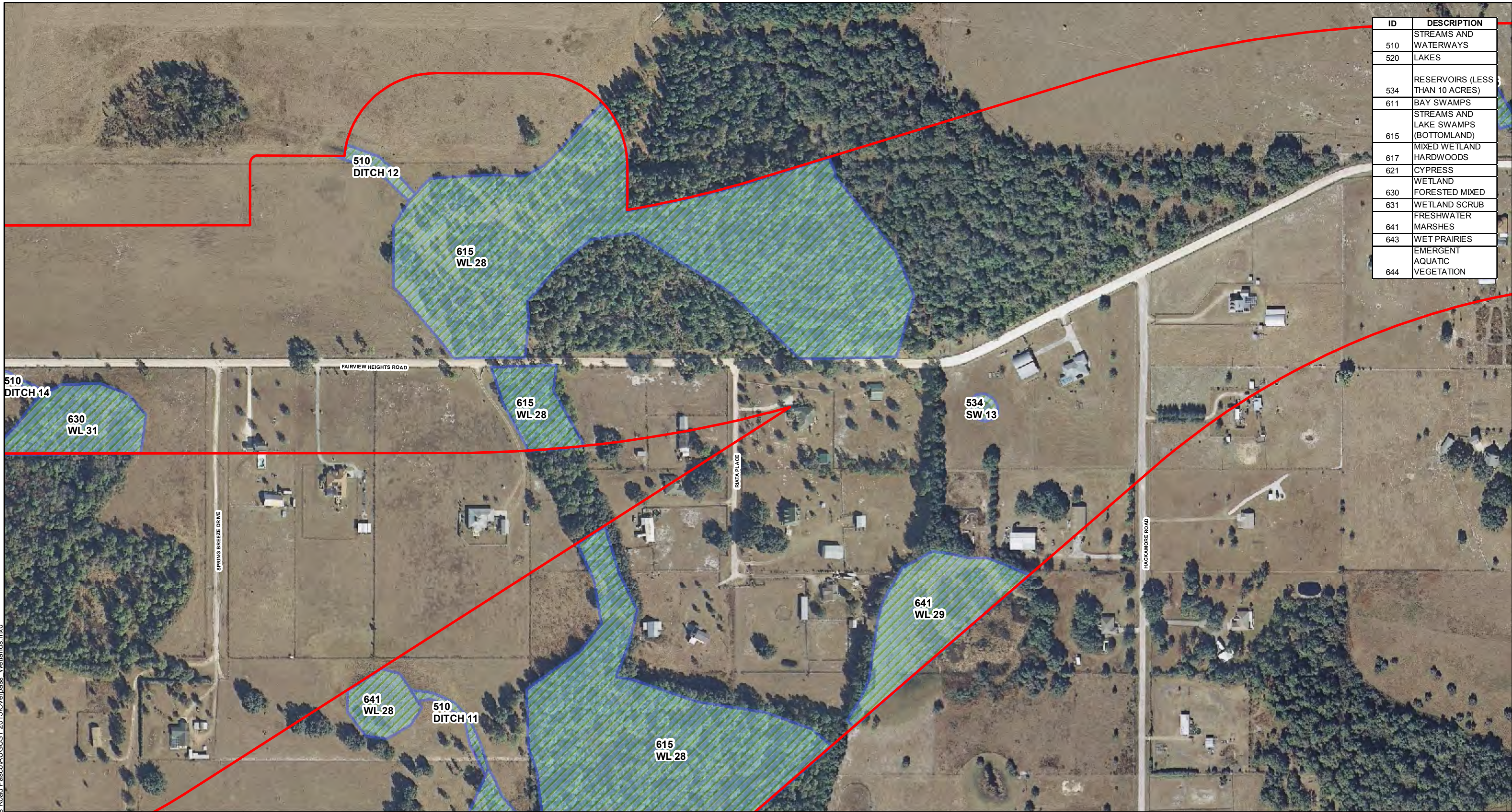
- Project Study Area
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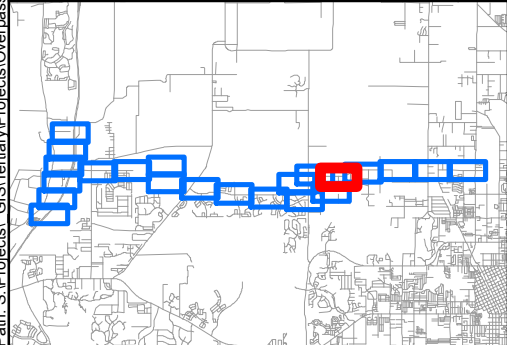
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 17 of 22



ID	DESCRIPTION
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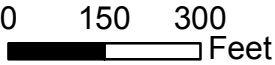


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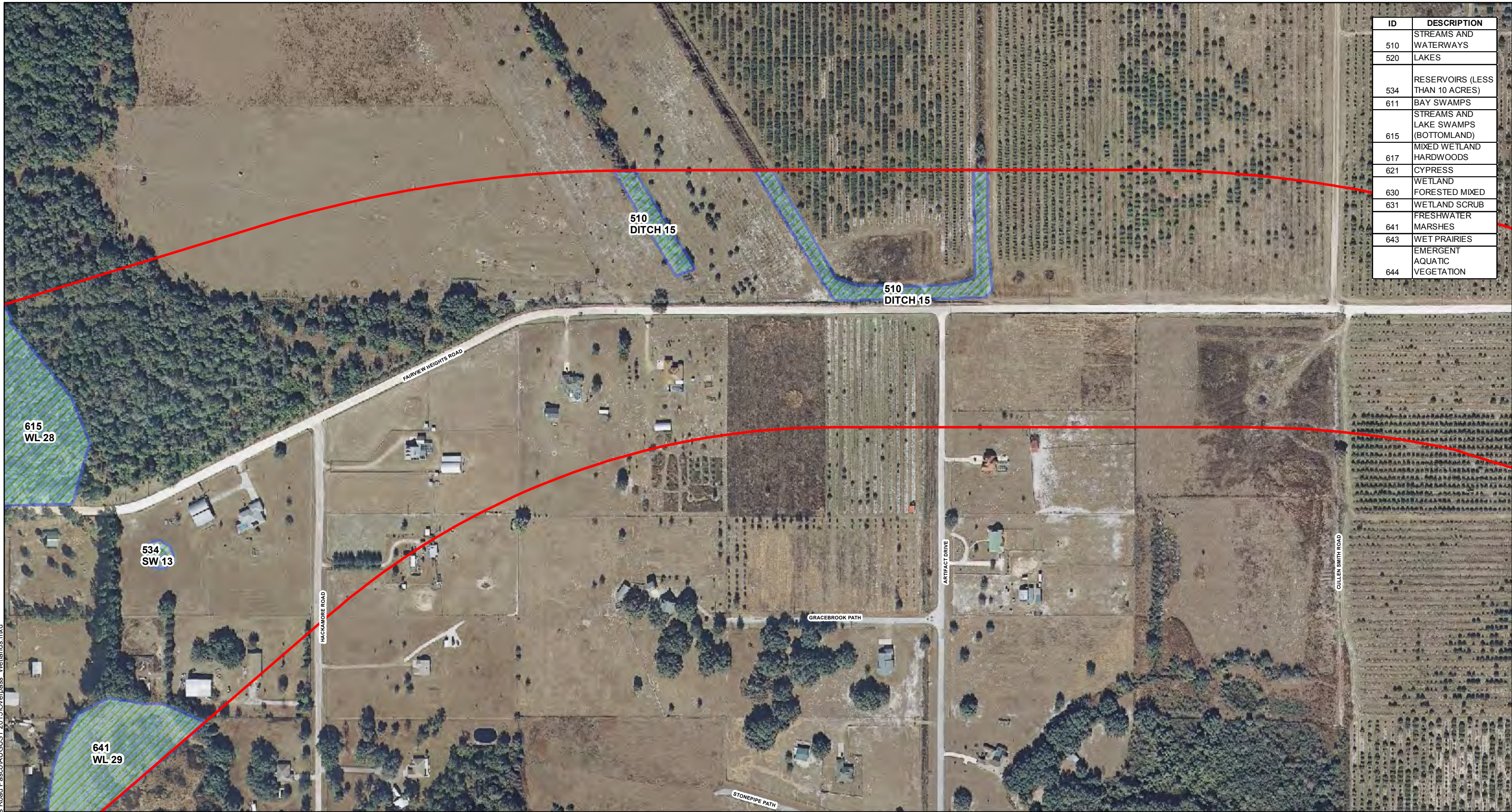
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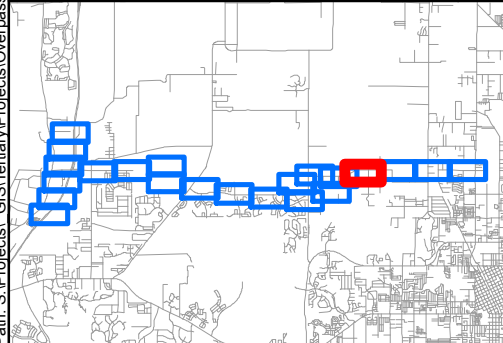
**Overpass Road from Old Pasco Road
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Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 18 of 22



ID	DESCRIPTION
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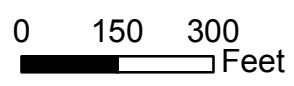


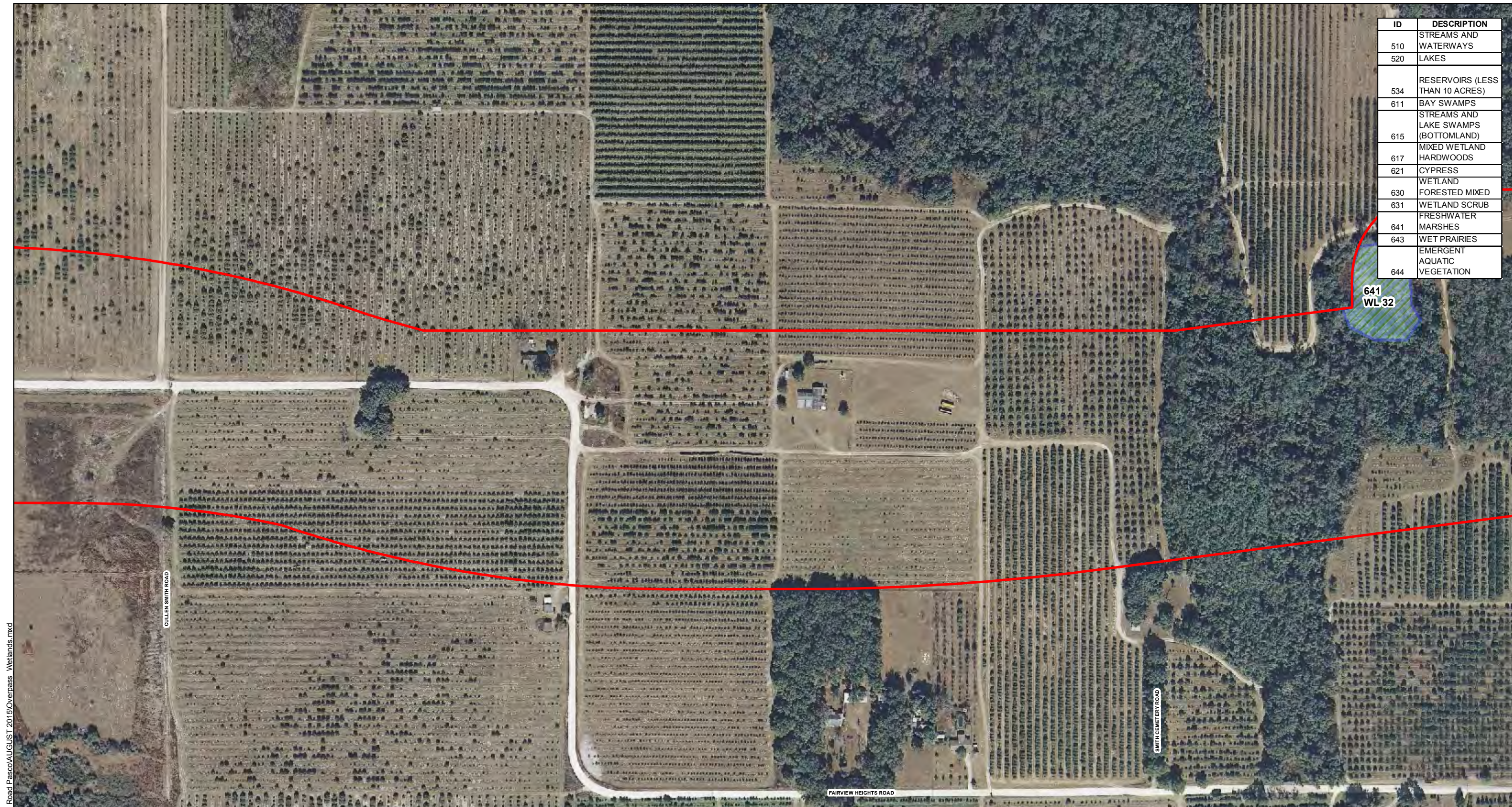
Legend

- Project Study Area
- Wetlands/ Other Surface Waters

Source:
Aerials- FDOT, 2011
Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 19 of 22

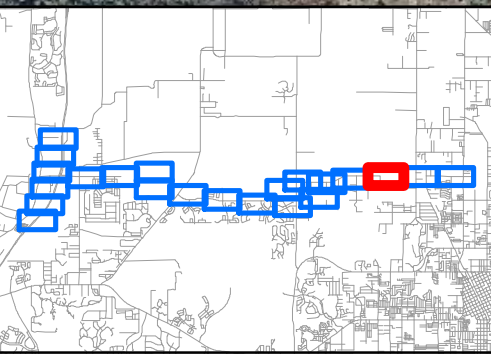




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641
WL 32

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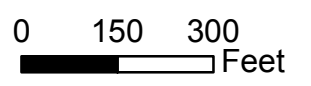


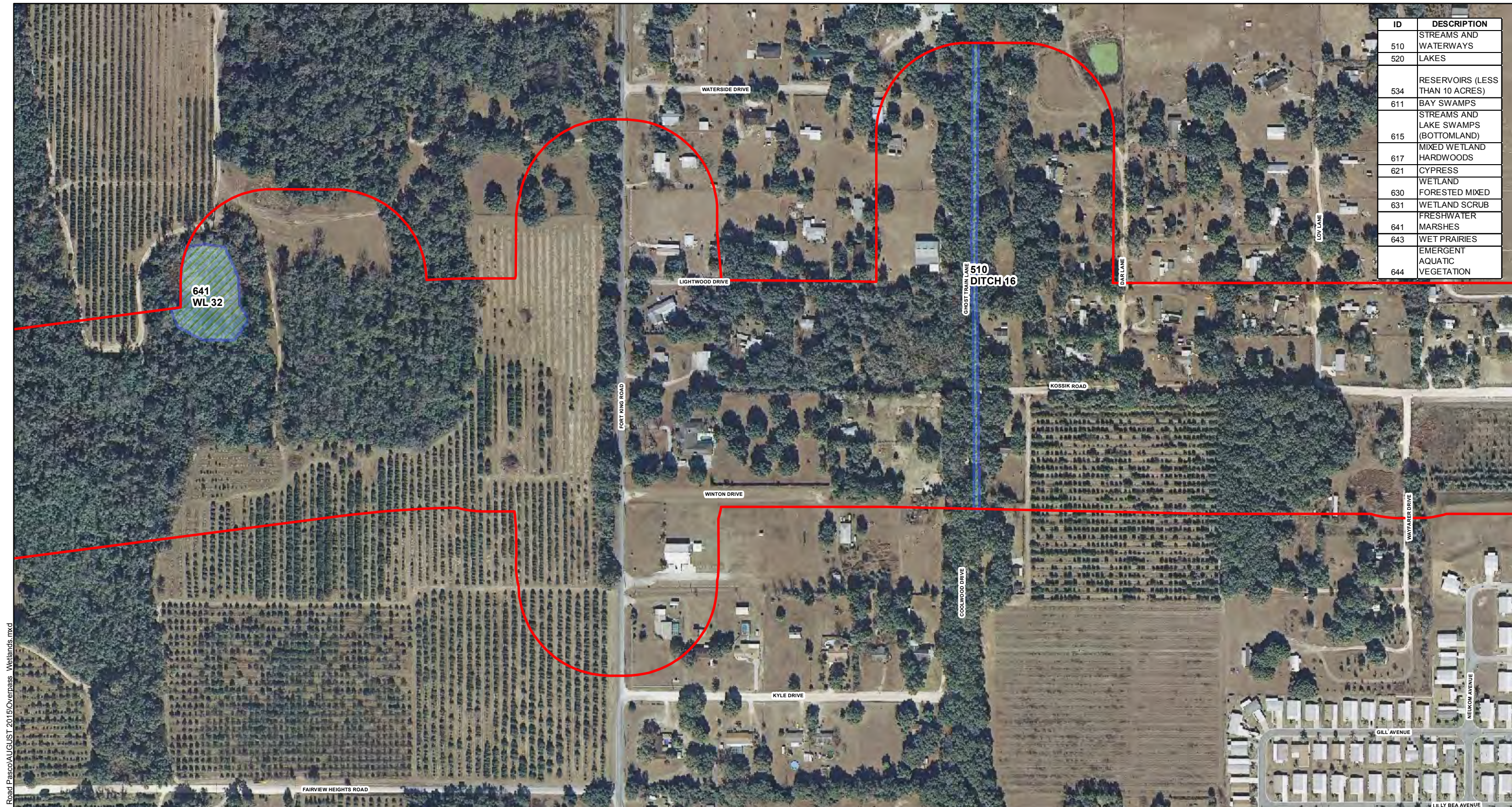
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- Project Study Area
- Wetlands/ Other Surface Waters

Source:
Aerials- FDOT, 2011
Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

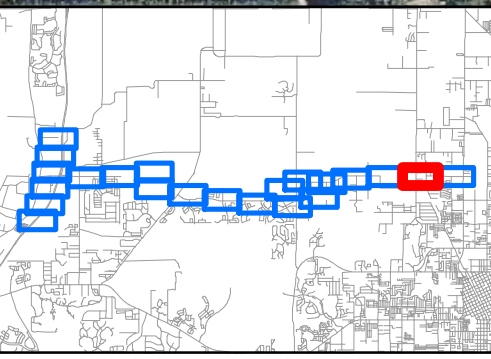
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 20 of 22





ID	DESCRIPTION
510	STREAMS AND WATERWAYS
520	LAKES
534	RESERVOIRS (LESS THAN 10 ACRES)
611	BAY SWAMPS
615	STREAMS AND LAKE SWAMPS (BOTTOMLAND)
617	MIXED WETLAND HARDWOODS
621	CYPRESS WETLAND
630	FORESTED MIXED
631	WETLAND SCRUB
641	FRESHWATER MARSHES
643	WET PRAIRIES
644	EMERGENT AQUATIC VEGETATION

Path: S:\Projects\GIS\Tertiary\Projects\Overpass Road_Pasco\AUGUST 2015\Overpass Wetlands.mxd

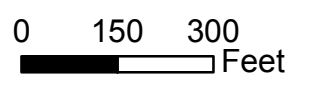


Legend

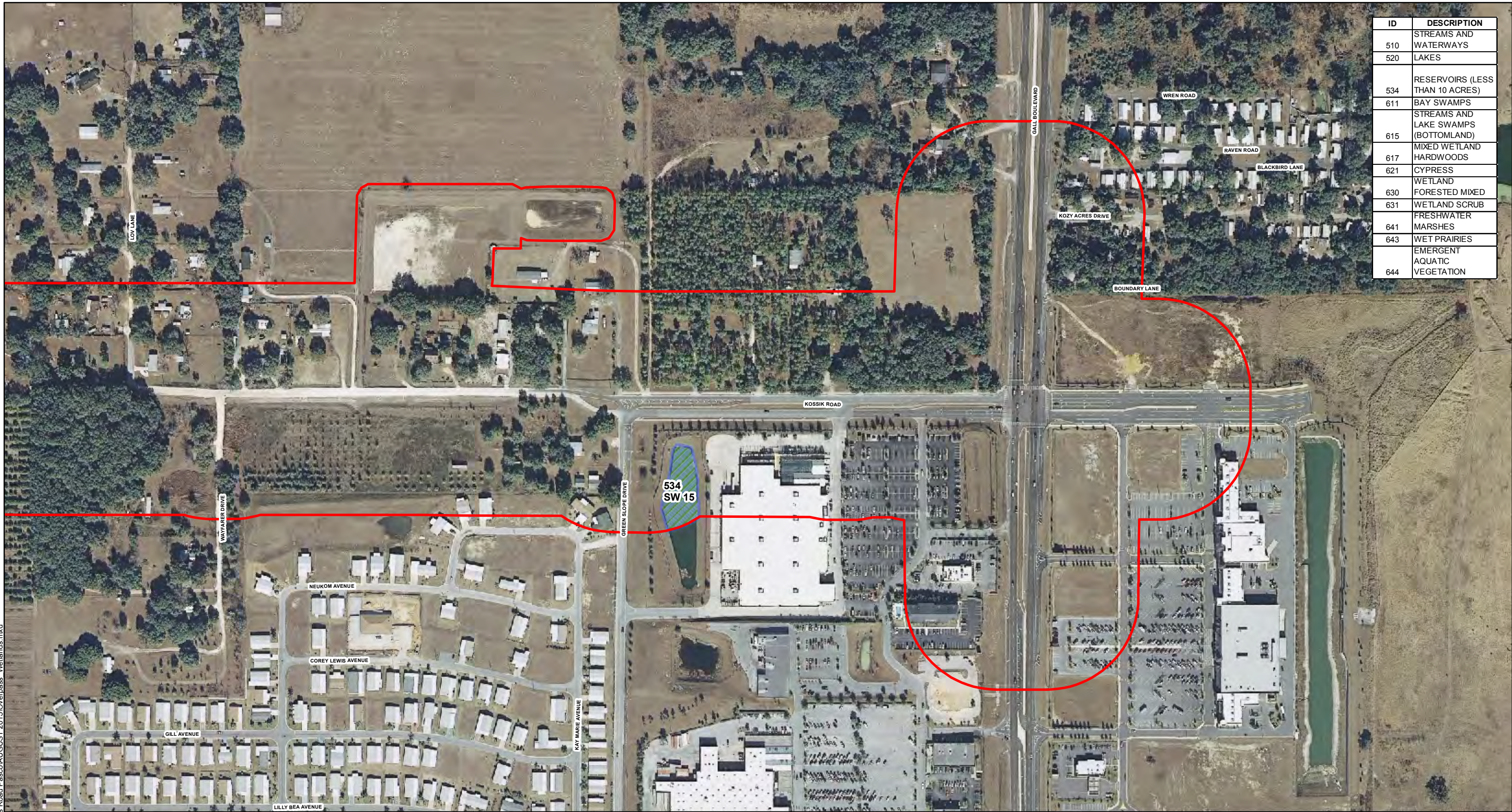
- Project Study Area
- Wetlands/ Other Surface Waters

Source:
Aerials- FDOT, 2011
Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

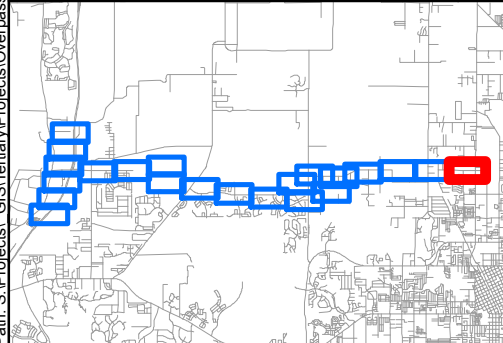
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 21 of 22



ID	DESCRIPTION
510	STREAMS AND WATERWAYS
520	LAKES
534	RESERVOIRS (LESS THAN 10 ACRES)
611	BAY SWAMPS
615	STREAMS AND LAKE SWAMPS (BOTTOMLAND)
617	MIXED WETLAND HARDWOODS
621	CYPRESS WETLAND
630	FORESTED MIXED WETLAND
631	WETLAND SCRUB
641	FRESHWATER MARSHES
643	WET PRAIRIES
644	EMERGENT AQUATIC VEGETATION



Path: S:\Projects\GIS\Tertiary\Projects\Overpass Road Pasco\AUGUST 2015\Overpass Wetlands.mxd

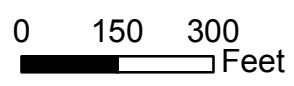


Legend

- Project Study Area
- Wetlands/ Other Surface Waters

Source:
Aerials- FDOT, 2011
Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 22 of 22

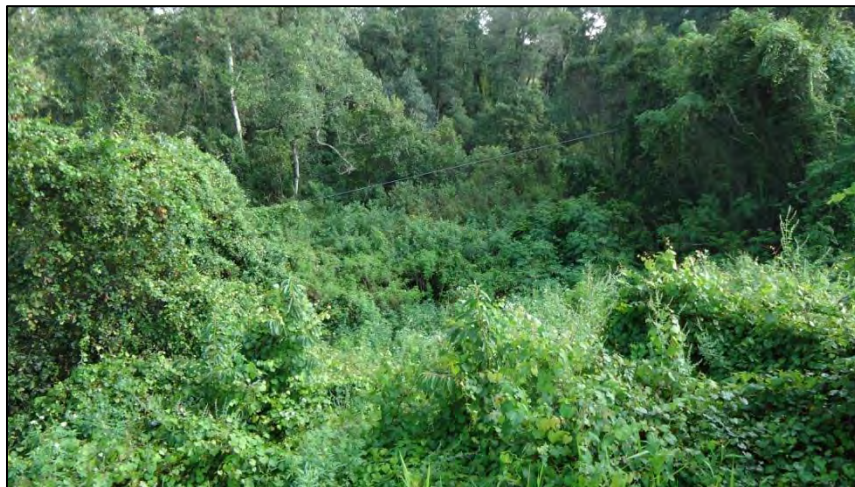


APPENDIX D

Wetland and Other Surface Water Photographs



Wetland 1 facing west from Old Pasco Road
FLUCFCS: 641 – Freshwater Marsh



Wetland 2 facing west north from Overpass Road
FLUCFCS: 615/641 – Stream and Lake Swamps/Freshwater Marsh (not shown)



Wetland 2 facing south, directly west of I-75
FLUCFCS: 615/641 – Stream and Lake Swamps/Freshwater Marsh



Wetland 3 facing east from I-75
FLUCFCS: 615 – Streams and Lake Swamps



Wetland 4 facing east from Wesley Chapel District Park
FLUCFCS: 644 – Emergent Aquatic Vegetation



Wetland 5 facing east from Overpass Road
FLUCFCS: 631 – Wetland Scrub



Wetland 7 facing north
FLUCFCS: 615 – Stream and Lake Swamps



Wetland 8 facing south
FLUCFCS: 621/641/643 – Cypress/Freshwater Marsh (not shown)/Wet Prairie



Wetland 9 facing west from Overpass Road
FLUCFCS: 641 – Freshwater Marsh



Wetland 10 facing west from Angelstem Boulevard
FLUCFCS: 631 – Wetland Scrub



Wetland 11 facing south from Overpass Road (connected to Lake 1)
FLUCFCS: 641 – Freshwater Marsh



Wetland 12 facing north from Overpass Road
FLUCFCS: 621/631 – Cypress/Wetland Scrub



Wetland 13 facing south from Overpass Road
FLUCFCS: 641 – Freshwater Marsh



Wetland 14 facing south from Overpass Road
FLUCFCS: 641 – Freshwater Marsh



Wetland 15 facing northeast from Overpass Road
FLUCFCS: 641 – Freshwater Marsh



Wetland 16 facing south from center of alignment
FLUCFCS: 631 – Wetland Scrub



Wetland 17 facing east from center of alignment
FLUCFCS: 617/631/641/643 – Mixed Wetland Hardwoods/Wetland Scrub (not shown)/Freshwater Marsh (not shown)/Wet Prairie



Wetland 17 facing west from center of alignment
FLUCFCS: 617/631/641/643 – Mixed Wetland Hardwoods/Wetland Scrub /Freshwater Marsh /Wet Prairie



Wetland 18 facing east from center of alignment
FLUCFCS: 641 – Freshwater Marsh



Wetland 19 facing south from center of alignment
FLUCFCS: 641 – Freshwater Marsh



Wetland 20 facing east from center of alignment
FLUCFCS: 621/631/641 – Cypress (not shown)/Wetland Scrub/Freshwater Marsh



Wetland 20 facing north from center of alignment
FLUCFCS: 621/631/641 – Cypress/Wetland Scrub (not shown)/Freshwater Marsh (not shown)



Wetland 23 facing west from west side of wetland
FLUCFCS: 643 – Wet Prairie



Wetland 25 facing south from Atkins Road
FLUCFCS: 643 – Wet Prairie



Wetland 26 facing northeast from Handcart Road
FLUCFCS: 630/631/643 – Wetland Forested Mixed/Wetland Scrub/Wet Prairie (not shown)



Wetland 28 facing north from Fairview Heights Road
FLUCFCS: 615/641/643 – Stream and Lake Swamps/Freshwater Marsh (not shown)/Wet Prairie (not shown)



Wetland 30 facing west from Handcart Road
FLUCFCS: 615 – Stream and Lake Swamps



Wetland 31 facing south from Fairview Heights Road
FLUCFCS: 630 – Wetland Forested Mixed



Wetland 32 facing west from west side of wetland
FLUCFCS: 641 – Freshwater Marsh



Wetland 38 facing east from Old Pasco Road
FLUCFCS: 641 – Freshwater Marsh



Wetland 39 facing west from I-75
FLUCFCS: 617/641 – Mixed Wetland Hardwoods/Freshwater Marsh



Wetland 40 (behind first layer of shrubs and vines) facing west from I-75
FLUCFCS: 641 – Freshwater Marsh



Wetland 41 facing north from north side of wetland
FLUCFCS: 615 – Stream and Lake Swamps



Wetland 42 facing east from McKendree Road
FLUCFCS: 641 – Freshwater Marsh



Wetland 46 facing north
FLUCFCS: 631 – Wetland Scrub



Lake 1 facing south from Overpass Road
FLUCFCS: 520 – Lakes



Surface Water 2 facing west
FLUCFCS: 534 – Reservoirs less than 10 acres



Surface Water 3 facing east
FLUCFCS: 534 – Reservoirs less than 10 acres



Surface Water 4 facing south from Overpass Road
FLUCFCS: 534 – Reservoirs less than 10 acres



Surface Water 6 facing south from Overpass Road
FLUCFCS: 534 – Reservoirs less than 10 acres



Surface Water 7 facing south from Overpass Road
FLUCFCS: 534 – Reservoirs less than 10 acres



Surface Water 8 facing north from Overpass Road
FLUCFCS: 534 – Reservoirs less than 10 acres



Surface Water 9 facing north from Overpass Road
FLUCFCS: 534 – Reservoirs less than 10 acres



Surface Water 10 facing south from Overpass Road
FLUCFCS: 534 – Reservoirs less than 10 acres



Surface Water 11 facing north from Overpass Road
FLUCFCS: 534 – Reservoirs less than 10 acres



Surface Water 12 facing west
FLUCFCS: 534 – Reservoirs less than 10 acres



Surface Water 13 facing east from Fairview Heights Road
FLUCFCS: 534 – Reservoirs less than 10 acres



Surface Water 18 facing south from Blair Drive
FLUCFCS: 534 – Reservoirs less than 10 acres



Ditch 1 facing west from I-75
FLUCFCS: 510 – Streams and Waterways



Ditch 2 facing west from McKendree Road
FLUCFCS: 510 – Streams and Waterways



Ditch 3 facing south from Overpass Road
FLUCFCS: 510 – Streams and Waterways



Ditch 4 facing north from Overpass Road
FLUCFCS: 510 – Streams and Waterways



Ditch 6 facing southwest from Overpass Road
FLUCFCS: 510 – Streams and Waterways



Ditch 7 facing northeast from Overpass Road
FLUCFCS: 510 – Streams and Waterways



Ditch 8 facing north from Atkins Road
FLUCFCS: 510 – Streams and Waterways



Ditch 9 facing north from Handcart Road
FLUCFCS: 510 – Streams and Waterways



Ditch 10 facing north
FLUCFCS: 510 – Streams and Waterways



Ditch 12 facing north from Handcart Road
FLUCFCS: 510 – Streams and Waterways



Ditch 13 facing north from Fairview Heights Road
FLUCFCS: 510 – Streams and Waterways



Ditch 14 facing northeast from Fairview Heights Road
FLUCFCS: 510 – Streams and Waterways



Ditch 15 facing north from Fairview Heights Road
FLUCFCS: 510 – Streams and Waterways



Ditch 16 facing north from Kossik Road
FLUCFCS: 510 – Streams and Waterways



Ditch 22 facing east from I-75
FLUCFCS: 510 – Streams and Waterways



Ditch 23 facing east from I-75
FLUCFCS: 510 – Streams and Waterways



Ditch 24 facing west from I-75
FLUCFCS: 510 – Streams and Waterways

APPENDIX E

UMAM Data Sheets

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

Site/Project Name Overpass Road PD&E Study		Application Number		Assessment Area Name or Number Wetland 2	
FLUCCs code 615/641 - Streams and Lake Swamps/Freshwater Marsh		Further classification (optional) FWS - PFO1C/PEM1C		Impact or Mitigation Site? Impact	Assessment Area Size 4.7 acres
Basin/Watershed Name/Number Hillsborough River	Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 2 is a large forested wetland with few areas comprised of freshwater marsh overlaying mapped hydric soils.					
Assessment area description Within the project study area, dominant vegetation with the area consists of sweet bay, black gum, elderberry, sugarberry, red maple, Virginia chain fern, and primrose willow. Dominant vegetation within the freshwater marsh portion of the wetland consists of soft rush.					
Significant nearby features This area is located within the north side of Overpass Road west of I-75.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique in relation to the regional landscape.		
Functions Provides cover and refuge, food chain support, water retention, water quality improvement, stormwater attenuation, and nesting/foraging habitat for wildlife species.			Mitigation for previous permit/other historic use		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Frogs, turtles, snakes, wading birds, mammals			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern indigo snake (T), wading birds (SSC), wood stork (E), Sherman's fox squirrel (SSC)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): No evidence of wildlife was observed within WL 2 during the September 2012 field review.					
Additional relevant factors:					
Assessment conducted by: T. Norman/S. Durrance			Assessment date(s): 10-Sep-12		

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

Site/Project Name Overpass Road PD&E	Application Number	Assessment Area Name or Number WL 2
Impact or Mitigation Impact	Assessment conducted by: T. Norman/S. Durrance	Assessment date: 10-Sep-12

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	This wetland provides a wildlife corridor within an area characterized primarily of agricultural fields and also provides habitat for potential foraging, nesting, and shelter for various wildlife species. Wildlife access is impeded by I-75 to the east, Overpass Road to the south, Old Pasco Road to the west, and Gillette Road to the north.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">7</td> <td align="center">0</td> </tr> </table>	w/o pres or current	with	7	0	
w/o pres or current	with				
7	0				
.500(6)(b) Water Environment (n/a for uplands)	Water levels within WL 2 appear to be adequate considering seasonal variations. Standing water was present during the September 2012 field reviews and hydrologic indicators were distinct such as buttressed trunks and saturated soils. Water quality is impacted by runoff from surrounding roadways.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">7</td> <td align="center">0</td> </tr> </table>	w/o pres or current	with	7	0	
w/o pres or current	with				
7	0				
.500(6)(c) Community structure	The majority of vegetation within WL 2 are desirable wetland species such as sweet bay, black gum, elderberry, sugarberry, red maple, and Virginia chain fern. Nuisance and exotic species present include primrose willow.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">7</td> <td align="center">0</td> </tr> </table>	w/o pres or current	with	7	0	
w/o pres or current	with				
7	0				

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.70	0.00

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

For impact assessment areas
FL = delta x acres = 4.7 ac x 0.70 = 3.29

Delta = [with-current]
0.70

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 Overpass Road PD&E Study		Application Number		Assessment Area Name or Number Wetland 3	
FLUCCs code 615 - Streams and Lake Swamps		Further classification (optional) FWS - PFO1C		Impact or Mitigation Site? Impact	Assessment Area Size 5.8 acres
Basin/Watershed Name/Number Hillsborough River	Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 3 is a large forested wetland overlaying mapped hydric soils that extends east outside of the project study area. During the September 2012 field review, water was flowing through a small culvert off of I-75 into this wetland.					
Assessment area description Within the project study area, dominant vegetation within the canopy consists of red maple, sweet bay, slash pine, cabbage palm, and Carolina willow. Ground cover is dominated by elderberry, primrose willow, dogfennel, beggarticks, and water pennywort.					
Significant nearby features This wetland is located on the south side of Overpass Road east of I-75.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique in relation to the regional landscape.		
Functions Provides cover and refuge, food chain support, water retention, water quality improvement, stormwater attenuation, and nesting/foraging habitat for wildlife species.			Mitigation for previous permit/other historic use		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Frogs, turtles, snakes, wading birds, mammals			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern indigo snake (T), wading birds (SSC), wood stork (E), Sherman's fox squirrel (SSC)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): No evidence of wildlife was observed within WL 3 during the September 2012 field review.					
Additional relevant factors:					
Assessment conducted by: T. Norman/S. Durrance			Assessment date(s): 10-Sep-12		

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

Site/Project Name Overpass Road PD&E	Application Number	Assessment Area Name or Number WL 3
Impact or Mitigation Impact	Assessment conducted by: T. Norman/S. Durrance	Assessment date: 10-Sep-12

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	This wetland provides a wildlife corridor that extends outside of the project study area and also provides habitat for potential foraging, nesting, and shelter for various wildlife species. Wildlife access is impeded by I-75 to the west, Overpass Road to the north, a recreational park to the east, and water treatment plant to the south.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">7</td> <td align="center">0</td> </tr> </table>		w/o pres or current	with	7
w/o pres or current	with			
7	0			
.500(6)(b)Water Environment (n/a for uplands)	Water levels within WL 3 appear to be adequate considering seasonal variations. During the September 2012 field review, water was flowing through a small culvert off of I-75 into this wetland and hydrologic indicators were distinct such as buttressed trunks and saturated soils. Water quality is impacted by runoff from surrounding roadways.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">7</td> <td align="center">0</td> </tr> </table>		w/o pres or current	with	7
w/o pres or current	with			
7	0			
.500(6)(c)Community structure	The majority of vegetation within WL 3 are desirable wetland species such as red maple, sweet bay, slash pine, and elderberry. Nuisance and exotic species present include primrose willow.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">7</td> <td align="center">0</td> </tr> </table>		w/o pres or current	with	7
w/o pres or current	with			
7	0			

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.70	0.00

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

For impact assessment areas
FL = delta x acres = 5.8 ac x 0.70 = 4.06

Delta = [with-current]
0.70

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 Overpass Road PD&E Study		Application Number		Assessment Area Name or Number Wetland 5	
FLUCCs code 631 - Wetland Scrub		Further classification (optional) FWS - PSS1C		Impact or Mitigation Site? Impact	Assessment Area Size 4.3 acres
Basin/Watershed Name/Number Hillsborough River	Affected Waterbody (Class) Class III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 5 is a wetland scrub area overlaying mapped hydric soils. Adjacent uplands consist of abandoned citrus groves.					
Assessment area description Within the project study area, dominant vegetation within this wetland consists of red maple, Carolina willow, red bay, elderberry, and primrose willow.					
Significant nearby features This area is located approximately 0.90 mile east of Boyette Road.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique in relation to the regional landscape.		
Functions Provides cover and refuge, food chain support, water retention, water quality improvement, stormwater attenuation, and nesting/foraging habitat for wildlife species.			Mitigation for previous permit/other historic use		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Frogs, turtles, snakes, wading birds, mammals			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern indigo snake (T), wading birds (SSC), wood stork (E), Sherman's fox squirrel (SSC)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): No evidence of wildlife was observed within WL 5 during the September 2012 field review.					
Additional relevant factors:					
Assessment conducted by: T. Norman/S. Durrance			Assessment date(s): 10-Sep-12		

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

Site/Project Name Overpass Road PD&E	Application Number	Assessment Area Name or Number WL 5
Impact or Mitigation Impact	Assessment conducted by: T. Norman/S. Durrance	Assessment date: 10-Sep-12

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> <table border="1"> <tr> <td>6</td> <td>0</td> </tr> </table>	6	0	<p>This wetland provides a wildlife corridor within an area characterized primarily of agricultural fields and also provides habitat for potential foraging, nesting, and shelter for various wildlife species. Wildlife access is impeded by the Palm Cove residential development to the west and agriculture fields.</p>
6	0		
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>w/o pres or current with</p> <table border="1"> <tr> <td>7</td> <td>0</td> </tr> </table>	7	0	<p>Water levels within WL 5 appear to be adequate considering seasonal variations. Standing water and saturated soils were present during the September 2012 field reviews. Water quality is impacted by runoff from surrounding agriculture fields.</p>
7	0		
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current with</p> <table border="1"> <tr> <td>6</td> <td>0</td> </tr> </table>	6	0	<p>The majority of vegetation within WL 5 are desirable wetland species such as red bay, elderberry, and red maple. Nuisance and exotic species present include primrose willow.</p>
6	0		

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres with
0.63 0.00

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

For impact assessment areas
FL = delta x acres = 4.3 ac * 0.63=2.71

Delta = [with-current]
0.63

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 Overpass Road PD&E Study		Application Number		Assessment Area Name or Number Wetland 8	
FLUCCs code 641/643 – Freshwater Marsh/Wet Prairie		Further classification (optional) FWS - PEM1C/PEM1J		Impact or Mitigation Site? Impact	Assessment Area Size 0.7 acres
Basin/Watershed Name/Number Hillsborough River	Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 8 is comprised of freshwater marsh and wet prairie and connects to a cypress swamp to the south. WL 8 overlays mapped hydric soils.					
Assessment area description The freshwater marsh portion of the wetland is dominated by soft rush, cattail, Carolina willow, and primrose willow. Dominant vegetation within the wet prairie portion of the wetland consists of dogfennel, flatsedge, bristle grass, and bushy broomsedge.					
Significant nearby features WL 8 is located approximately 0.2 mile northwest of Curley Road and Overpass Road.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique in relation to the regional landscape.		
Functions Provides cover and refuge, food chain support, water retention, water quality improvement, stormwater attenuation, and nesting/foraging habitat for wildlife species.			Mitigation for previous permit/other historic use		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Salamanders, snakes, frogs, birds, alligator, raccoon, otter.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern indigo snake (T), wading birds (SSC), wood stork (E), Florida sandhill crane (T)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): No evidence of wildlife was observed within WL 8 during the September 2012 field review.					
Additional relevant factors:					
Assessment conducted by: T. Norman/S. Durrance			Assessment date(s): 10-Sep-12		

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

Site/Project Name Overpass Road PD&E	Application Number	Assessment Area Name or Number WL 8
Impact or Mitigation Impact	Assessment conducted by: T. Norman/S. Durrance	Assessment date: 10-Sep-12

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	This wetland provides a wildlife corridor that extends outside of the project study area and also provides habitat for potential foraging, nesting, and shelter for various wildlife species. Wildlife access is impeded by improved pasture and its associated drainage ditches.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">8</td> <td align="center">0</td> </tr> </table>		w/o pres or current	with	8
w/o pres or current	with			
8	0			
.500(6)(b)Water Environment (n/a for uplands)	Water levels within WL 8 appear to be adequate considering seasonal variations. Water quality is impacted by runoff from the surrounding pasture.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">7</td> <td align="center">0</td> </tr> </table>		w/o pres or current	with	7
w/o pres or current	with			
7	0			
.500(6)(c)Community structure	The majority of vegetation within WL 8 are desirable wetland species such as soft rush, bristle grass, and bushy broomsedge. Nuisance/exotic species present include cattail and primrose willow.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">6</td> <td align="center">0</td> </tr> </table>		w/o pres or current	with	6
w/o pres or current	with			
6	0			

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.70	0.00

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

For impact assessment areas
FL = delta x acres = 0.7 ac*0.70=0.49

Delta = [with-current]
0.70

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 Overpass Road PD&E Study		Application Number		Assessment Area Name or Number Wetland 9	
FLUCCs code 641 – Freshwater Marsh		Further classification (optional) FWS - PEM1C		Impact or Mitigation Site? Impact	Assessment Area Size 0.8 acres
Basin/Watershed Name/Number Hillsborough River	Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 9 is a small freshwater marsh that does not overlay mapped hydric soils.					
Assessment area description Dominant vegetation consists of Carolina willow, elderberry, and primrose willow.					
Significant nearby features WL 9 is located at Curley Road and Overpass Road on the northwest side of Curley Road.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique in relation to the regional landscape.		
Functions Provides cover and refuge, food chain support, water retention, water quality improvement, stormwater attenuation, and nesting/foraging habitat for wildlife species.			Mitigation for previous permit/other historic use		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Salamanders, snakes, frogs, birds, alligator, raccoon, otter.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern indigo snake (T), wading birds (SSC), wood stork (E), Florida sandhill crane (T)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): No evidence of wildlife was observed within WL 9 during the September 2012 field review.					
Additional relevant factors:					
Assessment conducted by: T. Norman/S. Durrance			Assessment date(s): 10-Sep-12		

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

Site/Project Name Overpass Road PD&E	Application Number	Assessment Area Name or Number WL 9
Impact or Mitigation Impact	Assessment conducted by: T. Norman/S. Durrance	Assessment date: 10-Sep-12

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	This wetland provides little wildlife habitat for potential foraging, nesting, and shelter for various wildlife species. Wildlife access is impeded by improved pasture, Curley Road, and Overpass Road.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>6</td> <td>0</td> </tr> </table>		w/o pres or current	with	6
w/o pres or current	with			
6	0			
.500(6)(b)Water Environment (n/a for uplands)	Water levels within WL 9 appear to be adequate considering seasonal variations. Water quality is impacted by runoff from the surrounding pasture and roadways.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>6</td> <td>0</td> </tr> </table>		w/o pres or current	with	6
w/o pres or current	with			
6	0			
.500(6)(c)Community structure	Desirable species such as elderberry is present within WL 9. However, Carolina willow seems to be the dominant plant species. Nuisance/exotic species present include primrose willow.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>6</td> <td>0</td> </tr> </table>		w/o pres or current	with	6
w/o pres or current	with			
6	0			

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.60	0.00

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

For impact assessment areas
FL = delta x acres = 0.60 * 0.8 ac=0.48

Delta = [with-current]
0.60

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 Overpass Road PD&E Study		Application Number		Assessment Area Name or Number Wetland 11	
FLUCCs code 641 – Freshwater Marsh		Further classification (optional) FWS - PEM1C		Impact or Mitigation Site? Impact	Assessment Area Size 0.1 acre
Basin/Watershed Name/Number Hillsborough River	Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 11 is a freshwater marsh that does not overlay mapped hydric soils but is hydrologically connected to Lake 1.					
Assessment area description Within the project study area, dominant vegetation within this marsh consists of saltbush, cattail, primrose willow, sesbans, and dogfennel.					
Significant nearby features WL 11 is located on the south side of Overpass Road directly east of Angelstem Boulevard.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique in relation to the regional landscape.		
Functions Provides cover and refuge, food chain support, water retention, water quality improvement, stormwater attenuation, and nesting/foraging habitat for wildlife species.			Mitigation for previous permit/other historic use		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Salamanders, snakes, frogs, birds, alligator, raccoon, otter.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern indigo snake (T), wading birds (SSC), wood stork (E), Florida sandhill crane (T)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): No evidence of wildlife was observed within WL 11 during the September 2012 field review.					
Additional relevant factors:					
Assessment conducted by: T. Norman/S. Durrance			Assessment date(s): 10-Sep-12		

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

Site/Project Name Overpass Road PD&E	Application Number	Assessment Area Name or Number WL 11
Impact or Mitigation Impact	Assessment conducted by: T. Norman/S. Durrance	Assessment date: 10-Sep-12

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	This wetland provides little wildlife habitat for potential foraging, nesting, and shelter for various wildlife species. Wildlife access is impeded by the Watergrass residential development, Watergrass Elementary School, and Overpass Road.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>6</td> <td>0</td> </tr> </table>		w/o pres or current	with	6
w/o pres or current	with			
6	0			
.500(6)(b)Water Environment (n/a for uplands)	Water levels within WL 11 appear to be adequate considering seasonal variations. Water quality is impacted by runoff from the surrounding development and roadways.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>6</td> <td>0</td> </tr> </table>		w/o pres or current	with	6
w/o pres or current	with			
6	0			
.500(6)(c)Community structure	Majority of the vegetation consists of nuisance/exotic species such as sesbans, primrose willow, and cattail.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>4</td> <td>0</td> </tr> </table>		w/o pres or current	with	4
w/o pres or current	with			
4	0			

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.53	0.00

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

For impact assessment areas
FL = delta x acres = 0.53 * 0.1=0.05

Delta = [with-current]
0.53

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 Overpass Road PD&E Study		Application Number		Assessment Area Name or Number Wetland 12	
FLUCCs code 631 - Wetland Scrub		Further classification (optional) FWS - PSS1C		Impact or Mitigation Site? Impact	Assessment Area Size 0.1 acre
Basin/Watershed Name/Number Hillsborough River	Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 12 is a wetland scrub area that connects to a small area of bald cypress and overlays mapped hydric soils. During the September 2012 field review, standing water was present throughout this wetland.					
Assessment area description Within the project study area, dominant vegetation within this scrub wetland consists of saltbush, primrose willow, and persimmon.					
Significant nearby features This area is located on the north side of Overpass Road directly west of Windchase Way.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique in relation to the regional landscape.		
Functions Provides cover and refuge, food chain support, water retention, water quality improvement, stormwater attenuation, and nesting/foraging habitat for wildlife species.			Mitigation for previous permit/other historic use		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Frogs, turtles, snakes, wading birds, mammals			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern indigo snake (T), wading birds (SSC), wood stork (E), Sherman's fox squirrel (SSC)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): No evidence of wildlife was observed within WL 12 during the September 2012 field review.					
Additional relevant factors:					
Assessment conducted by: T. Norman/S. Durrance			Assessment date(s): 10-Sep-12		

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

Site/Project Name Overpass Road PD&E	Application Number	Assessment Area Name or Number WL 12
Impact or Mitigation Impact	Assessment conducted by: T. Norman/S. Durrance	Assessment date: 10-Sep-12

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	This wetland provides a wildlife corridor outside of the project study area also provides habitat for potential foraging, nesting, and shelter for various wildlife species. Wildlife access is impeded by the Watergrass residential development and Overpass Road.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">6</td> <td align="center">0</td> </tr> </table>		w/o pres or current	with	6
w/o pres or current	with			
6	0			
.500(6)(b)Water Environment (n/a for uplands)	Water levels within WL 12 appear to be adequate considering seasonal variations. Standing water and saturated soils were present during the September 2012 field reviews. Water quality is impacted by runoff from surrounding development and roadways.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">6</td> <td align="center">0</td> </tr> </table>		w/o pres or current	with	6
w/o pres or current	with			
6	0			
.500(6)(c)Community structure	The vegetation within WL 12 consists of saltbush and persimmon. Nuisance and exotic species present include primrose willow.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">5</td> <td align="center">0</td> </tr> </table>		w/o pres or current	with	5
w/o pres or current	with			
5	0			

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.57	0.00

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

For impact assessment areas
FL = delta x acres = 0.57 * 0.1=0.06

Delta = [with-current]
0.57

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 Overpass Road PD&E Study		Application Number		Assessment Area Name or Number Wetland 15	
FLUCCs code 641 – Freshwater Marsh		Further classification (optional) FWS - PEM1C		Impact or Mitigation Site? Impact	Assessment Area Size 0.01 acres
Basin/Watershed Name/Number Hillsborough River	Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 15 is a freshwater marsh that does not overlay mapped hydric soils. During the September 2012 field review, standing water was present within this wetland.					
Assessment area description Within the project study area, dominant vegetation within this marsh consists of primrose willow, dogfennel, and saltbush.					
Significant nearby features WL 15 is located directly east of Watergrass Parkway and Overpass Road.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique in relation to the regional landscape.		
Functions Provides cover and refuge, food chain support, water retention, water quality improvement, stormwater attenuation, and nesting/foraging habitat for wildlife species.			Mitigation for previous permit/other historic use		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Salamanders, snakes, frogs, birds, alligator, raccoon, otter.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern indigo snake (T), wading birds (SSC), wood stork (E), Florida sandhill crane (T)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): During the September 2012 field review, two sandhill cranes were observed foraging throughout WL 15.					
Additional relevant factors:					
Assessment conducted by: T. Norman/S. Durrance			Assessment date(s): 10-Sep-12		

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

Site/Project Name Overpass Road PD&E	Application Number	Assessment Area Name or Number WL 15
Impact or Mitigation Impact	Assessment conducted by: T. Norman/S. Durrance	Assessment date: 10-Sep-12

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	This wetland provides little wildlife habitat for potential foraging, nesting, and shelter for various wildlife species. Wildlife access is impeded by the Watergrass residential development, improved pasture, and Overpass Road.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>6</td> <td>0</td> </tr> </table>		w/o pres or current	with	6
w/o pres or current	with			
6	0			
.500(6)(b)Water Environment (n/a for uplands)	Water levels within WL 15 appear to be adequate considering seasonal variations. During the September 2012 field review, WL 15 was inundated. Water quality is impacted by runoff from the surrounding development and roadways.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>6</td> <td>0</td> </tr> </table>		w/o pres or current	with	6
w/o pres or current	with			
6	0			
.500(6)(c)Community structure	Majority of the vegetation consists of dogfennel and saltbush; nuisance/exotic species present includes primrose willow.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>4</td> <td>0</td> </tr> </table>		w/o pres or current	with	4
w/o pres or current	with			
4	0			

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.53	0.00

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

For impact assessment areas
FL = delta x acres = 0.01 ac * 0.53=0.01

Delta = [with-current]
0.53

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 Overpass Road PD&E Study		Application Number		Assessment Area Name or Number Wetland 17	
FLUCCs code 617/641/643 – Mixed Wetland Hardwoods/ Freshwater Marsh/Wet Prairie		Further classification (optional) FWS - PFO1C/PEM1C/PEM1J		Impact or Mitigation Site? Impact	Assessment Area Size 3.6 acres
Basin/Watershed Name/Number Hillsborough River	Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 17 consists of forested and herbaceous wetland features and overlays mapped hydric soils. WL 17 extends beyond the project study area to the north and south. During the September 2012 field review, WL 17 was fully inundated.					
Assessment area description Dominant vegetation within the forested portion of the wetland consists of red maple, sweetgum, and wax myrtle. The herbaceous wetland areas consists predominantly of red ludwigia, Indian joint-vetch, maidencane, primrose willow, bahia grass, soft rush, water pennywort, and spike rush.					
Significant nearby features This wetland is located within open land near the eastern terminus of the existing Overpass Road.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique in relation to the regional landscape.		
Functions Provides cover and refuge, food chain support, water retention, water quality improvement, stormwater attenuation, and nesting/foraging habitat for wildlife species.			Mitigation for previous permit/other historic use		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Salamanders, snakes, frogs, birds, alligator, raccoon, otter.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern indigo snake (T), wading birds (SSC), wood stork (E), Florida sandhill crane (T)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): During the September 2012 field review, no evidence of wildlife was observed within WL 17.					
Additional relevant factors:					
Assessment conducted by: T. Norman/S. Durrance			Assessment date(s): 10-Sep-12		

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

Site/Project Name Overpass Road PD&E	Application Number	Assessment Area Name or Number WL 17
Impact or Mitigation Impact	Assessment conducted by: T. Norman/S. Durrance	Assessment date: 10-Sep-12

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	This wetland provides a wildlife corridor beyond the project study area and also provides habitat for potential foraging, nesting, and shelter for various wildlife species. Wildlife access is impeded by improved pasture.					
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">8</td> <td align="center">0</td> </tr> </table>		w/o pres or current	with	8	0	
w/o pres or current	with					
8	0					
.500(6)(b)Water Environment (n/a for uplands)	Water levels within WL 17 appear to be adequate considering seasonal variations. During the September 2012 field review, WL 17 was inundated. Water quality is impacted by runoff from the surrounding pasture.					
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">7</td> <td align="center">0</td> </tr> </table>		w/o pres or current	with	7	0	
w/o pres or current	with					
7	0					
.500(6)(c)Community structure	Majority of the vegetation within WL 17 is desirable and includes red maple, sweetgum, red ludwigia, maidencane, soft rush, and spike rush. Nuisance/exotic species present include primrose willow.					
<table border="1"> <tr> <td>1. Vegetation and/or</td> <td>2. Benthic Community</td> </tr> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">7</td> <td align="center">0</td> </tr> </table>		1. Vegetation and/or	2. Benthic Community	w/o pres or current	with	7
1. Vegetation and/or	2. Benthic Community					
w/o pres or current	with					
7	0					

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.73	0.00

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

For impact assessment areas
FL = delta x acres = 0.73 * 3.6 ac=2.63

Delta = [with-current]
0.73

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 Overpass Road PD&E Study		Application Number		Assessment Area Name or Number Wetland 20	
FLUCCs code 631/641 – Wetland Scrub/Freshwater Marsh		Further classification (optional) FWS - PSS1C/PEM1C		Impact or Mitigation Site? Impact	
				Assessment Area Size 1.9 acres	
Basin/Watershed Name/Number Hillsborough River		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 20 consists of wetland scrub and freshwater marsh and overlays mapped hydric soils. WL 20 connects to offsite forested wetland systems.					
Assessment area description Dominant vegetation within the scrub portion of the wetland consists of wax myrtle, live oak, dogfennel, and maidencane. Dominant vegetation within the freshwater marsh consists of soft rush and maidencane.					
Significant nearby features WL 20 is located approximately 0.30 mile west of Atkins Road.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique in relation to the regional landscape.		
Functions Provides cover and refuge, food chain support, water retention, water quality improvement, stormwater attenuation, and nesting/foraging habitat for wildlife species.			Mitigation for previous permit/other historic use		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Salamanders, snakes, frogs, birds, alligator, raccoon, otter.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern indigo snake (T), wading birds (SSC), wood stork (E), Florida sandhill crane (T)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): During the September 2012 field review, no evidence of wildlife was observed within WL 20.					
Additional relevant factors:					
Assessment conducted by: T. Norman/S. Durrance			Assessment date(s): 10-Sep-12		

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

Site/Project Name Overpass Road PD&E	Application Number	Assessment Area Name or Number WL 20
Impact or Mitigation Impact	Assessment conducted by: T. Norman/S. Durrance	Assessment date: 10-Sep-12

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	This wetland provides a wildlife corridor beyond the project study area and also provides habitat for potential foraging, nesting, and shelter for various wildlife species. Wildlife access is impeded by improved pasture.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">8</td> <td align="center">0</td> </tr> </table>		w/o pres or current	with	8
w/o pres or current	with			
8	0			
.500(6)(b)Water Environment (n/a for uplands)	Water levels within WL 20 appear to be adequate considering seasonal variations. Water quality is impacted by runoff from the surrounding pasture.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">7</td> <td align="center">0</td> </tr> </table>		w/o pres or current	with	7
w/o pres or current	with			
7	0			
.500(6)(c)Community structure	Majority of the vegetation within WL 17 is desirable and includes maidencane and softrush. Less desirable wetland species include dogfennel and live oak.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">7</td> <td align="center">0</td> </tr> </table>		w/o pres or current	with	7
w/o pres or current	with			
7	0			

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.73	0.00

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

For impact assessment areas
FL = delta x acres = 0.73 * 1.9 ac=1.39

Delta = [with-current]
0.73

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 Overpass Road PD&E Study		Application Number		Assessment Area Name or Number Wetland 23	
FLUCCs code 643 – Wet Prairie		Further classification (optional) FWS - PEM1J		Impact or Mitigation Site? Impact	Assessment Area Size 0.2 acres
Basin/Watershed Name/Number Hillsborough River	Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 23 is a wet prairie that lies within a pine plantation and does not overlay mapped hydric soils. During the September 2012 field review, standing water was present throughout this wetland.					
Assessment area description Dominant vegetation within WL 23 consists of red ludwigia, milkweed, camphorweed, buttonweed, and maidencane.					
Significant nearby features This wetland is located approximately 0.25 mile west of Atkins Road.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique in relation to the regional landscape.		
Functions Provides cover and refuge, food chain support, water retention, water quality improvement, stormwater attenuation, and nesting/foraging habitat for wildlife species.			Mitigation for previous permit/other historic use		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Salamanders, snakes, frogs, birds, alligator, raccoon, otter.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern indigo snake (T), wading birds (SSC), wood stork (E), Florida sandhill crane (T)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): No evidence of wildlife was observed within WL 8 during the September 2012 field review.					
Additional relevant factors:					
Assessment conducted by: T. Norman/S. Durrance			Assessment date(s): 10-Sep-12		

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

Site/Project Name Overpass Road PD&E	Application Number	Assessment Area Name or Number WL 23
Impact or Mitigation Impact	Assessment conducted by: T. Norman/S. Durrance	Assessment date: 10-Sep-12

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	This wetland provides little habitat support for potential foraging, nesting, and shelter for various wildlife species. Adjacent uplands consist of planted pine and pasture. Wildlife access is impeded by improved pasture and its associated buildings.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>6</td> <td>0</td> </tr> </table>		w/o pres or current	with	6
w/o pres or current	with			
6	0			
.500(6)(b)Water Environment (n/a for uplands)	Water levels within WL 23 appear to be adequate considering seasonal variations. Water quality is impacted by runoff from the surrounding pasture. WL 23 does not appear to be directly connected to other offsite wetlands.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>5</td> <td>0</td> </tr> </table>		w/o pres or current	with	5
w/o pres or current	with			
5	0			
.500(6)(c)Community structure	The majority of vegetation within WL 8 are desirable wetland species such as red ludwigia, milkweed, camphorweed, buttonweed, and maidencane.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>8</td> <td>0</td> </tr> </table>		w/o pres or current	with	8
w/o pres or current	with			
8	0			

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.63	0.00

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

For impact assessment areas
FL = delta x acres = 0.63 * 0.2ac = 0.13

Delta = [with-current]
0.63

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 Overpass Road PD&E Study		Application Number		Assessment Area Name or Number Wetland 28	
FLUCCs code 615 - Streams and Lake Swamps		Further classification (optional) FWS - PFO1C		Impact or Mitigation Site? Impact	Assessment Area Size 4.0 acres
Basin/Watershed Name/Number Hillsborough River	Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 28 consists of a large forested wetland that connects to areas of wet prairie and freshwater marsh. A flowing channel of water runs through WL 28.					
Assessment area description Dominant vegetation within WL 28 consists of sweetgum, blackgum, sweet bay, longleaf pine, red maple, Carolina willow, wax myrtle, and Virginia chain fern.					
Significant nearby features WL 28 is located on the north side of Fairview Heights Road approximately 0.15 mile west from Hackamore Road.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique in relation to the regional landscape.		
Functions Provides cover and refuge, food chain support, water retention, water quality improvement, stormwater attenuation, and nesting/foraging habitat for wildlife species.			Mitigation for previous permit/other historic use		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Frogs, turtles, snakes, wading birds, mammals			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern indigo snake (T), wading birds (SSC), wood stork (E), Sherman's fox squirrel (SSC)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): No evidence of wildlife was observed within WL 28 during the September 2012 field review.					
Additional relevant factors:					
Assessment conducted by: T. Norman/S. Durrance			Assessment date(s): 10-Sep-12		

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

Site/Project Name Overpass Road PD&E	Application Number	Assessment Area Name or Number WL 28
Impact or Mitigation Impact	Assessment conducted by: T. Norman/S. Durrance	Assessment date: 10-Sep-12

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 7 with 0	This wetland provides a wildlife corridor that extends outside of the project study area and also provides habitat for potential foraging, nesting, and shelter for various wildlife species. Wildlife access is impeded by Fairview Heights Road to the south and improved pasture to the north and west.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 7 with 0	Water levels within WL 28 appear to be adequate considering seasonal variations. Hydrologic indicators were distinct such as buttressed trunks and saturated soils. Water quality is impacted by runoff from surrounding roadways and pasture.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 8 with 0	The majority of vegetation within WL 28 are desirable wetland species such as sweetgum, blackgum, sweet bay, red maple, and Virginia chain fern.

Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.73 with 0.00

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

For impact assessment areas FL = delta x acres = 0.73 * 4.0 ac=2.92
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Delta = [with-current] 0.73

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

For mitigation assessment areas RFG = delta/(t-factor x risk) =
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**PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)**

Site/Project Name Overpass Road PD&E Study		Application Number		Assessment Area Name or Number Wetland 30	
FLUCCs code 615 - Streams and Lake Swamps		Further classification (optional) FWS - PFO1C		Impact or Mitigation Site? Impact	Assessment Area Size 4.3 acres
Basin/Watershed Name/Number Hillsborough River	Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 30 consists of an unnamed creek and its associated floodplain and overlays mapped hydric soils. WL 30 connects to other offsite forested wetland systems outside of the project area.					
Assessment area description Within the project study area, dominant vegetation within the canopy consists of sweet bay, swamp bay, and Carolina willow. Ground cover is dominated by elderberry, primrose willow, dogfennel, beggarticks, and caesarweed.					
Significant nearby features WL 30 is located on both the east and west side of Handcart Road north of Atkins Road.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique in relation to the regional landscape.		
Functions Provides cover and refuge, food chain support, water retention, water quality improvement, stormwater attenuation, and nesting/foraging habitat for wildlife species.			Mitigation for previous permit/other historic use		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Frogs, turtles, snakes, wading birds, mammals			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern indigo snake (T), wading birds (SSC), wood stork (E), Sherman's fox squirrel (SSC)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): No evidence of wildlife was observed within WL 30 during the September 2012 field review.					
Additional relevant factors:					
Assessment conducted by: T. Norman/S. Durrance			Assessment date(s): 10-Sep-12		

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

Site/Project Name Overpass Road PD&E	Application Number	Assessment Area Name or Number WL 30
Impact or Mitigation Impact	Assessment conducted by: T. Norman/S. Durrance	Assessment date: 10-Sep-12

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> <table border="1"> <tr> <td>7</td> <td>0</td> </tr> </table>	7	0	<p>This wetland provides a wildlife corridor that extends outside of the project study area and also provides habitat for potential foraging, nesting, and shelter for various wildlife species. Wildlife access is impeded by Handcart Road to the east and residential development and improved pasture to the north and south.</p>
7	0		
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>w/o pres or current with</p> <table border="1"> <tr> <td>7</td> <td>0</td> </tr> </table>	7	0	<p>Water levels within WL 30 appear to be adequate considering seasonal variations. Hydrologic indicators were distinct such as buttressed trunks and saturated soils. Water quality is impacted by runoff from surrounding roadways and pasture.</p>
7	0		
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current with</p> <table border="1"> <tr> <td>7</td> <td>0</td> </tr> </table>	7	0	<p>The majority of vegetation within WL 30 are desirable wetland species such as sweet bay, swamp bay, and elderberry. Nuisance/exotic species present include primrose willow and caesarweed.</p>
7	0		

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres with
0.70 0.00

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

For impact assessment areas
FL = delta x acres = 0.70 * 4.3 ac=3.01

Delta = [with-current]
0.70

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 Overpass Road PD&E Study		Application Number		Assessment Area Name or Number Wetland 46	
FLUCCs code 631 - Wetland Scrub		Further classification (optional) FWS - PSS1C		Impact or Mitigation Site? Impact	Assessment Area Size 3.0 acres
Basin/Watershed Name/Number Hillsborough River	Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) None		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 46 consists of a disturbed wetland scrub that is connected to Surface Water 3 which has been heavily excavated in the past.					
Assessment area description Dominant vegetation with WL 46 consists of Brazilian pepper, saltbush, primrose willow, Carolina willow, caesarweed, and beggarticks.					
Significant nearby features WL 46 is located on the north side of Overpass Road approximately 0.10 mile east of Boyette Road.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique in relation to the regional landscape.		
Functions Provides cover and refuge, food chain support, water retention, water quality improvement, stormwater attenuation, and nesting/foraging habitat for wildlife species.			Mitigation for previous permit/other historic use		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Frogs, turtles, snakes, wading birds, mammals			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern indigo snake (T), wading birds (SSC), wood stork (E), Sherman's fox squirrel (SSC)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): No evidence of wildlife was observed within WL 46 during the September 2012 field review.					
Additional relevant factors:					
Assessment conducted by: T. Norman/S. Durrance			Assessment date(s): 10-Sep-12		

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

Site/Project Name Overpass Road PD&E	Application Number	Assessment Area Name or Number WL 46
Impact or Mitigation Impact	Assessment conducted by: T. Norman/S. Durrance	Assessment date: 10-Sep-12

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	WL 46 consists of a disturbed wetland scrub that is connected to Surface Water 3 which has been heavily excavated in the past. This wetland does provide a wildlife corridor outside of the project study area for potential foraging, nesting, and shelter for various wildlife species. Wildlife access is impeded by the residential development and Overpass Road.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>5</td> <td>0</td> </tr> </table>	w/o pres or current	with	5	0	
w/o pres or current	with				
5	0				
.500(6)(b)Water Environment (n/a for uplands)	Water levels within WL 46 appear to be adequate considering seasonal variations. Water quality is impacted by runoff from surrounding development and roadways.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>6</td> <td>0</td> </tr> </table>	w/o pres or current	with	6	0	
w/o pres or current	with				
6	0				
.500(6)(c)Community structure	The vegetation within WL 46 consists of saltbush, Carolina willow, and beggarticks. Nuisance and exotic species present include Brazilian pepper, primrose willow, and caesarweed.				
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>4</td> <td>0</td> </tr> </table>	w/o pres or current	with	4	0	
w/o pres or current	with				
4	0				

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.50	0.00

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

For impact assessment areas
FL = delta x acres = 0.50 * 3.0 ac=1.50

Delta = [with-current]
0.50

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 Overpass Road PD&E Study		Application Number		Assessment Area Name or Number Ditches	
FLUCCs code 510 - Streams and Waterways		Further classification (optional) FWS - PEM1Jx		Impact or Mitigation Site? Impact	
Assessment Area Size 7.3 acres					
Basin/Watershed Name/Number Hillsborough River		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Linear bodies of water are located throughout the project study area. These linear bodies of water include upland-cut, drainage ditches that carry water to and from wetlands.					
Assessment area description The plant species found in these linear bodies of water predominantly include Carolina willow, maidencane and primrose willow.					
Significant nearby features The ditches within the project area are upland-cut and are located along roadways and agriculture fields.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique in relation to the regional landscape.		
Functions Provides food chain support, water retention, water quality improvement, and oraging habitat for wildlife species.			Mitigation for previous permit/other historic use		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Frogs, snakes, wading birds			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Wading birds (SSC), wood stork (E)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): During the September 2012 field reviews, a tricolored heron was observed foraging within Ditch 4.					
Additional relevant factors:					
Assessment conducted by: T. Norman/S. Durrance			Assessment date(s): 10-Sep-12		

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

Site/Project Name Overpass Road PD&E	Application Number	Assessment Area Name or Number Ditches
Impact or Mitigation Impact	Assessment conducted by: T. Norman/S. Durrance	Assessment date: 10-Sep-12

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> <table border="1"> <tr> <td>2</td> <td>0</td> </tr> </table>	2	0	<p>The ditches are located within the proposed ROW and provides little to no access to wildlife habitat outside of the project area. Agriculture areas, residential developments, roadways, and forested wetlands border these ditches.</p>
2	0		
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>w/o pres or current with</p> <table border="1"> <tr> <td>3</td> <td>0</td> </tr> </table>	3	0	<p>All of the ditches within the project area are upland-cut ditches that are intermittently flooded. Standing water was observed within the Ditches 1, 3, 4, 5, 6, 7, 8, 9,15, and 21 during the field reviews providing little support for wood stork prey.</p>
3	0		
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current with</p> <table border="1"> <tr> <td>2</td> <td>0</td> </tr> </table>	2	0	<p>The plant species found in the majority of the ditches predominantly include Carolina willow, maidencane and primrose willow. Little habitat is supported within the ditches for wood stork prey.</p>
2	0		

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres with
0.23 0.00

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

For impact assessment areas
FL = delta x acres = 0.23*7.3 ac = 1.68

Delta = [with-current]
0.23

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

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

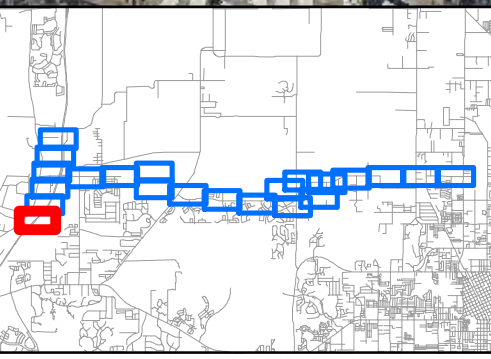
APPENDIX F

Wetland and Other Surface Water Impact Maps

ID	DESCRIPTION
510	STREAMS AND WATERWAYS
520	LAKES
534	RESERVOIRS (LESS THAN 10 ACRES)
611	BAY SWAMPS
615	STREAMS AND LAKE SWAMPS (BOTTOMLAND)
617	MIXED WETLAND HARDWOODS
621	CYPRESS
630	WETLAND FORESTED MIXED
631	WETLAND SCRUB
641	FRESHWATER MARSHES
643	WET PRAIRIES
644	EMERGENT AQUATIC VEGETATION



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Legend

Project Study Area	FPC Sites
OLD PASCO ROAD TO BOYETTE ROAD W/ PONDS	Impacted Wetlands/ Surface Waters
BOYETTE ROAD TO US 301 W/ PONDS	Wetlands/ Other Surface Waters
Proposed Stormwater Ponds	

Source:
Aerials- FDOT, 2011
Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Impacted Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 1 of 22

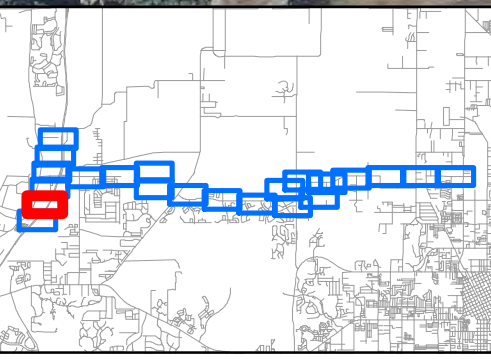
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W —+— E
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Feet



ID	DESCRIPTION
510	STREAMS AND WATERWAYS
520	LAKES
534	RESERVOIRS (LESS THAN 10 ACRES)
611	BAY SWAMPS
615	STREAMS AND LAKE SWAMPS (BOTTOMLAND)
617	MIXED WETLAND HARDWOODS
621	CYPRESS
630	WETLAND FORESTED MIXED
631	WETLAND SCRUB
641	FRESHWATER MARSHES
643	WET PRAIRIES
644	EMERGENT AQUATIC VEGETATION

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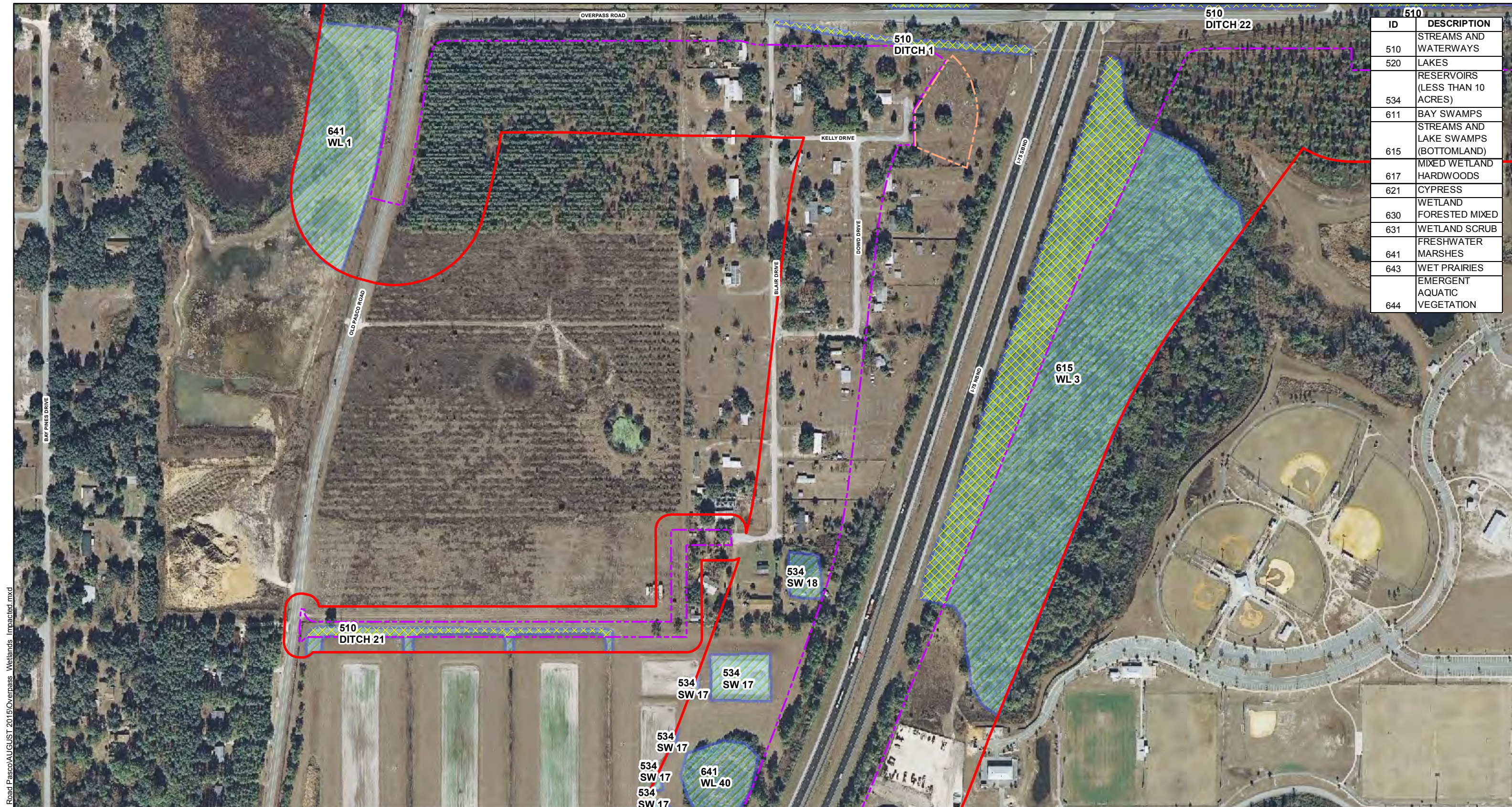
Legend

Project Study Area	FPC Sites
OLD PASCO ROAD TO BOYETTE ROAD W/ PONDS	Impacted Wetlands/ Surface Waters
BOYETTE ROAD TO US 301 W/ PONDS	Wetlands/ Other Surface Waters
Proposed Stormwater Ponds	

Source:
Aerials- FDOT, 2011
Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

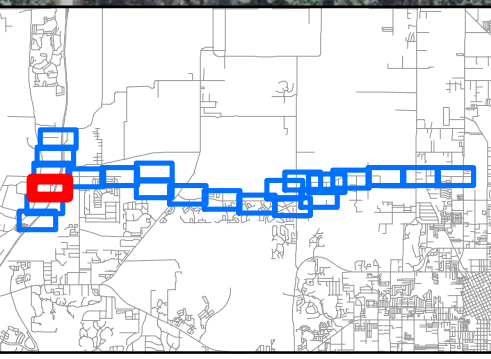
Overpass Road from Old Pasco Road to US 301 PD&E Study
Impacted Wetlands/ Other Surface Waters Location Map
 Pasco County, FL
 Sheet 2 of 22

N
 W E
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 0 150 300
 Feet



ID	DESCRIPTION
510	STREAMS AND WATERWAYS
520	LAKES
534	RESERVOIRS (LESS THAN 10 ACRES)
611	BAY SWAMPS
615	STREAMS AND LAKE SWAMPS (BOTTOMLAND)
617	MIXED WETLAND HARDWOODS
621	CYPRESS
630	WETLAND FORESTED MIXED
631	WETLAND SCRUB
641	FRESHWATER MARSHES
643	WET PRAIRIES
644	EMERGENT AQUATIC VEGETATION

Path: S:\Projects\GIS\Tertiary\Projects\Overpass Road Pasco\AUGUST 2015\Overpass Wetlands Impacted.mxd



Legend

- Project Study Area
- OLD PASCO ROAD TO BOYETTE ROAD W/ PONDS
- BOYETTE ROAD TO US 301 W/ PONDS
- Proposed Stormwater Ponds
- FPC Sites
- Impacted Wetlands/ Surface Waters
- Wetlands/ Other Surface Waters

Source:
Aerials- FDOT, 2011
Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

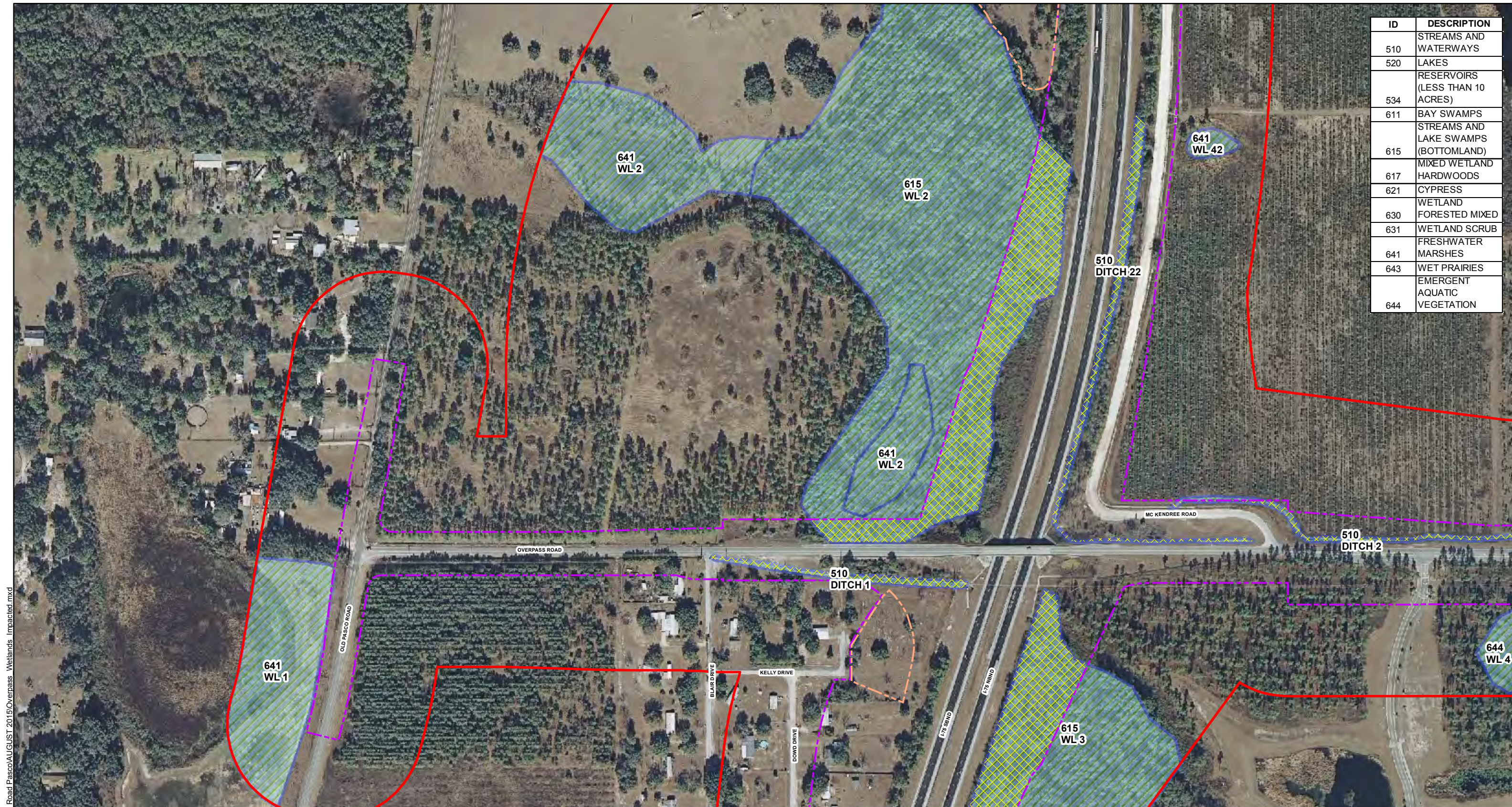
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**

Impacted Wetlands/ Other Surface Waters Location Map

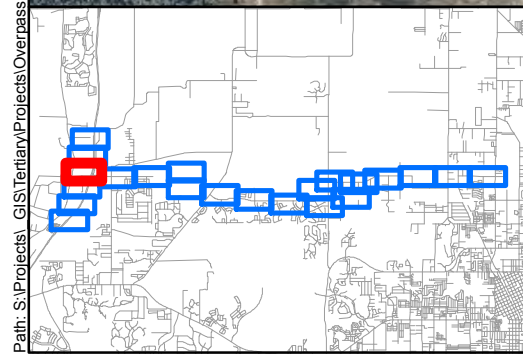
Pasco County, FL
Sheet 3 of 22

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ID	DESCRIPTION
510	STREAMS AND WATERWAYS
520	LAKES
534	RESERVOIRS (LESS THAN 10 ACRES)
611	BAY SWAMPS
615	STREAMS AND LAKE SWAMPS (BOTTOMLAND)
617	MIXED WETLAND HARDWOODS
621	CYPRESS WETLAND
630	FORESTED MIXED WETLAND
631	WETLAND SCRUB
641	FRESHWATER MARSHES
643	WET PRAIRIES
644	EMERGENT AQUATIC VEGETATION



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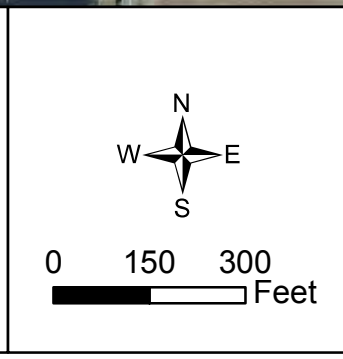


Legend

Project Study Area	FPC Sites
OLD PASCO ROAD TO BOYETTE ROAD W/ PONDS	Impacted Wetlands/ Surface Waters
BOYETTE ROAD TO US 301 W/ PONDS	Wetlands/ Other Surface Waters
Proposed Stormwater Ponds	

Source:
Aerials- FDOT, 2011
Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

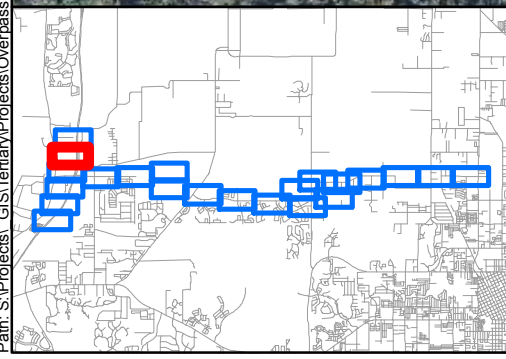
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Impacted Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 4 of 22



ID	DESCRIPTION
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644	EMERGENT AQUATIC VEGETATION



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Legend

Project Study Area	FPC Sites
OLD PASCO ROAD TO BOYETTE ROAD W/ PONDS	Impacted Wetlands/ Surface Waters
BOYETTE ROAD TO US 301 W/ PONDS	Wetlands/ Other Surface Waters
Proposed Stormwater Ponds	

Source:
Aerials- FDOT, 2011
Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

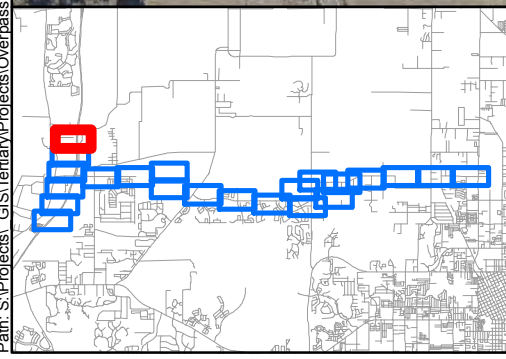
Overpass Road from Old Pasco Road to US 301 PD&E Study
Impacted Wetlands/ Other Surface Waters Location Map
 Pasco County, FL
 Sheet 5 of 22

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ID	DESCRIPTION
510	STREAMS AND WATERWAYS
520	LAKES
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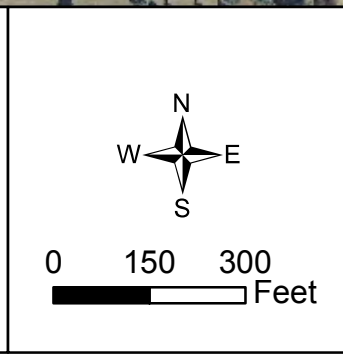


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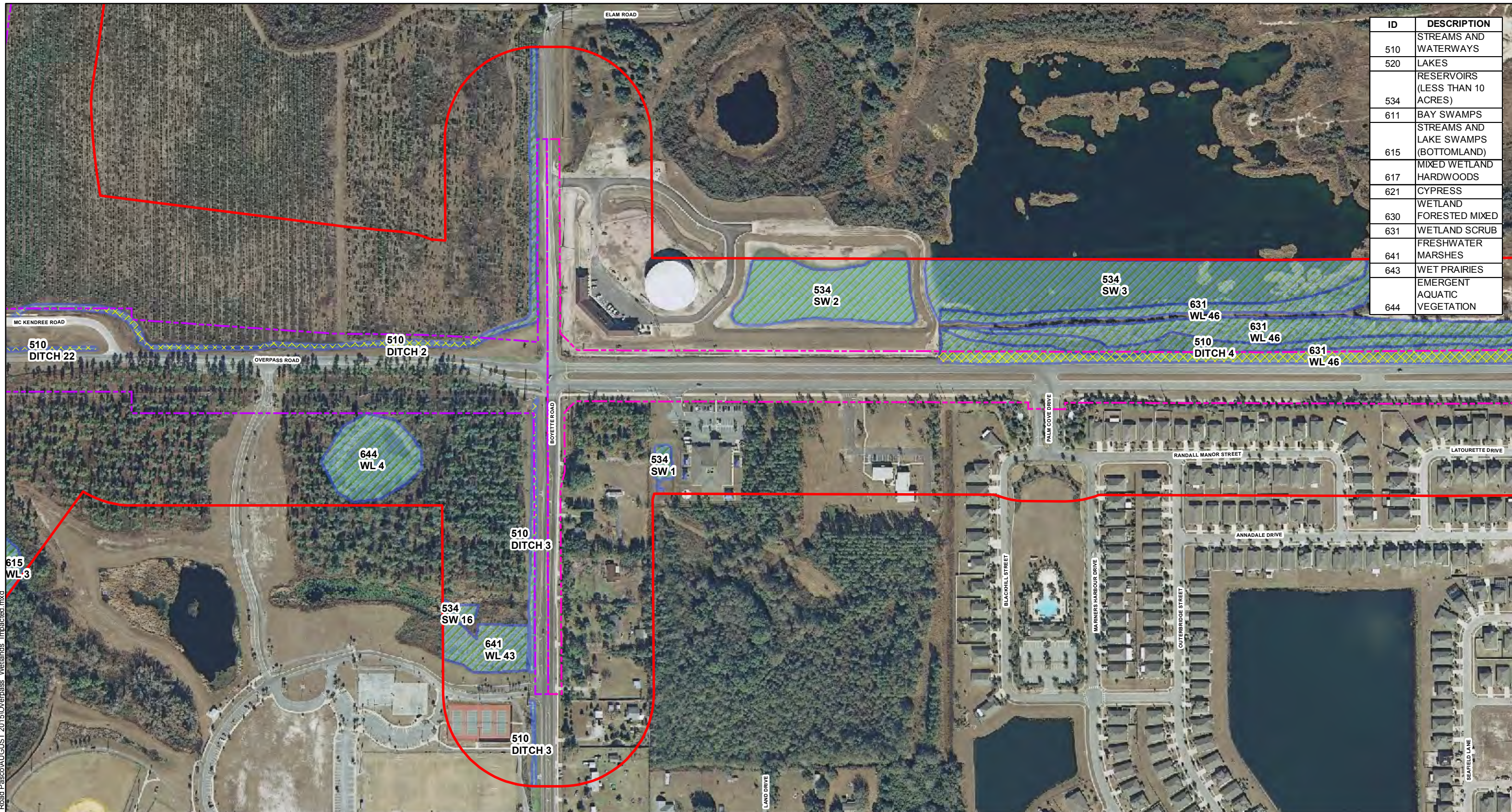
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- FPC Sites
- OLD PASCO ROAD TO BOYETTE ROAD W/ PONDS
- Wetlands/ Other Surface Waters
- BOYETTE ROAD TO US 301 W/ PONDS
- Proposed Stormwater Ponds

Source:
Aerials- FDOT, 2011
Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

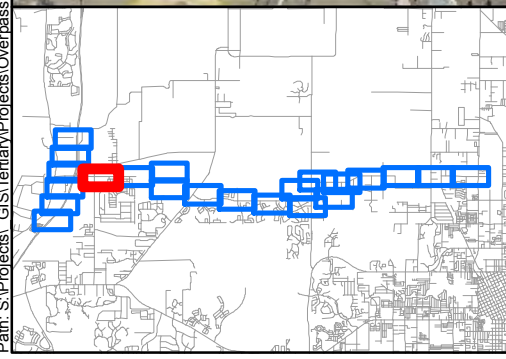
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Impacted Wetlands/ Other Surface Waters Location Map
 Pasco County, FL
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Legend

- Project Study Area
- OLD PASCO ROAD TO BOYETTE ROAD W/ PONDS
- BOYETTE ROAD TO US 301 W/ PONDS
- Proposed Stormwater Ponds
- FPC Sites
- Impacted Wetlands/ Surface Waters
- Wetlands/ Other Surface Waters

Source:
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Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

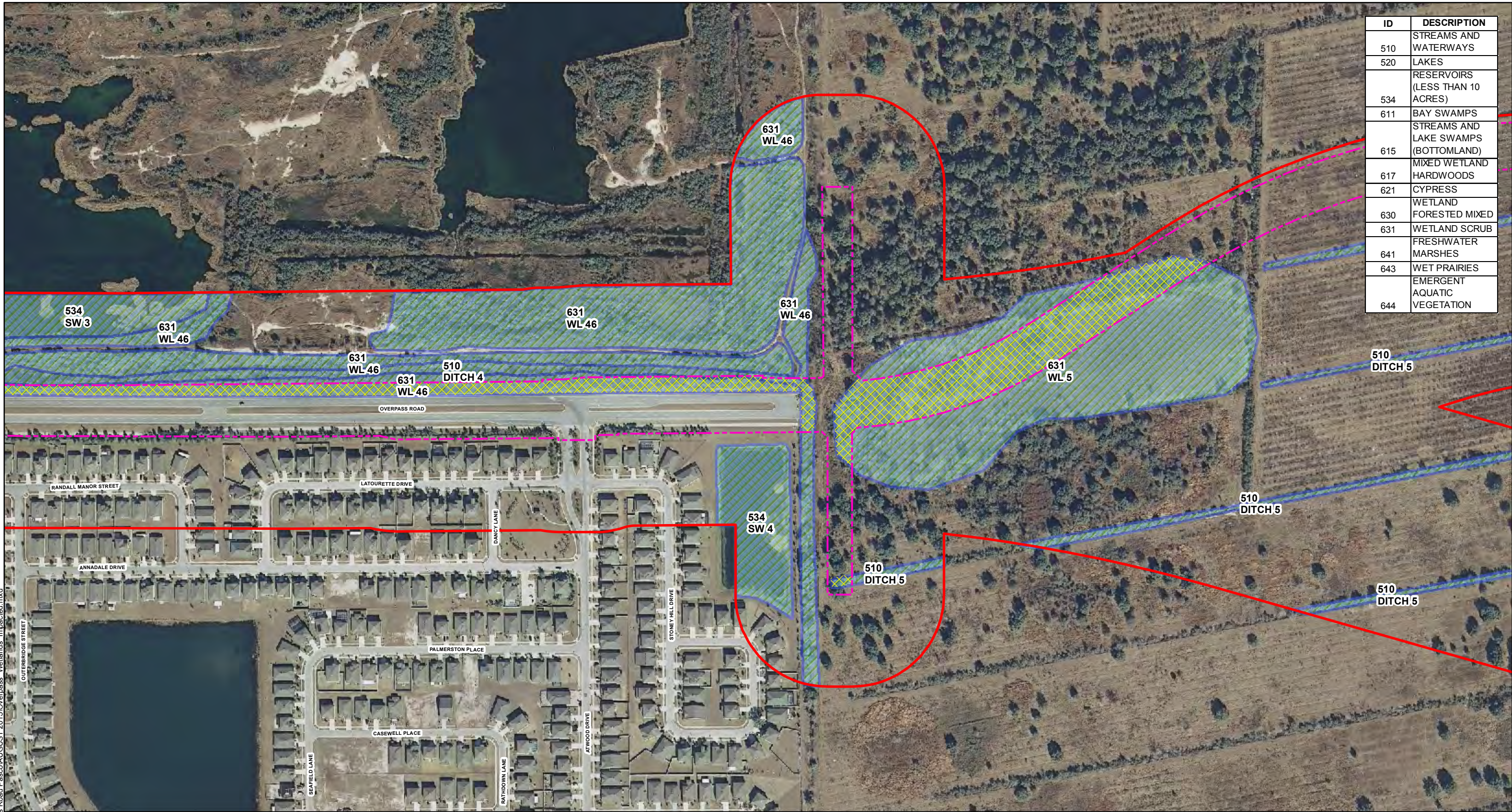
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**

Impacted Wetlands/ Other Surface Waters Location Map

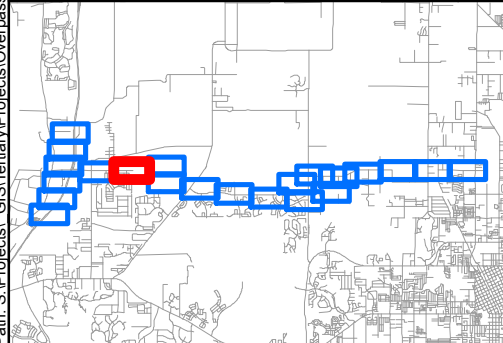
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Legend

- Project Study Area
- FPC Sites
- OLD PASCO ROAD TO BOYETTE ROAD W/ PONDS
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- BOYETTE ROAD TO US 301 W/ PONDS
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Source:
Aerials- FDOT, 2011
Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

**Overpass Road from Old Pasco Road
to US 301 PD&E Study**

Impacted Wetlands/ Other Surface Waters Location Map

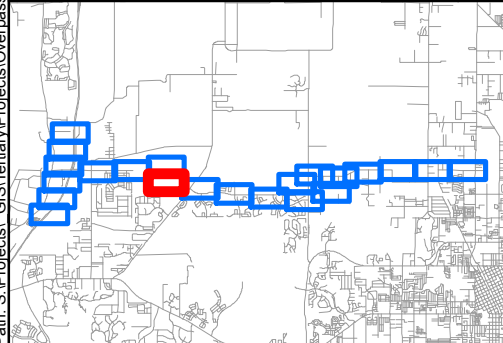
Pasco County, FL
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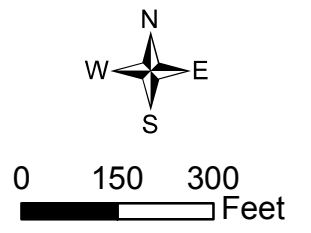


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- Project Study Area
- FPC Sites
- OLD PASCO ROAD TO BOYETTE ROAD W/ PONDS
- BOYETTE ROAD TO US 301 W/ PONDS
- Proposed Stormwater Ponds
- Impacted Wetlands/ Surface Waters
- Wetlands/ Other Surface Waters

Source:
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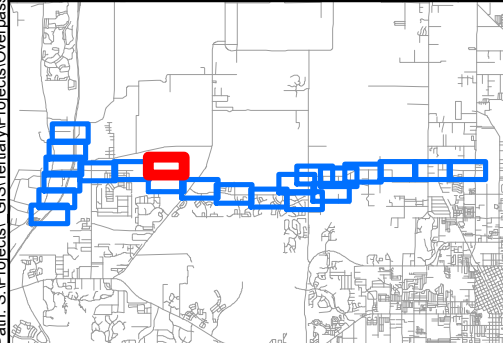
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Impacted Wetlands/ Other Surface Waters Location Map
Pasco County, FL
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Legend

Project Study Area	FPC Sites
OLD PASCO ROAD TO BOYETTE ROAD W/ PONDS	Impacted Wetlands/ Surface Waters
BOYETTE ROAD TO US 301 W/ PONDS	Wetlands/ Other Surface Waters
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Source:
Aerials- FDOT, 2011
Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

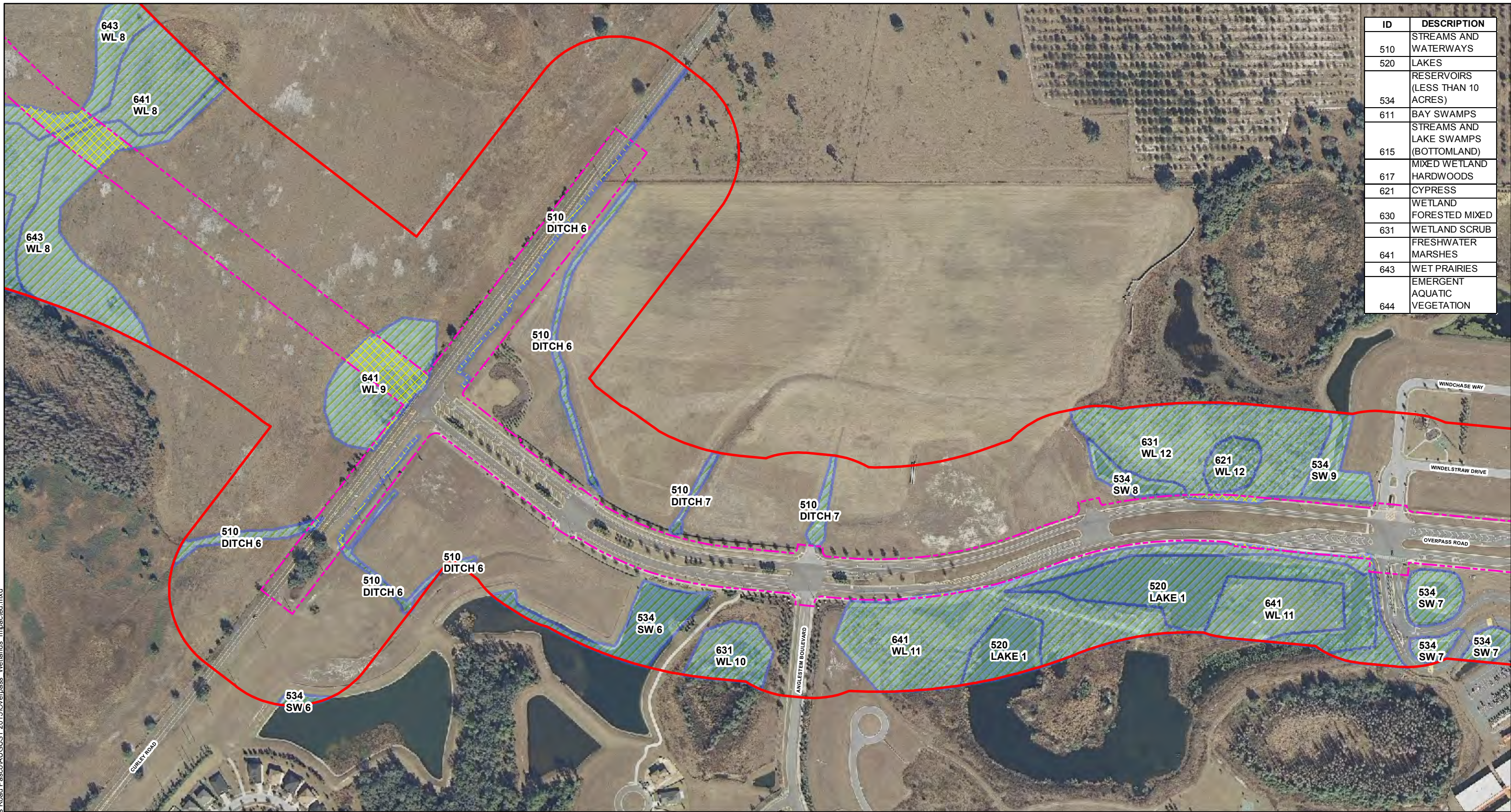
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**

Impacted Wetlands/ Other Surface Waters Location Map

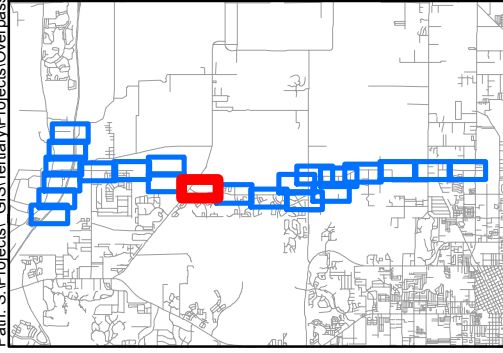
Pasco County, FL
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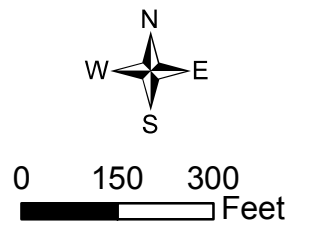
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- Project Study Area
- FPC Sites
- OLD PASCO ROAD TO BOYETTE ROAD W/ PONDS
- Impacted Wetlands/ Surface Waters
- BOYETTE ROAD TO US 301 W/ PONDS
- Wetlands/ Other Surface Waters
- Proposed Stormwater Ponds

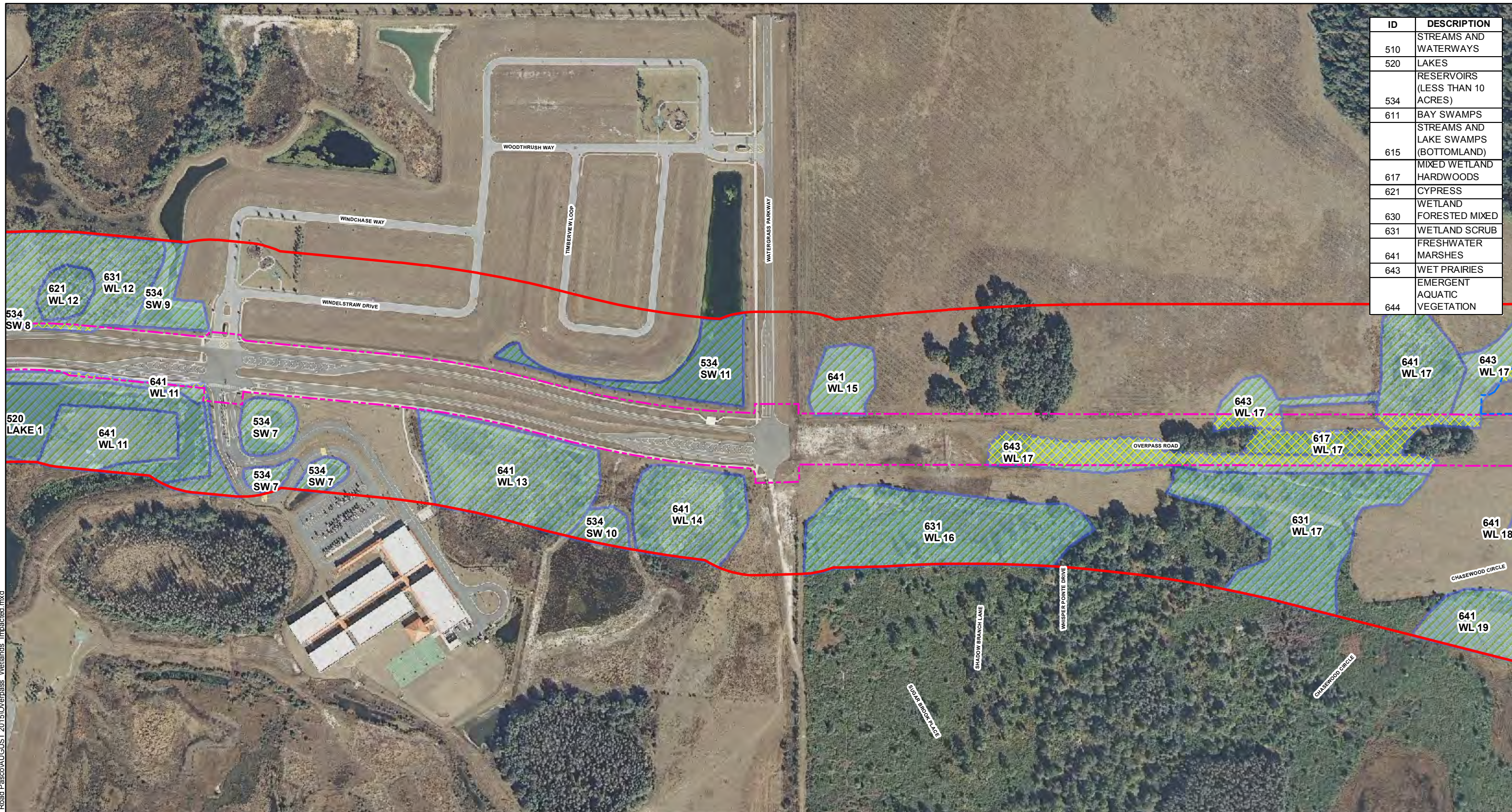
Source:
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Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Impacted Wetlands/ Other Surface Waters Location Map

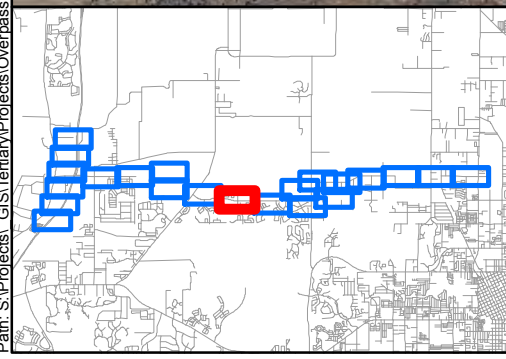
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ID	DESCRIPTION
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520	LAKES
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Legend

Project Study Area	FPC Sites
OLD PASCO ROAD TO BOYETTE ROAD W/ PONDS	Impacted Wetlands/ Surface Waters
BOYETTE ROAD TO US 301 W/ PONDS	Wetlands/ Other Surface Waters
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Source:
Aerials- FDOT, 2011
Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

**Overpass Road from Old Pasco Road
to US 301 PD&E Study**

Impacted Wetlands/ Other Surface Waters Location Map

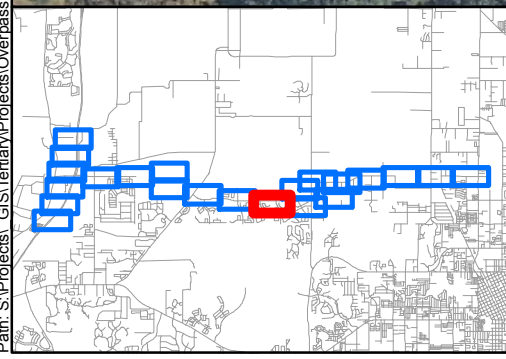
Pasco County, FL
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520	LAKES
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Project Study Area	FPC Sites
OLD PASCO ROAD TO BOYETTE ROAD W/ PONDS	Impacted Wetlands/ Surface Waters
BOYETTE ROAD TO US 301 W/ PONDS	Wetlands/ Other Surface Waters
Proposed Stormwater Ponds	

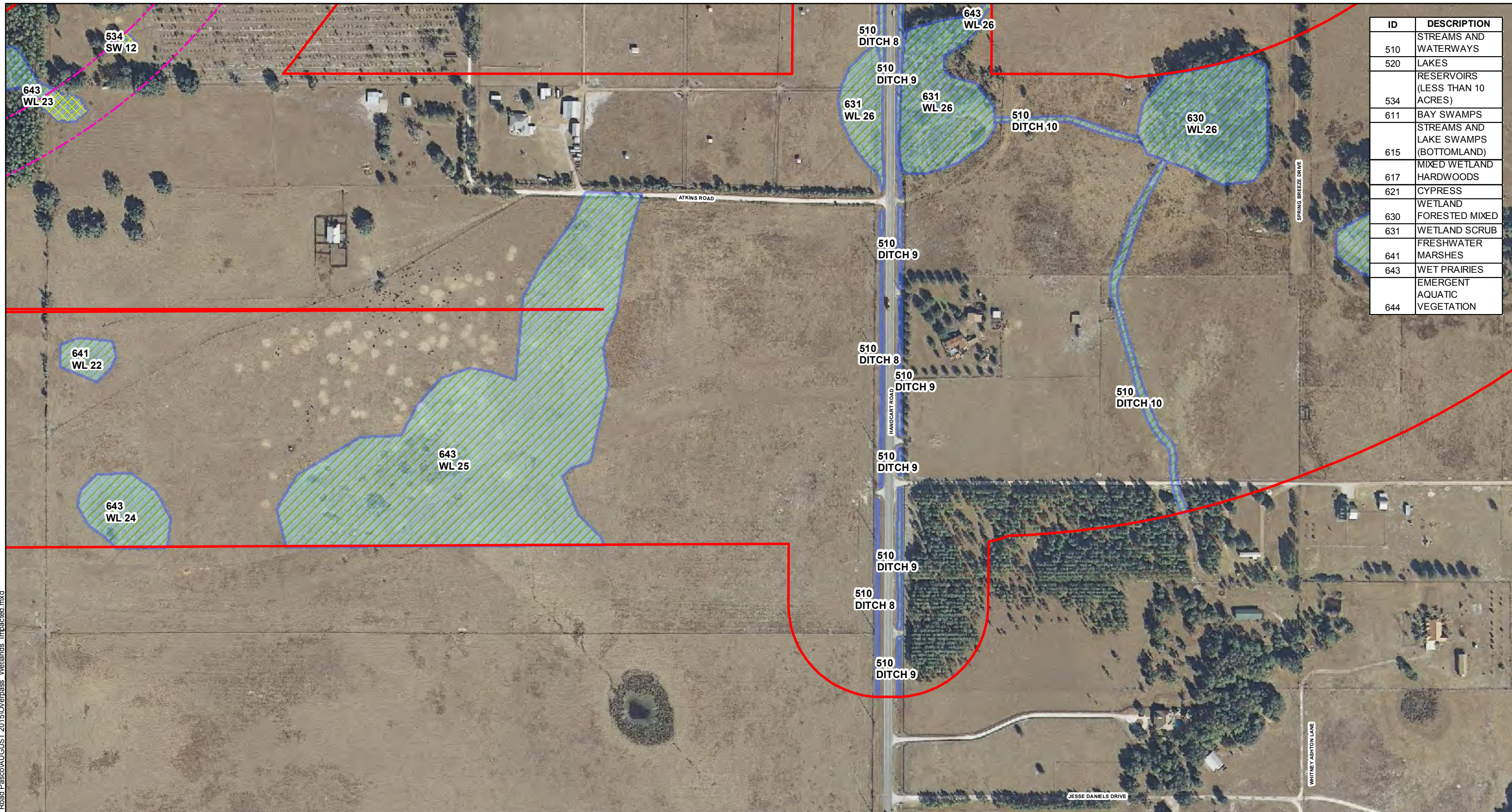
Source:
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Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Impacted Wetlands/ Other Surface Waters Location Map
Pasco County, FL
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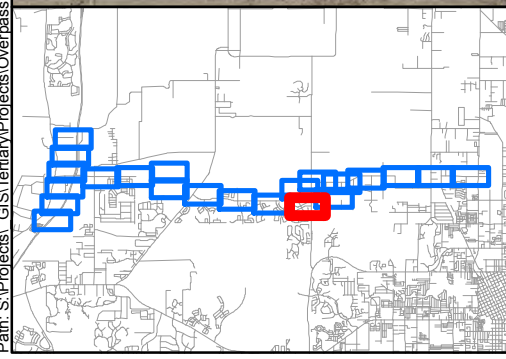
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ID	DESCRIPTION
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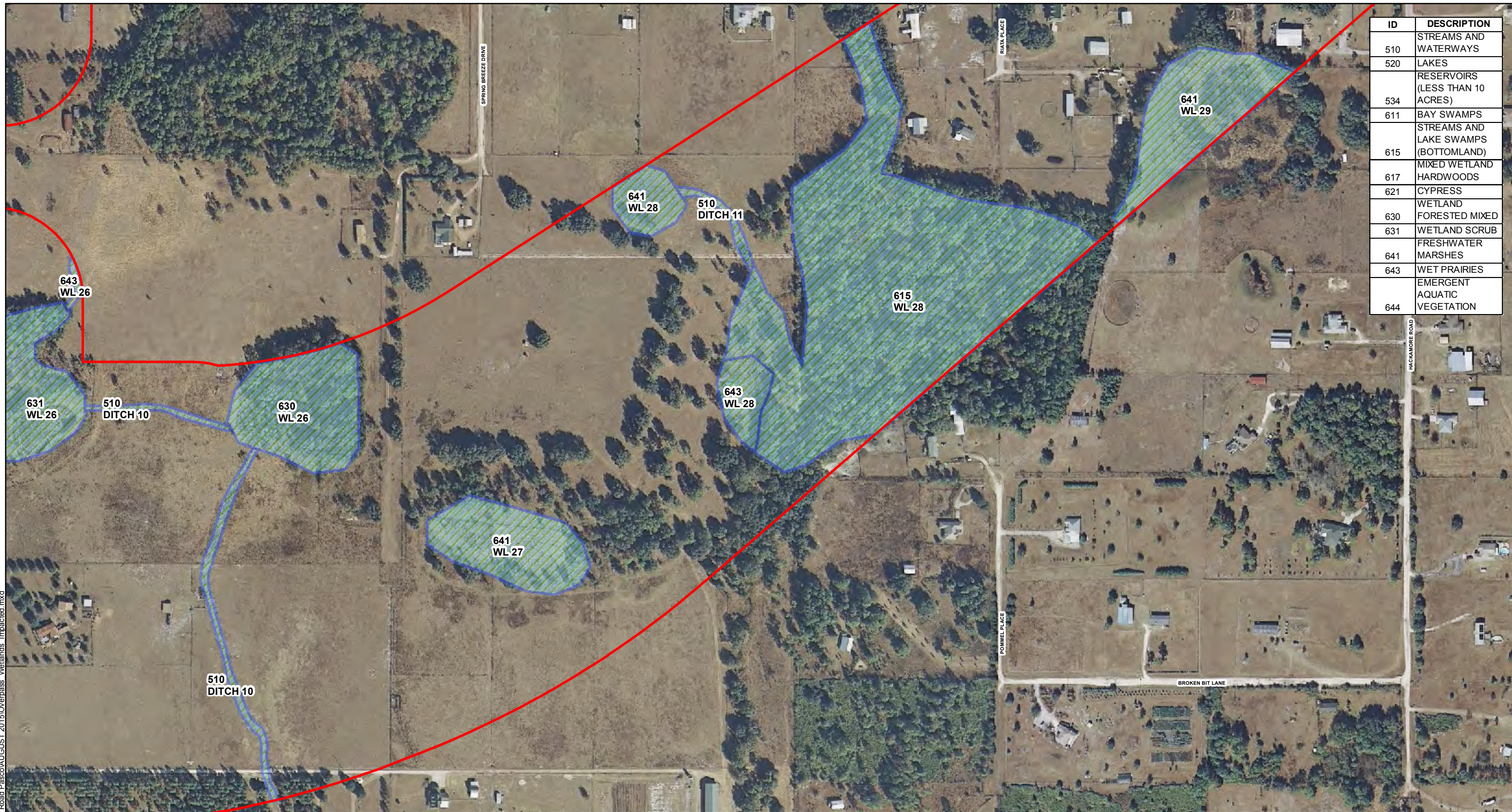
Project Study Area	FPC Sites
OLD PASCO ROAD TO BOYETTE ROAD W/ PONDS	Impacted Wetlands/ Surface Waters
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Source:
Aerials- FDOT, 2011
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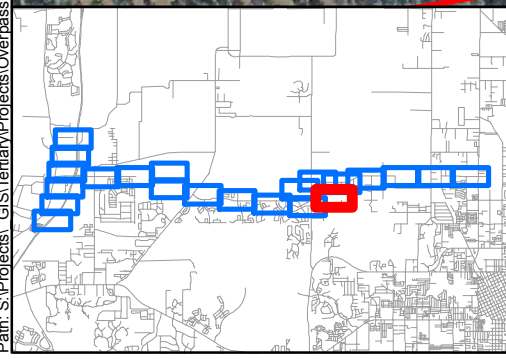
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Impacted Wetlands/ Other Surface Waters Location Map
Pasco County, FL
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Feet

ID	DESCRIPTION
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Legend

- Project Study Area
- FPC Sites
- OLD PASCO ROAD TO BOYETTE ROAD W/ PONDS
- Wetlands/ Other Surface Waters
- BOYETTE ROAD TO US 301 W/ PONDS
- Proposed Stormwater Ponds

Source:
Aerials- FDOT, 2011
Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

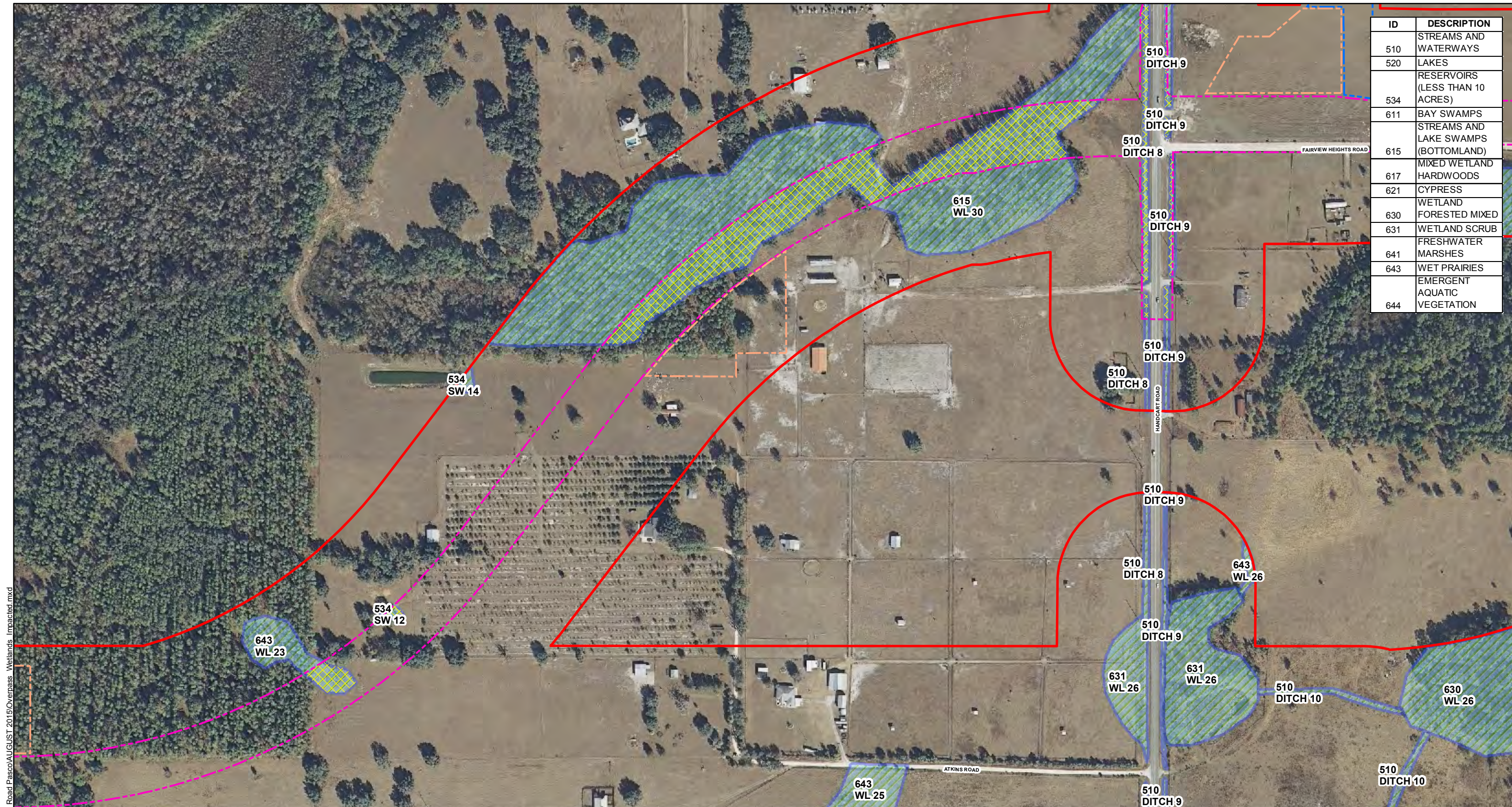
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**

Impacted Wetlands/ Other Surface Waters Location Map

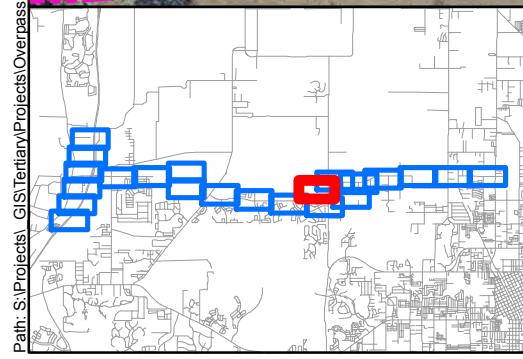
Pasco County, FL
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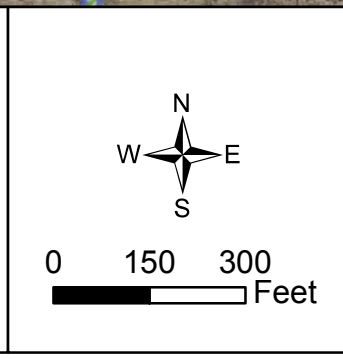


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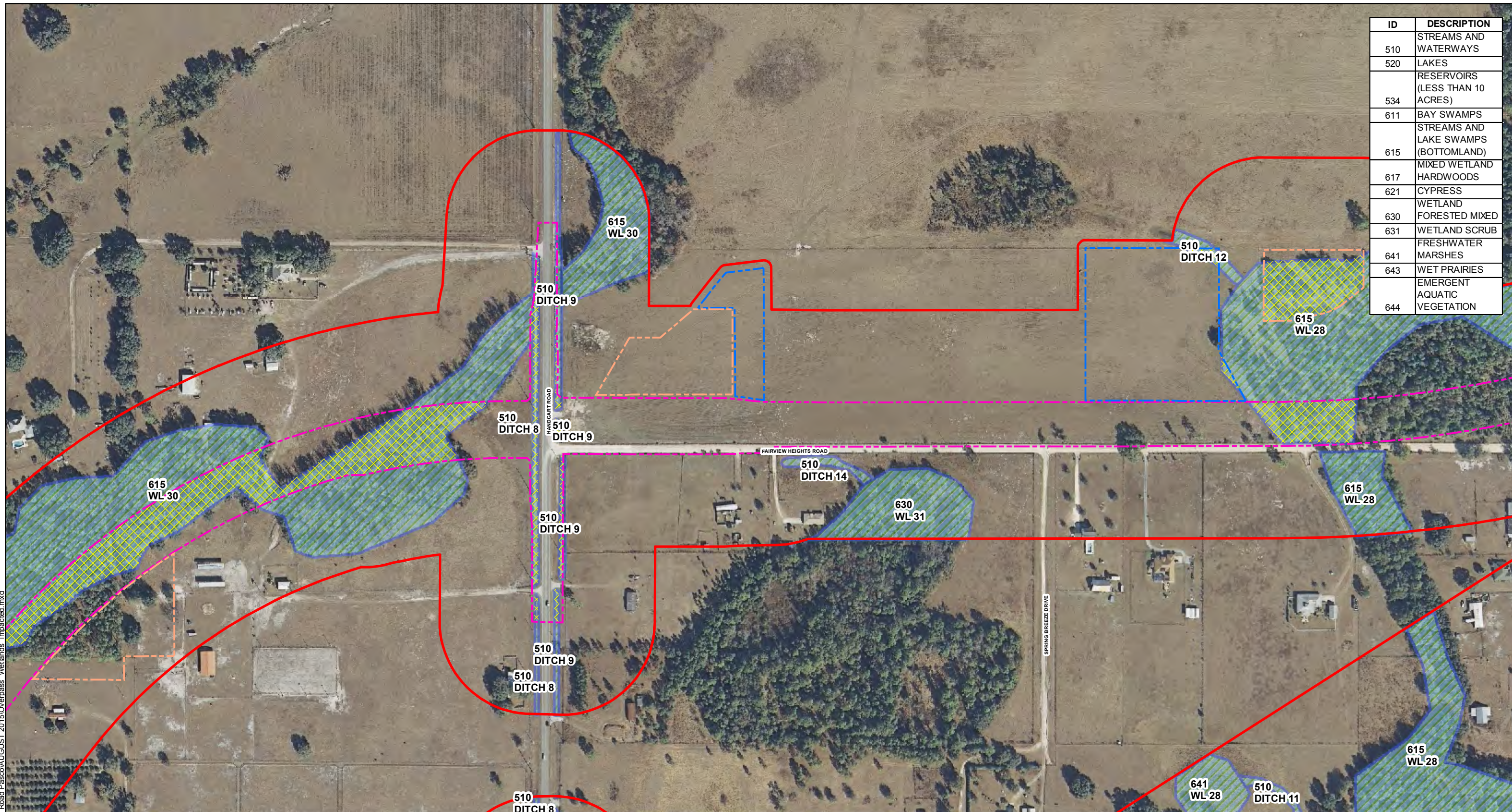
Project Study Area	FPC Sites
OLD PASCO ROAD TO BOYETTE ROAD W/ PONDS	Impacted Wetlands/ Surface Waters
BOYETTE ROAD TO US 301 W/ PONDS	Wetlands/ Other Surface Waters
Proposed Stormwater Ponds	

Source:
Aerials- FDOT, 2011
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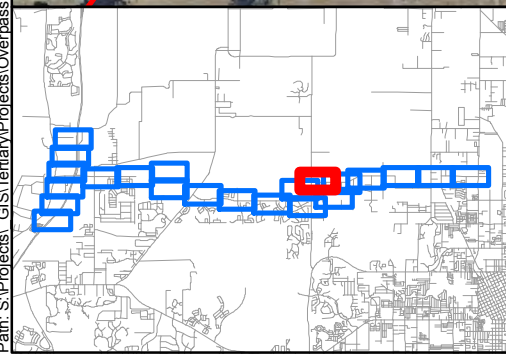
**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Impacted Wetlands/ Other Surface Waters Location Map
Pasco County, FL
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ID	DESCRIPTION
510	STREAMS AND WATERWAYS
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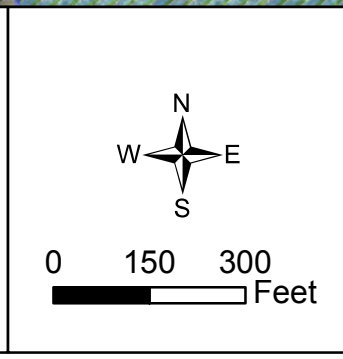


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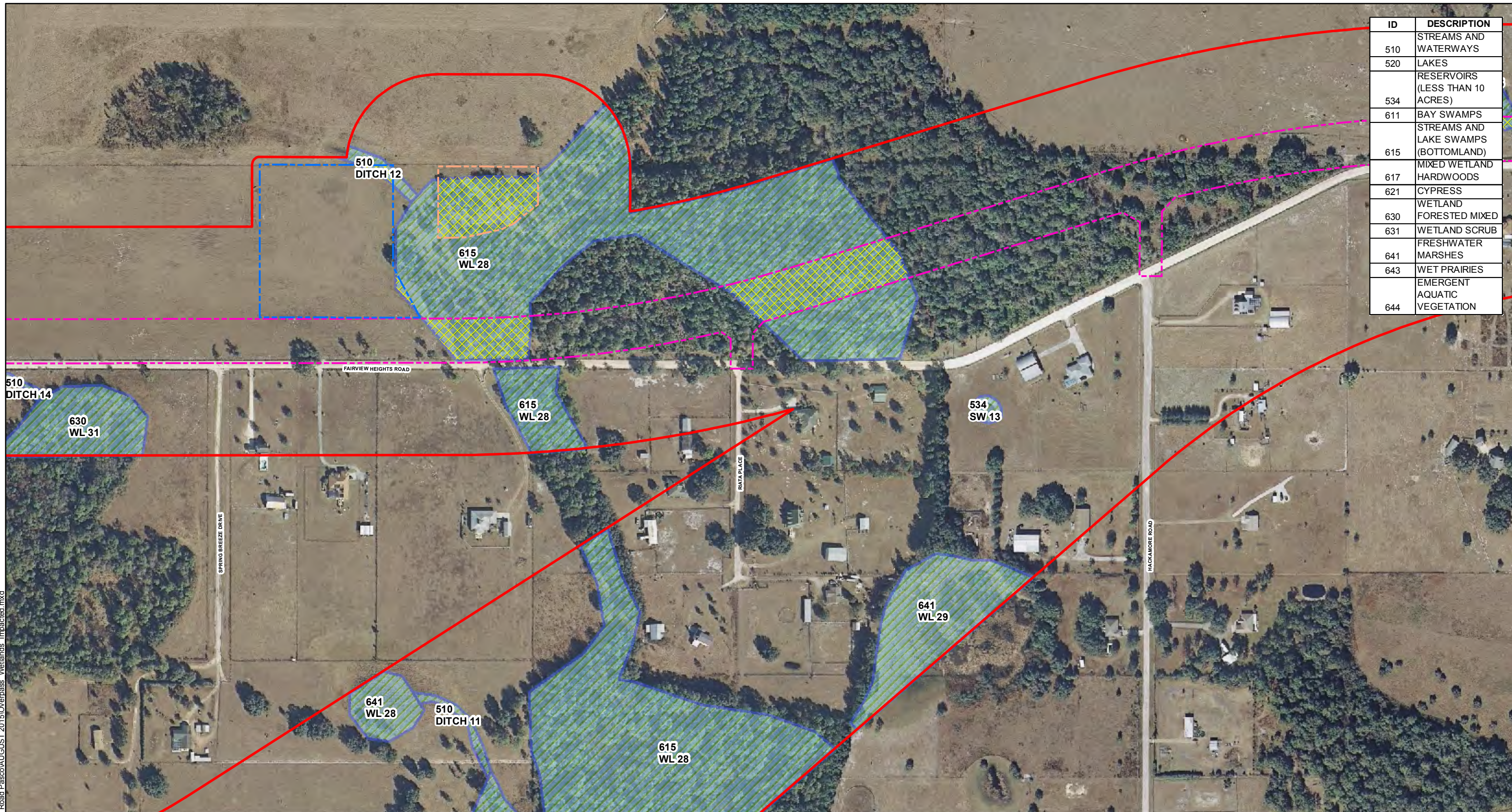
- Project Study Area
- FPC Sites
- OLD PASCO ROAD TO BOYETTE ROAD W/ PONDS
- BOYETTE ROAD TO US 301 W/ PONDS
- Proposed Stormwater Ponds
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- Wetlands/ Other Surface Waters

Source:
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Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Impacted Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 17 of 22



ID	DESCRIPTION
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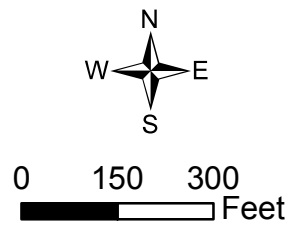


Legend

- Project Study Area
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- BOYETTE ROAD TO US 301 W/ PONDS
- Proposed Stormwater Ponds
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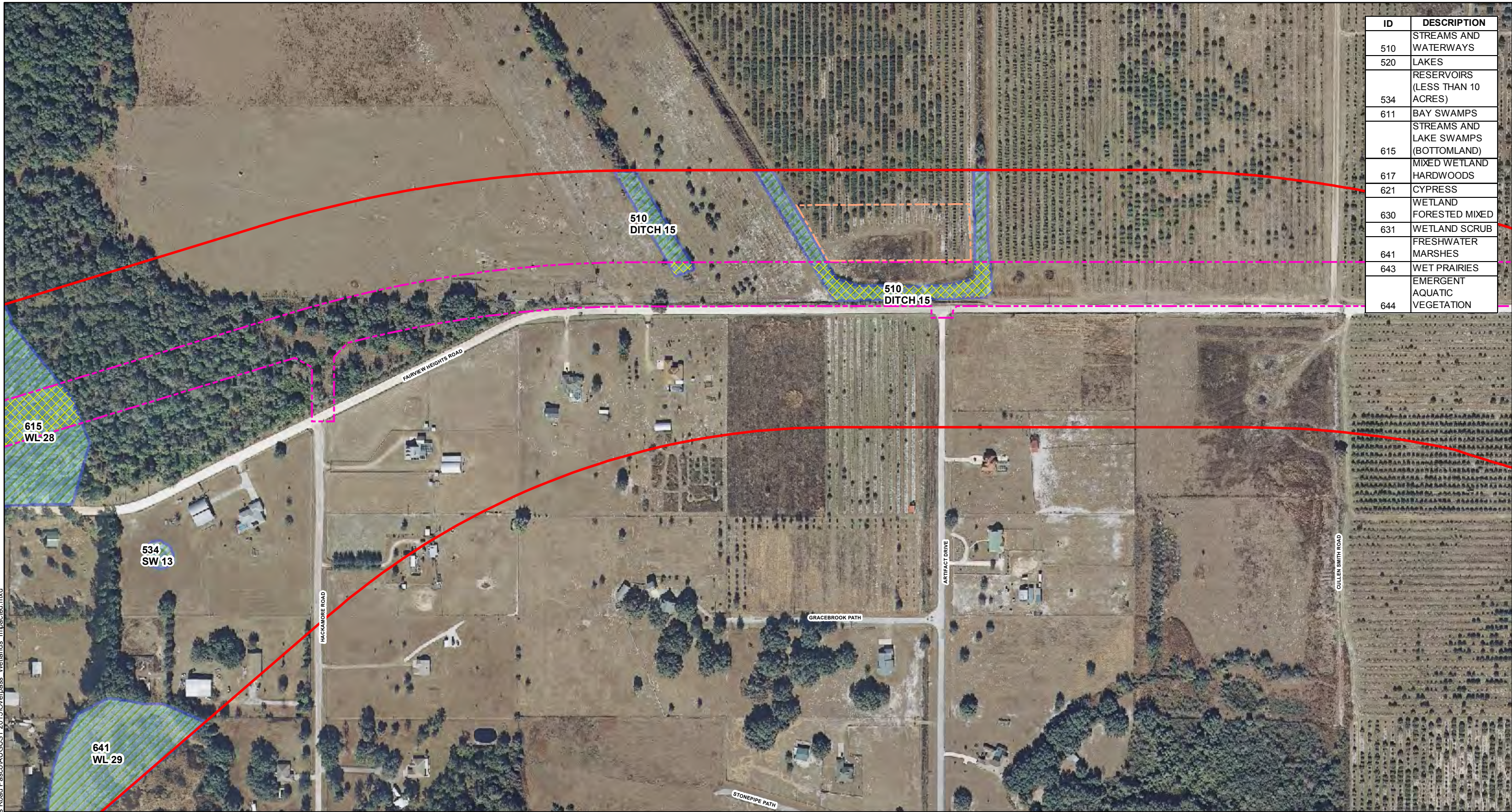
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Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Impacted Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 18 of 22

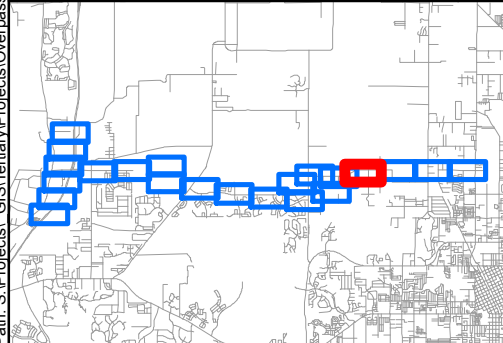


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643	WET PRAIRIES
644	EMERGENT AQUATIC VEGETATION



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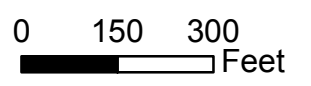
Legend

- Project Study Area
- FPC Sites
- OLD PASCO ROAD TO BOYETTE ROAD W/ PONDS
- BOYETTE ROAD TO US 301 W/ PONDS
- Proposed Stormwater Ponds
- Impacted Wetlands/ Surface Waters
- Wetlands/ Other Surface Waters

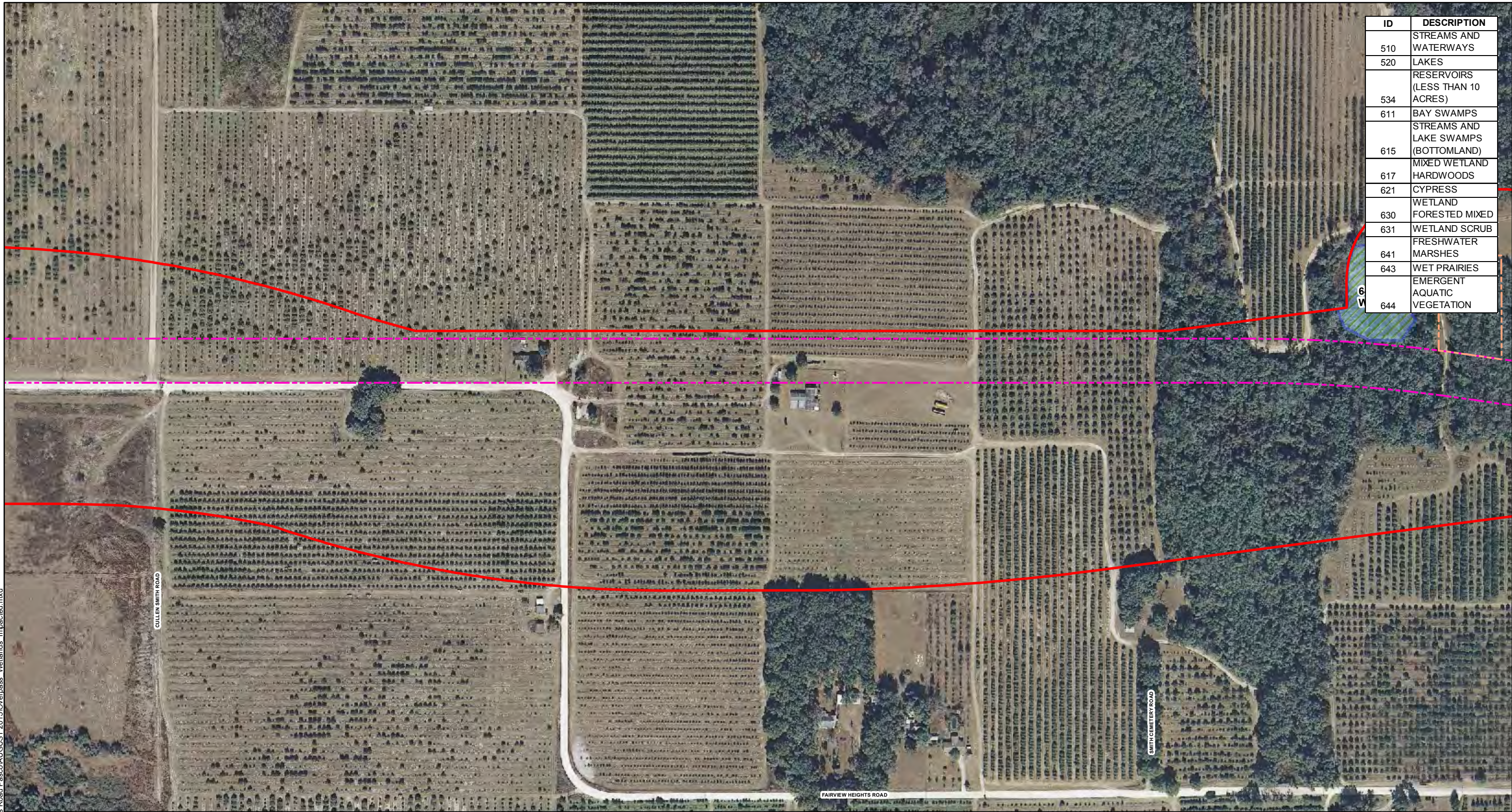
Source:
Aerials- FDOT, 2011
Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Impacted Wetlands/ Other Surface Waters Location Map

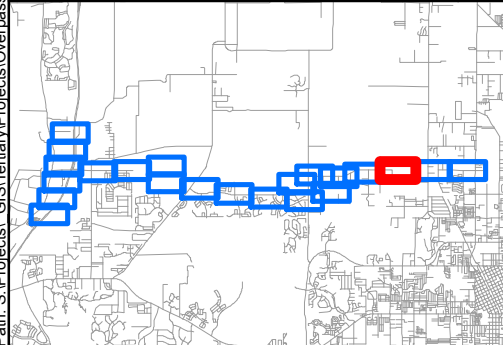
Pasco County, FL
Sheet 19 of 22



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ID	DESCRIPTION
510	STREAMS AND WATERWAYS
520	LAKES
534	RESERVOIRS (LESS THAN 10 ACRES)
611	BAY SWAMPS
615	STREAMS AND LAKE SWAMPS (BOTTOMLAND)
617	MIXED WETLAND HARDWOODS
621	CYPRESS WETLAND
630	FORESTED MIXED
631	WETLAND SCRUB
641	FRESHWATER MARSHES
643	WET PRAIRIES
644	EMERGENT AQUATIC VEGETATION

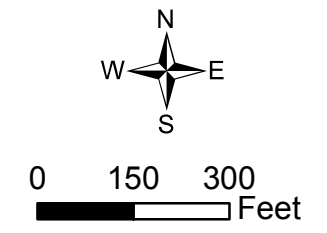


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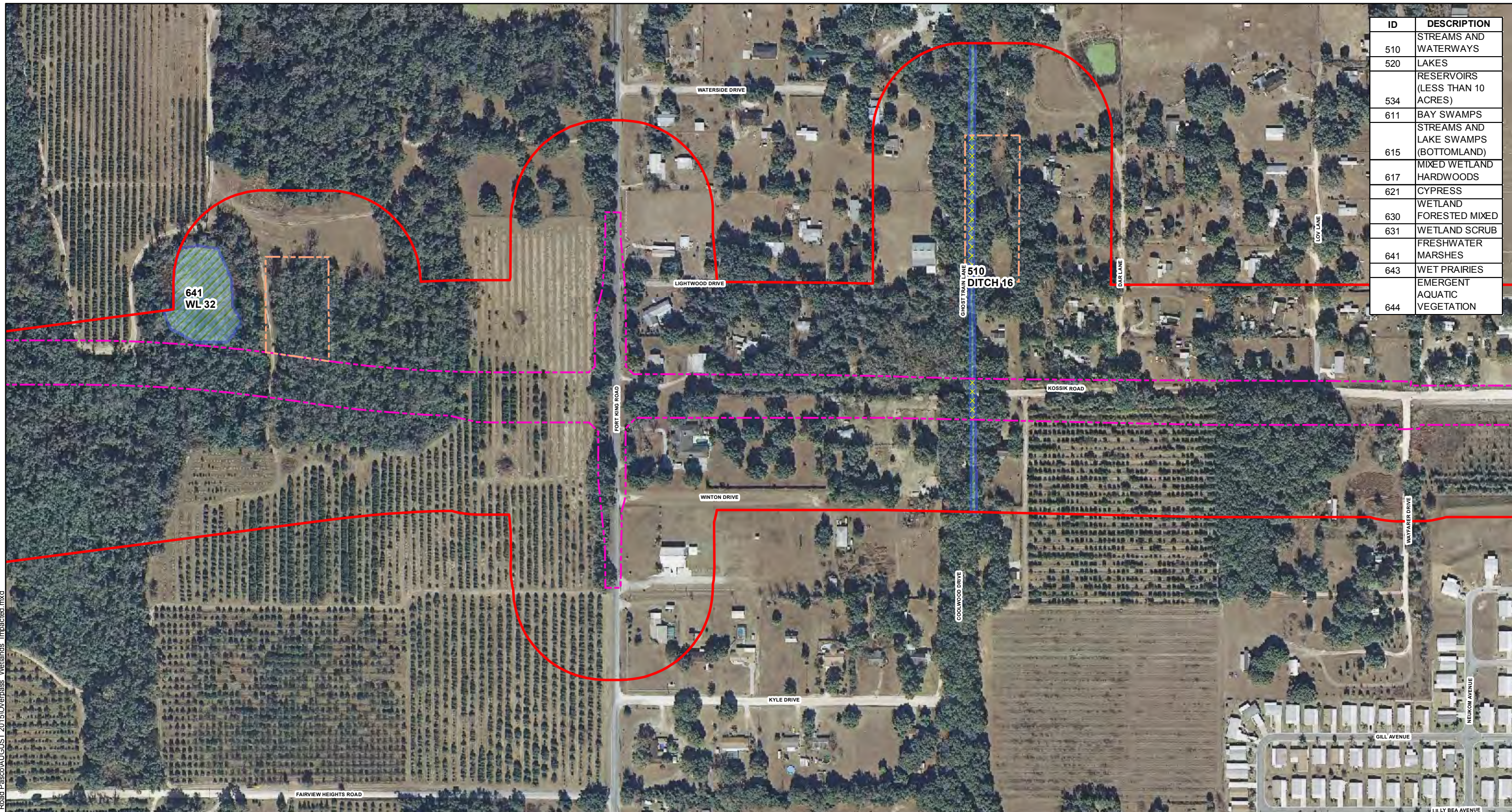
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Source:
Aerials- FDOT, 2011
Wetlands- SWFWMD, 2009/ URS, 2012/ FDOT, 1999

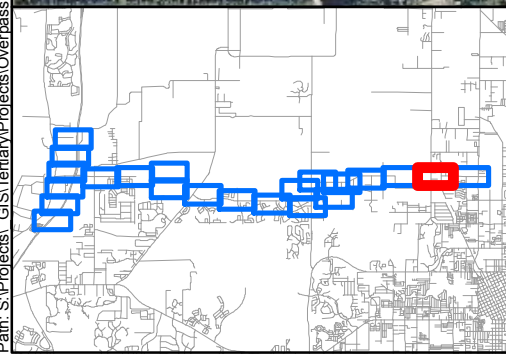
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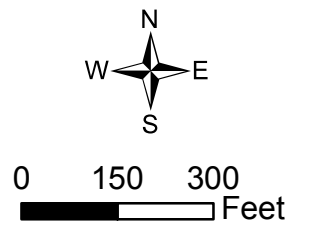


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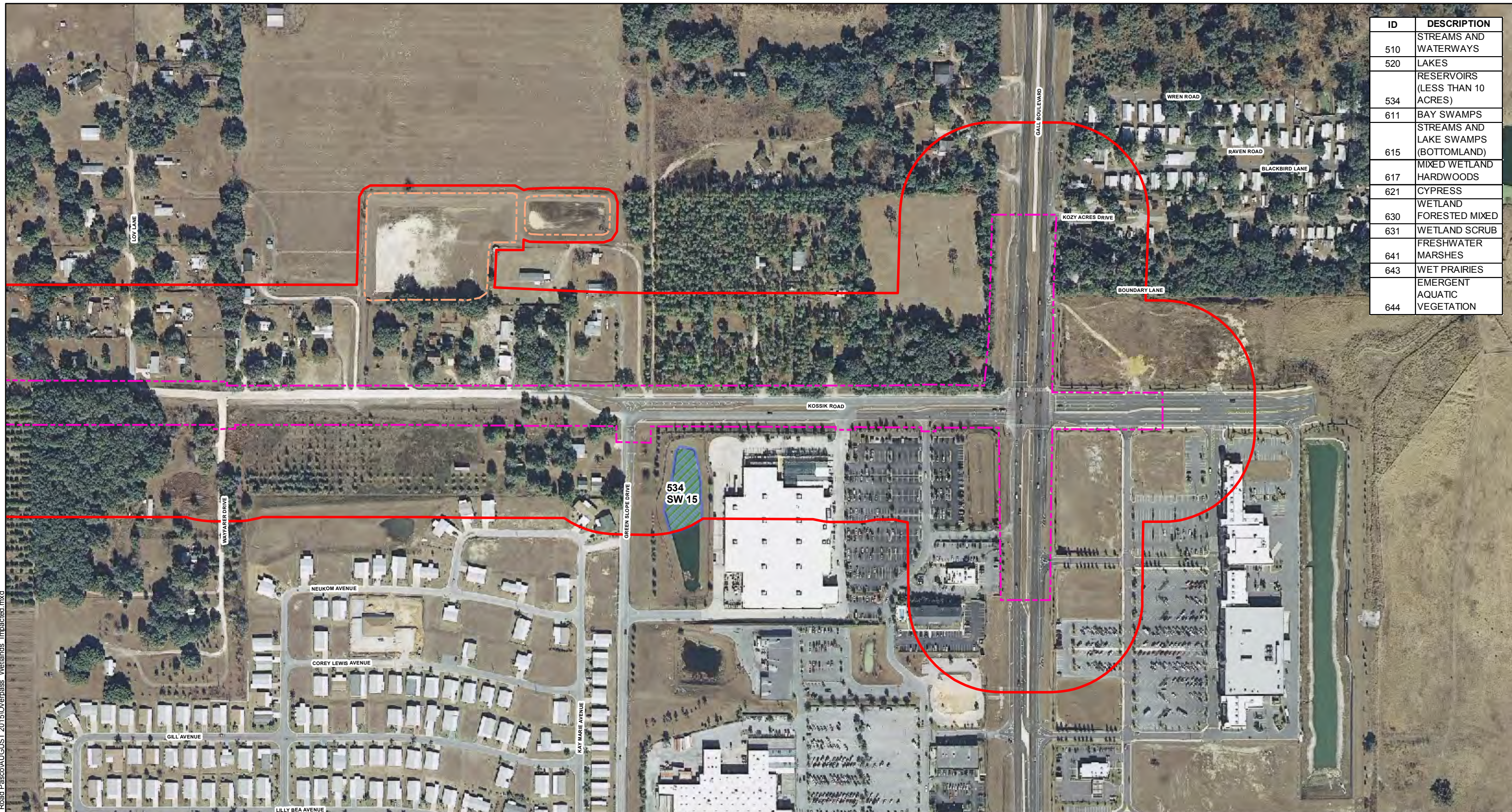
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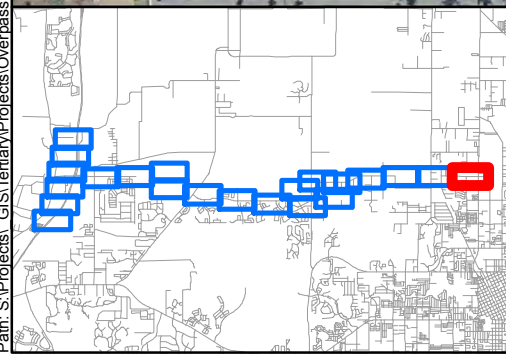
**Overpass Road from Old Pasco Road
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Impacted Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 21 of 22



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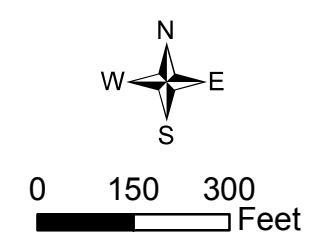


Legend

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**Overpass Road from Old Pasco Road
to US 301 PD&E Study**
Impacted Wetlands/ Other Surface Waters Location Map
Pasco County, FL
Sheet 22 of 22



APPENDIX G

Agency Correspondence



Florida Fish
and Wildlife
Conservation
Commission

Commissioners

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Tallahassee

Aliese P. "Liesa" Priddy
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MyFWC.com

September 2, 2015

Kevin Sumner
Engineering Services Dept.
Pasco County Project Management Division
5418 Sunset Road
New Port Richey, FL 34652
ksumner@pascocountyfl.net

Re: Overpass Road from Old Pasco Road to US 301, Project Development and Environment (PD&E) Study, Item No. 432734-1, Pasco County, Draft Wetland Evaluation and Biological Assessment Report

Dear Mr. Sumner:

The Florida Fish and Wildlife Conservation Commission (FWC) staff has reviewed the Draft Wetland Evaluation and Biological Assessment Report (WEBAR) for the above-referenced project, prepared as part of the PD&E Study for the proposed project. We have previously reviewed this project via the Efficient Transportation Decision Making (ETDM) process as ETDM #9871. We provide the following comments and recommendations for your consideration in accordance with Chapter 379, Florida Statutes, and Rule 68A-27, Florida Administrative Code (F.A.C.).

The project involves widening Overpass Road from two to four lanes between Old Pasco Road and I-75, constructing a new interchange at I-75 and Overpass Road, widening Overpass Road from four to six lanes from I-75 to its current terminus located approximately 0.86 miles east of Boyette Road, and extending the six-lane Overpass Road east to US 301 for a total length of approximately 9.0 miles in Pasco County. An Environmental Assessment will be prepared for the project, in accordance with the Federal Highway Administration's National Environmental Policy Act project development process. The project vicinity consists of a mix of residential, commercial, agricultural, and natural vegetative land cover. Natural communities include forested and herbaceous freshwater wetlands, and forested uplands.

The WEBAR evaluated potential project impacts to 19 wildlife species classified under the Endangered Species Act as Federally Endangered (FE) or Threatened (FT), or by the State of Florida as Threatened (ST) or Species of Special Concern (SSC). Listed species were evaluated based on range and potential appropriate habitat within the project area. Included were: Eastern indigo snake (FT), wood stork (FE), Florida scrub jay (FT), gopher frog (SSC), gopher tortoise (ST), short-tailed snake (ST), Florida pine snake (SSC), Florida burrowing owl (SSC), Florida sandhill crane (ST), Southeastern American kestrel (ST), limpkin (SSC), roseate spoonbill (SSC), snowy egret (SSC), reddish egret (SSC), little blue heron (SSC), tricolored heron (SSC), white ibis (SSC), Florida mouse (SSC), and Sherman's fox squirrel (SSC).

Also evaluated was the bald eagle, which was delisted by state and federal agencies, but remains protected under state rule in Section 68A-16.002, F.A.C., and by the federal Bald

and Golden Eagle Protection Act (16 U.S.C. 668-668d); the Florida black bear, which has been removed from the state list, but is still governed and managed by the FWC pursuant to the Florida Black Bear Management Plan and the Florida Black Bear Conservation Rule 68A-4.009, F.A.C.; and the American alligator (FT because of similarity of appearance to the American crocodile).

Project biologists made a finding of “no effect” for the scrub jay, Southeastern American kestrel, and short-tailed snake due to a lack of suitable habitat for these species within the project area. The biologists determined that the project “may affect, but is unlikely to adversely affect” all the other species. We agree with these determinations.

We support the project commitments for protected species, which include the following:

1. Should a bald eagle nest be built prior to or during construction within 660 feet of the construction limits, further coordination will occur with the FWC and/or U.S. Fish and Wildlife Service (USFWS) as appropriate.
2. The standard FDOT Construction Precautions for the Eastern Indigo Snake will be followed during construction.
3. Due to the presence of gopher tortoise habitat within the project area, a gopher tortoise survey in appropriate habitat will be performed within construction limits prior to construction, and the FDOT will secure any necessary relocation permit from the FWC.

Please reference the FWC's Gopher Tortoise Permitting Guidelines (Revised February 2015

<http://myfwc.com/media/2984206/GT-Permitting-Guidelines-FINAL-Feb2015.pdf>) for survey methodology and permitting guidance prior to any construction activity. Specific guidance in the permitting guidelines includes methods for avoiding permitting as well as options and state requirements for minimizing, mitigating, and permitting potential impacts of the proposed activities. Any commensal species observed during the burrow excavations should be handled in accordance with Appendix 9 of the Gopher Tortoise Permitting Guidelines. To the maximum extent possible, the FWC also recommends that all staging and storage areas be sited to avoid impacts to gopher tortoise burrows and their habitat.

4. Due to the presence of Florida burrowing owl habitat and the documentation of potentially occupied burrows within the project study area, a burrowing owl survey within the construction limits will be performed during design and permitting and prior to construction per FWC guidelines. Pasco County will secure any relocation permits needed for this species during the project design and construction phases of the project.
5. Due to the presence of Florida sandhill cranes and suitable nesting areas located within the project study area, a sandhill crane nest survey will be performed within the construction limits prior to construction per FWC guidelines. Pasco County will coordinate with FWC during the project design and construction phases of the project.

6. To avoid potential adverse impacts to the wood stork, informal Section 7 consultation will be re-initiated with the USFWS during project design and permitting. Pasco County will commit to mitigate for the loss of suitable wood stork habitat located within the preferred alignment to confirm that there is no net loss of wetlands. Mitigation for lost foraging habitat will be provided within the core foraging range of known rookeries to comply with the USFWS's Standard Local Operating Procedures for Endangered Species (SLOPES). This mitigation should also compensate for habitat loss for the other potentially affected wading birds.

In addition to these commitments, we recommend that the area to be affected by the use of heavy equipment be surveyed for the presence of Sherman's fox squirrel nests. If fox squirrels are nesting in the area to be affected, we recommend the applicant maintain a 125-foot distance from the nest tree and avoid the nest tree until the young leave the nest. If removal of the tree is unavoidable and removal of the nest is necessary, we recommend coordinating with the FWC to discuss potential permitting alternatives. Any fox squirrels observed foraging within the project area should be allowed to vacate the area.

The WEBAR evaluates the potential project impacts to an estimated 40.8 acres of wetlands and other surface waters, with a commitment to provide appropriate mitigation. We agree with the findings of this evaluation.

Thank you for the opportunity to review the WEBAR for the Overpass Road project in Pasco County. If you need further assistance, please do not hesitate to contact Jane Chabre either by phone at (850) 410-5367 or at FWCConservationPlanningServices@MyFWC.com. If you have specific technical questions regarding the content of this letter, contact Brian Barnett at (772) 579-9746 or email brian.barnett@MyFWC.com.

Sincerely,



Jennifer D. Goff
Land Use Planning Program Administrator
Office of Conservation Planning Services

jdg/bb

ENV 1-13-2

Overpass Road PDE Wetland Evaluation and Biological Assessment_165_090215



United States Department of the Interior

U. S. FISH AND WILDLIFE SERVICE

7915 BAYMEADOWS WAY, SUITE 200
JACKSONVILLE, FLORIDA 32256-7517

IN REPLY REFER TO:

FWS Log No. 04EF1000-2015-1-0388

September 14, 2015

Kevin Sumner
Project Manager, Pasco County
Project Management Division
5418 Sunset Road
New Port Richey, FL 34652

Dear Mr. Sumner:

The U.S. Fish and Wildlife Service (Service) has completed its review of the Wetland Evaluation and Biological Assessment Report (WEBAR) for the Overpass Road Project Development and Environment Study (PD&E). The proposed Overpass Road will be a new alignment that will provide Old Pasco Road new access with Interstate 75 (I-75). The Service provides the following comments in accordance with section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 et seq.).

The Service received a request from the Pasco County (County) on August 19, 2015, for informal consultation and concurrence with the findings and commitments presented on the WEBAR for the proposed project. It is our understanding that the County is committed to re-initiating informal consultation for the project's effects on the listed species during its future permitting process. It is also understood that wetland impacts to suitable wood stork foraging areas will be re-evaluated and provide compensation within a Service approved mitigation or conservation bank during the permitting process. The Service has reviewed the information provided and the County's effects determinations for potential impacts to species listed under the Endangered Species Act and provide the following comments.

Eastern Indigo Snake (*Drymarchon corais couperi*)

The County made a '*may affect, but not likely to adversely affect*' determination for the eastern indigo snake due to the fact that the species was not observed during the field survey but suitable habitat exists within the project study area indicating possible presence. The County commits to implementing the Service's *Standard Protection Measures for the Indigo Snake* during construction of the project. Based on our review of the information provided and the County's commitment to implement the Standard Protection Measures for the Eastern Indigo Snake the Service concurs with the '*may affect, but not likely to adversely affect*' determination for the Eastern indigo snake.

OCT 01 2015

Florida Scrub Jay (*Aphelocoma coerulescens*)


Florida scrub jays (FLSJ) and suitable species habitat has been previously identified in Pasco County. Suitable FLSJ habitat identified in the WEBAR included citrus groves, open land and improved pastures. The Service has reviewed the documents provided, as well as the available FLSJ observation data and concurs with a 'no effect' determination for the Florida scrub jay.

Wood Stork (*Mycteria americana*)

Several documented occurrences of wood storks are within one mile of the project area and the WEBAR identifies a wood stork observed foraging within the project study area south of Fairview Heights Road near Hackamore Road. The County commits to re-initiating Section 7 consultation prior to permitting the project and evaluating impacts to suitable foraging habitat and provide compensation within a Service approved bank. The Service has reviewed information provided, as well as available observation and species presence data and concurs with a 'may affect, but not likely to adversely affect' determination for this species.

Thank you for considering the effects of your proposed project on fish and wildlife, and the ecosystems upon which they depend. Should changes to the proposed project occur or new information regarding fish and wildlife resources become available, further consultation with the Service should be initiated to assess any potential impacts. All additional information available will be evaluated when Section 7 consultation is reinitiated. If you have any questions, please contact Lourdes Mena at (904)731-3119.

Sincerely,


for Jay B. Herrington
Field Supervisor

cc: Joe Sullivan, FHWA
Cathy Kendall, FHWA
Nicolle Selly, FDOT District Seven

ETDM Summary Report

Project #9871 - Overpass Road from Old Pasco Road to US 301

Programming Screen - Published on 08/12/2008

Printed on: 12/14/2009

Introduction to Programming Screen Summary Report

The Programming Screen Summary Report shown below is a read-only version of information contained in the Programming Screen Summary Report generated by the ETDM Coordinator for the selected project after completion of the ETAT Programming Screen review. The purpose of the Programming Screen Summary Report is to summarize the results of the ETAT Programming Screen review of the project; provide details concerning agency comments about potential effects to natural, cultural, and community resources; and provide additional documentation of activities related to the Programming Phase for the project. Available information for a Programming Screen Summary Report includes:

- Screening Summary Report chart
- Project Description information (including a summary description of the project, a summary of public comments on the project, and community-desired features identified during public involvement activities)
- Purpose and Need information (including the Purpose and Need Statement and the results of agency reviews of the project Purpose and Need)
- Alternative-specific information, consisting of descriptions of each alternative and associated road segments; an overview of ETAT Programming Screen reviews for each alternative; and agency comments concerning potential effects and degree of effect, by issue, to natural, cultural, and community resources.
- Project Scope information, consisting of general project commitments resulting from the ETAT Programming Screen review, permits, and technical studies required (if any)
- Class of Action determined for the project
- Dispute Resolution Activity Log (if any)

The legend for the Degree of Effect chart is provided in an appendix to the report.

For complete documentation of the project record, also see the GIS Analysis Results Report published on the same date as the Programming Screen Summary Report.

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9871 - Overpass Road from Old Pasco Road to US 301 ** Most Recent Data

Review Start Date:	2/13/2008	Phase:	Programming Screen
From:	Old Pasco Road	To:	US 301,"Location not available."
District:	District 7	County:	Pasco County
Contact Name:	Carin Watkins	Contact Email:	carin.watkins@dot.state.fl.us

Project Re-Published 8/12/2008

Project Overview: Summary Degree of Effect Chart

		Evaluation of Direct Effects																				
		Natural							Cultural			Community										
Legend		Air Quality	Coastal and Marine	Contaminated Sites	Farmlands	Floodplains	Infrastructure	Navigation	Special Designations	Water Quality and Quantity	Wetlands	Wildlife and Habitat	Historic and Archaeological Sites	Recreation Areas	Section 4(f) Potential	Aesthetics	Economic	Land Use	Mobility	Relocation	Social	Secondary and Cumulative Effects
		N/A	N/A / No Involvement																			
1	Enhanced																					
0	None																					
2	Minimal (after 12/5/2005)																					
3	Moderate																					
4	Substantial																					
5	Dispute Resolution (Programming)																					
Alternative #1																						
From Old Pasco Road To US 301																						
- Reviewed from 2/13/2008 to 3/29/2008		2	N/A	3	3	3	2	N/A	0	3	3	3	4	2	3	2	2	2	1	3	3	4
- Published on 8/12/2008																						

Project Description Summary

This roadway capacity improvement project in Pasco County involves the addition of an interchange at the intersection of Overpass Road and I-75; the extension of Overpass Road as a two-lane facility from just east of Boyette Road to US 301; and the widening of both the existing two-lane undivided segment of Overpass Road (from Old Pasco Road to east of Boyette Road) and the new two-lane undivided Overpass Road extension (from east of Boyette Road to US 301) to four lanes. The total project length is approximately 9.0 miles, as shown on Figure 1 (attached). The existing sections and number of lanes are provided on Figure 2 and the proposed future sections are shown on Figure 3 (both attached).

Three alternatives, O-1, O-2, and a no build concept were studied initially. Alternatives O-1 and O-2, were developed to address the long-range planning and safety needs and to minimize the social, environmental, and economic impacts. The build alternatives were developed to address these five criteria, plus comments received from the public and other pertinent factors and were presented at a public workshop on October 28, 2004. Based on the public comments received in opposition to both proposed alternatives at the first public workshop, a new alternative, O-3, was developed to eliminate, as much as possible, impacting the residents south of Fairview Heights Road east of Handcraft Road. Alternative O-3 was presented at the second public workshop on March 3, 2005 along with Alternative O-2, which was preferred to Alternative O-1 at the first workshop.

Alternative O-3 was chosen because:

- It utilizes the existing right-of-way (ROW) to the maximum extent possible (reduces impacts to residents and ROW acquisition costs)
- Satisfies the Long Range Planning objectives of the Comprehensive Plan and Long Range Transportation Plan
- Has the least amount of affected parcels and potential relocations
- Is the least costly of all of the alternatives
- At the public workshop held on March 3, 2005 - most agreed that O-3 would have the least impact on local residents

Summary of Public Comments

9.1.1 FIRST PUBLIC WORKSHOP OVERVIEW

A Public Information Workshop was held on October 28, 2004 from 5:30 p.m. to 7:30 p.m. at the Pasco County Public Library, New River Branch, 34043 S.R. 54, Zephyrhills, Florida. The Public Information Workshop was held to allow interested persons the opportunity to review the concepts and express their comments concerning the proposed alignments and the social, economic, and environmental effects of the proposed improvements.

Invitational letters were mailed to 54 property owners and other interested persons. Property owners affected by any of the proposed alternatives were included on the mailing list. In addition, a display advertisement inviting all interested persons to the workshop was published in the Tampa Tribune-Pasco Edition on October 7 and October 21, 2004.

A total of 63 persons signed the attendance sheets at the Workshop.

At the workshop, alignment concept displays, analysis matrix, and project information were available for public viewing. Pasco County representatives and their consultants were available to answer questions and receive comments. A project handout was provided to all attendees.

From the oral comments received by Pasco County representatives and the consultants present, the general consensus appeared that there was no support for either of the two alternative alignments presented in Segment C, which was east of Handcart Road. This was primarily due to the potential loss of residences that have been built in recent years. Recommendations from the meeting included trying to use Fairview Heights Road from Handcart Road to where it turns south before continuing on the new alignment to the end of project. Other comments included taking most of the right-of-way from the north side of the road in this area.

One land owner to the west of Handcart Road preferred alignment O-2 because it provided better access to his property which he is considering subdividing into a small platted subdivision of approximately 117 homes. Alignment O-1 is too far south into the COMAS Trust property and his only access would be via an existing county maintained road on the north side of the COMAS Trust property. He showed the Pasco County representatives and consultants a development plan map by Heidt and Associates that included an alignment that ran through his property before connecting to Fairview Heights Road at Handcart Road. He also provided a letter of his concerns to the consultant, which was included in the tabulation of written comments below.

Also during the workshop, the landowner of the large parcel along the north side of Fairview Heights Road from Handcart Road to Ft King Road stated that he had spoken with the County Administrator regarding the dedication of property along the north side of Fairview Heights Road. He stated plans to subdivide a portion of his property into one-acre lots.

9.1.2 WRITTEN COMMENTS

A total of 11 written comments were received by mail, facsimile, and e-mail during the 10-day comment period. One letter was received from the attorney representing the Kirkland Ranch property that favored alignment O-2 because it splits the difference between the COMAS Trust property and the Kirkland Ranch property thus providing access to both. The letter stated that with over 1,700 acres of land, the Kirkland Ranch has the flexibility to include access from both Curley Road and the new Overpass Road. Table 9-1 below shows a breakdown of the written responses received.

TABLE 9-1
COMMENTS RECEIVED
FIRST PUBLIC WORKSHOP
Category of Comment Total
Favor 3 (O-2)
Oppose 5 (Both)

Affects Rural Lifestyle 3
R/W Acquisition/Residential Relocation 2
Environmental Concerns 2
Alignment/Access 3
Cost 3
Other 7

9.1.3 SECOND PUBLIC WORKSHOP OVERVIEW

A second Public Information Workshop was held on March 3, 2005 from 5:30 p.m. to 7:30 p.m. at the Pasco County Public Library, New River Branch, 34043 S.R. 54, Zephyrhills, Florida. The Public Information Workshop was held to allow interested persons the opportunity to review the revised concepts and express their comments concerning the proposed alignments and the social, economic, and environmental effects of the proposed improvements.

Invitational letters were mailed to 80 property owners and other interested persons. Property owners affected by any of the proposed alternatives were included on the mailing list. In addition, a display advertisement inviting all interested persons to the workshop was published in the Tampa Tribune-Pasco Edition on February 10 and February 24, 2005.

A total of 63 persons signed the attendance sheets at the Workshop.

At the workshop, alignment concept displays, analysis matrix, and project information for proposed alternatives O-2 and O-3 were available for public viewing. Pasco County representatives and their consultants were available to answer questions and receive comments.

A project handout was provided to all attendees.

Based on the oral comments received during the workshop there was positive support for alternative O-3, which closely followed Fairview Heights Road in the segment east of Handcart Road. This alternative eliminated impacts to most of the residences identified on alternatives O-1 and O-2. The residential impacts were a major concern at the first public workshop, which resulted in the development of Alternative O-3. There were still some concerns from residents that would be adjacent to the roadway regarding access and the fact that "their" country road would now be a heavily traveled highway.

9.1.4 WRITTEN COMMENTS

A total of seven written comments were received by mail, facsimile, and e-mail during the 10-day comment period. Two comments, from the same address, favored Alternative O-2 because they would rather have their property acquired for ROW than live adjacent to a "four-lane highway." Four of remaining comments received all favored Alternative O-3 and one did not favor or oppose any of the

alternatives but had questions on access and the cost of relocating existing residences and utilities. One was opposed to alternative O-3 because there was a large retention pond located on his property.

Table 9-2 below shows a breakdown of the written responses received.

TABLE 9-2
COMMENTS RECEIVED
SECOND PUBLIC WORKSHOP
Category of Comment Total
Alternative O-2 O-3
Favor 1 4
Oppose 1
Affects Rural Lifestyle
R/W Acquisition/Residential Relocation 2
Environmental Concerns
Alignment/Access 1
Cost 1
Other 1

Community Desired Features

No desired features have been entered into the database. This does not necessarily imply that none have been identified.

Purpose and Need Statement

EXECUTIVE SUMMARY

The two- to four-lane expansion of Overpass Road from Old Pasco Road to US 301 is identified in the 2025 Pasco County Metropolitan Planning Organization (MPO) Long Range Transportation Plan (LRTP) as a needs project. The extension of Overpass Road as a two-lane facility from east of Boyette Road to Fort King Highway (slightly west of US 301) is identified in both the 2025 Pasco County MPO LRTP and in the adopted Pasco County Comprehensive Plan as a cost feasible project. While the LRTP and the Comprehensive Plan do not currently identify an interchange at I-75 and Overpass Road as cost feasible, the Comprehensive Plan classifies the I 75/Overpass Road interchange as a future potential high volume intersection (entering traffic volumes exceed 75,000 vehicles).

The I-75/Overpass Road interchange would play a significant role in the regional network in terms of enhancing connectivity, safety, and traffic circulation as the I-75 corridor serves as part of Floridas designated Strategic Intermodal System (SIS) network. The proposed interchange is projected to divert traffic demand from the future over-capacity conditions at the two adjacent I-75/SR 52 and I-75/CR 54 interchanges, which each are currently experiencing increased queuing conditions on the northbound off-ramps onto the I-75 mainline. In addition, the proposed I-75/Overpass Road interchange, as well as the extension and widening of Overpass Road, are anticipated to decrease delay and improve safety conditions on I-75 as well as further improve emergency evacuation and response times within the county as Overpass Road runs parallel to two primary state evacuation routes (SR 52 and CR 54/SR 54). Overall, the construction of a new interchange at I-75, as well as the extension and expansion of Overpass Road, will be critical in accommodating anticipated travel demands and enhancing safety. These infrastructure improvements will work to ensure that mobility is 1) maintained on Floridas Interstate and Intrastate Highway Systems, as well as 2) enhanced between existing and proposed developments along the roadway network in eastern Pasco County.

The cost estimate of Overpass Road Alternative O-3 is \$57,630,748 (From 'Final Overpass Road Route Study', March 2005) and the cost of estimate of I-75/Overpass Road proposed interchange is \$47,117,200 (From 'Interstate 75/Overpass Road Interchange Feasibility Study', October 2006)

TRANSPORTATION PLAN CONSISTENCY

The 2025 Pasco County MPO LRTP identifies the two- to four-lane expansion of Overpass Road from Old Pasco Road

to US 301 (including the extension) as a needs project. The extension of Overpass Road as a two-lane facility from east of Boyette Road to Fort King Road is identified in the 2025 Pasco County MPO LRTP as a cost feasible project. The Overpass Road extension is also identified in the Pasco County Comprehensive Plan. While the LRTP and the Comprehensive Plan do not currently identify an interchange at I-75 and Overpass Road as a cost feasible project, the Comprehensive Plan classifies the I-75/Overpass Road interchange as a future potential high volume intersection (entering traffic volumes exceed 75,000 vehicles).

It should be noted that during the next amendment periods, Pasco County plans to include the proposed I-75/Overpass Road interchange project, as well as the widening of Overpass Road from Old Pasco Road to US 301 to a minimum of four lanes, in both the LRTP and Comprehensive Plan. As such, the proposed Overpass Road improvements will be reflected on Pasco Countys adopted future transportation map. Figure 3 (attached) shows the required plan amendments for the project.

EMERGENCY EVACUATION

I-75 is a primary facility of the state evacuation route network established by the Florida Division of Emergency Management. While Overpass Road does not currently serve as part of the state evacuation route network, its role in facilitating traffic during emergency evacuation periods could be significant as the proposed interchange would provide access to I-75. In addition, the interchange, as well as the extension and widening of Overpass Road, would further enhance emergency evacuation capacity; the interchange and improved facility would help relieve congestion on two parallel primary state evacuation routes intersecting I-75 (SR 52 and CR 54/SR 54). Overall, the proposed Overpass Road infrastructure improvements (including the I-75 interchange) would lead to efficient traffic flow, which, in turn, would improve evacuation and response times.

FUTURE POPULATION AND EMPLOYMENT GROWTH

Eastern Pasco County is growing at a rapid pace. As presented on Figure 4 (attached), within close proximity to the project corridor, there are four Developments of Regional Impact (DRIs) and several Master Planned Unit Developments (MPUDs). These developments will result in the construction of over 50,000 residential units, in addition to over 700,000 square feet of retail and office space. It should be noted that Figure 2 was produced on May 8, 2007. As such, the map only portrays the development approved up to that date.

According to data extracted from the traffic analysis zones (TAZs) encompassing the Overpass Road corridor (including the proposed extension) within the Tampa Bay Regional Planning Model (TBRPM), population along the corridor is expected to increase from 11,858 in year 2000 to 57,380 in year 2030. Based on this same data, employment along the corridor is expected to grow from 3,736 in year 2000 to 25,041 in year 2030. It should be noted that the 2030 population and employment figures reflect those adjustments that were incorporated into the TBRPM during the SR 54 Project Development and Environment (PD&E) Study conducted in 2006.

According to the Bureau of Economic Business Research (BEBR), the population of Pasco County is forecasted to increase from 406,898 in year 2005 to 650,997 in year 2030. In conjunction with population growth, employment within the county is projected to grow from 88,300 in year 2005 to 102,100 in year 2015.

TRAFFIC CONDITIONS

Table 1 presents 2006 and projected 2030 Annual Average Daily Traffic (AADT) volumes, as well as 2006 and projected 2030 Levels of Service (LOS), for facilities surrounding Overpass Road (I-75, SR 52, and SR 54). The existing and projected AADT volumes and LOS are derived from the I-75/Overpass Road Interchange Feasibility Study prepared in September 2006; the traffic projections presented within the Interchange Feasibility Study were developed from the TBRPM. It should be noted that the model was adjusted to account for approved and proposed developments within the area at the time the I-75/Overpass Road Interchange Feasibility Study was conducted. Based on the increase in population and employment figures, traffic projections for 2030 were extrapolated. The LOS presented within the Interchange Feasibility Study were based on the Federal Highway Administrations 2000 Highway Capacity Manual (HCM) and software.

Table 1: 2006 and Projected 2030 AADT Volumes and LOS on I-75, SR 52, and SR 54

I-75 (SR 52 to SR 54)
2006 AADT: 61,400
2030 AADT: 136,900
2006 LOS: D
2030 LOS: F

SR 52 (I-75 to Boyette Rd)
2006 AADT: 15,800
2030 AADT: 63,900
2006 LOS: D
2030 LOS: F

SR 54 (I-75 to Boyette Rd)
2006 AADT: 38,300
2030 AADT: 87,100
2006 LOS: F
2030 LOS: F

Source:
I-75/Overpass Road Interchange Feasibility Study, 2006.

As noted in the previous section, the eastern portion of Pasco County is experiencing dramatic population and employment growth due to an increase in development. The significant increase in growth has resulted in high traffic volumes and deficient LOS at the SR 52 and CR/SR 54 interchanges with I-75, as shown in Table 1. These volumes are projected to increase further over the ~25 year timeframe. Accordingly, the LOS on facilities surrounding Overpass Road are anticipated to degrade to an LOS F if no interchange is added or capacity improvements (including the extension) occur.

Overall, the construction of a new interchange at I-75/Overpass Road, as well as the extension and expansion of Overpass Road, will be critical in accommodating anticipated travel demands and enhancing safety. The interchange proposed at I-75/Overpass Road is projected to divert traffic demand from the future over-capacity conditions at the two adjacent I-75/SR 52 and I 75/CR 54 interchanges, which each are currently experiencing increased queuing conditions on the northbound off-ramps onto the I-75 mainline. In addition, the proposed I-75/Overpass Road interchange, as well as the extension and widening of Overpass Road, are anticipated to decrease delay and improve safety conditions on I-75. Thus, the improvements will work to ensure that mobility is 1) maintained on Floridas Interstate and Intrastate Highway Systems, as well as 2) enhanced between existing and proposed developments along the roadway network in eastern Pasco County.

REGIONAL CONNECTIVITY

The I-75/Overpass Road interchange would play a significant role in terms of enhancing regional connectivity, safety, and traffic circulation as the I-75 corridor serves as part of Floridas designated SIS network. The I-75 corridor also connects major residential and employment centers throughout the state. Due to the fact that Overpass Road runs parallel to two primary state evacuation routes (SR 52 and SR 54), the extension and widening could further enhance traffic flow, as well as emergency evacuation and response times within the county. The proposed Overpass Road improvements will be critical in improving overall safety, emergency access, and traffic circulation within eastern Pasco County as the corridor is ideally positioned between two major east-west state arterials (SR 52 and SR 54) and one major north south interstate (see Figure 1).

RELIEF TO PARALLEL FACILITIES

Based on the I-75/Overpass Road Interchange Feasibility Study conducted in 2006, the proposed interchange and the extension and expansion of the Overpass Road corridor are anticipated to: 1) reduce traffic congestion on the east-west arterials of SR 52 and SR 54 (parallel facilities) by providing an additional connection with I-75, as well as 2) divert traffic demand from the projected over capacity conditions at the adjacent SR 52 and SR 54 interchanges with I-75.

BICYCLE AND PEDESTRIAN FACILITIES

No pedestrian facilities are present along the existing two-lane undivided segment of Overpass Road from Old Pasco Road to east of Boyette Road. Undesignated bicycle lanes, however, are present on both sides along the entire roadway segment. Per policies of the Pasco County Comprehensive Plan, bicycle and pedestrian facilities should be included in the planning and design of all roadway improvement projects involving widening or new construction. As such, according to the Comprehensive Plan, both sidewalks and bicycle facilities will be constructed as part of the Overpass Road extension and widening, especially since this project is located within a transitioning urban area. In addition, both the Comprehensive Plan and the Pasco County MPO LRTP identify a multi-use trail along the Overpass Road corridor.

TRANSIT

Public transportation services in Pasco County are provided by the Pasco County Board of County Commissioners through Pasco County Public Transportation. The services predominantly consist of fixed-route transit buses and paratransit service operating throughout West Pasco, Dade City, and Zephyrhills. According to the Pasco County Comprehensive Plan, Overpass Road, including the extension, will serve as a future local transit route. This transit enhancement is not anticipated to affect traffic along the improved Overpass Road corridor.

Purpose and Need Reviews

National Marine Fisheries Service Comments

Agency	Acknowledgment	Review Date
National Marine Fisheries Service	Understood	3/19/2008
Comments		
No Purpose and Need Comments Were Found.		

US Environmental Protection Agency Comments

Agency	Acknowledgment	Review Date
US Environmental Protection Agency	Understood	3/20/2008
Comments		
No Purpose and Need Comments Were Found.		

FL Fish and Wildlife Conservation Commission Comments

Agency	Acknowledgment	Review Date
FL Fish and Wildlife Conservation Commission	Understood	3/24/2008
Comments		
No Purpose and Need Comments Were Found.		

Federal Highway Administration Comments

Agency	Acknowledgment	Review Date
Federal Highway Administration	Accepted	3/27/2008
Comments		

a. The Purpose and Need section correctly notes that the entire project is not currently consistent with the Pasco LRTP and Comprehensive Plan, and that amendments are needed to address the inconsistency. As the project moves forward, please be aware that FHWA cannot sign an environmental document unless the project is consistent with the STIP, TIP and LRTP.

b. The project description does not identify cost estimates or a funding source. These are important considerations, and are particularly needed for the MPO and local government in their decisions on whether to amend the LRTP and

Comprehensive Plant to include this project, which may be at the expense of other funding projects.

c. We note the FDOT is aware of the need for an Interchange Justification Report, please continue coordination with FHWA.

Southwest Florida Water Management District Comments

Agency	Acknowledgment	Review Date
Southwest Florida Water Management District	Understood	3/28/2008
Comments		
No Purpose and Need Comments Were Found.		

US Army Corps of Engineers Comments

Agency	Acknowledgment	Review Date
US Army Corps of Engineers	Understood	3/28/2008
Comments		
No Purpose and Need Comments Were Found.		

US Coast Guard Comments

Agency	Acknowledgment	Review Date
US Coast Guard	Understood	2/20/2008
Comments		
No Purpose and Need Comments Were Found.		

US Fish and Wildlife Service Comments

Agency	Acknowledgment	Review Date
US Fish and Wildlife Service	Understood	3/4/2008
Comments		
No Purpose and Need Comments Were Found.		

FL Department of State Comments

Agency	Acknowledgment	Review Date
FL Department of State	Understood	3/28/2008
Comments		
No Purpose and Need Comments Were Found.		

FL Department of Environmental Protection Comments

Agency	Acknowledgment	Review Date
FL Department of Environmental Protection	Understood	3/28/2008
Comments		
No Purpose and Need Comments Were Found.		

Natural Resources Conservation Service Comments

Agency	Acknowledgment	Review Date
Natural Resources Conservation Service	Understood	2/14/2008
Comments		
No Purpose and Need Comments Were Found.		

Agency	Acknowledgment	Review Date
FL Department of Community Affairs	Understood	3/28/2008
Comments		
No Purpose and Need Comments Were Found.		

Project Effects Overview				
Issue	Degree of Effect		Organization	Date Reviewed
Natural				
Air Quality	2	Minimal	US Environmental Protection Agency	3/24/2008
Coastal and Marine	N/A	N/A / No Involvement	National Marine Fisheries Service	3/19/2008
Coastal and Marine	N/A	N/A / No Involvement	Southwest Florida Water Management District	3/28/2008
Contaminated Sites	2	Minimal	US Environmental Protection Agency	3/25/2008
Contaminated Sites	3	Moderate	Southwest Florida Water Management District	3/28/2008
Contaminated Sites	2	Minimal	Federal Highway Administration	3/27/2008
Contaminated Sites	2	Minimal	FL Department of Environmental Protection	3/28/2008
Farmlands	3	Moderate	Natural Resources Conservation Service	2/14/2008
Floodplains	0	None	US Environmental Protection Agency	3/20/2008
Floodplains	3	Moderate	Southwest Florida Water Management District	3/28/2008
Infrastructure	3	Moderate	Southwest Florida Water Management District	3/28/2008
Navigation	N/A	N/A / No Involvement	US Army Corps of Engineers	3/28/2008
Navigation	N/A	N/A / No Involvement	US Coast Guard	2/20/2008
Navigation	N/A	N/A / No Involvement	Southwest Florida Water Management District	3/28/2008
Special Designations	0	None	Federal Highway Administration	3/27/2008
Special Designations	2	Minimal	Southwest Florida Water Management District	3/28/2008
Special Designations	0	None	US Environmental Protection Agency	3/20/2008
Water Quality and Quantity	3	Moderate	Southwest Florida Water Management District	3/28/2008
Water Quality and Quantity	3	Moderate	FL Department of Environmental Protection	3/28/2008
Water Quality and Quantity	2	Minimal	US Environmental Protection Agency	3/28/2008
Wetlands	3	Moderate	FL Department of Environmental Protection	3/28/2008
Wetlands	3	Moderate	US Environmental Protection Agency	3/28/2008
Wetlands	3	Moderate	US Army Corps of Engineers	3/28/2008

Wetlands	N/A	N/A / No Involvement	National Marine Fisheries Service	3/19/2008
Wetlands	4	Substantial	Southwest Florida Water Management District	3/28/2008
Wetlands	3	Moderate	US Fish and Wildlife Service	3/17/2008
Wildlife and Habitat	4	Substantial	Southwest Florida Water Management District	3/28/2008
Wildlife and Habitat	2	Minimal	Federal Highway Administration	3/27/2008
Wildlife and Habitat	3	Moderate	US Fish and Wildlife Service	3/17/2008
Wildlife and Habitat	3	Moderate	FL Fish and Wildlife Conservation Commission	3/24/2008
Cultural				
Historic and Archaeological Sites	3	Moderate	Federal Highway Administration	3/27/2008
Historic and Archaeological Sites	2	Minimal	Southwest Florida Water Management District	3/28/2008
Historic and Archaeological Sites	4	Substantial	FL Department of State	3/28/2008
Historic and Archaeological Sites	4	Substantial	Micosukee Tribe of Indians of Florida	2/19/2008
Recreation Areas	0	None	US Environmental Protection Agency	3/20/2008
Recreation Areas	2	Minimal	Southwest Florida Water Management District	3/28/2008
Recreation Areas	0	None	FL Department of Environmental Protection	3/28/2008
Section 4(f) Potential	2	Minimal	Southwest Florida Water Management District	3/28/2008
Section 4(f) Potential	3	Moderate	Federal Highway Administration	3/27/2008
Community				
Land Use	2	Minimal	FL Department of Community Affairs	3/28/2008
Social	2	Minimal	FL Department of Community Affairs	3/28/2008
Social	4	Substantial	Federal Highway Administration	3/27/2008
Social	3	Moderate	US Environmental Protection Agency	3/28/2008
Secondary and Cumulative				
Secondary and Cumulative Effects	3	Moderate	Southwest Florida Water Management District	3/28/2008
Secondary and Cumulative Effects	4	Substantial	FL Fish and Wildlife Conservation Commission	3/24/2008
Secondary and Cumulative Effects	4	Substantial	FL Department of State	3/28/2008
ETAT Reviews: Natural				
Air Quality				
Coordinator Summary				
Summary Degree of Effect				

2

Air Quality Summary Degree of Effect: Minimal

Reviewed By:

FDOT District 7 (6/04/2008)

Comments:

The Florida Department of Transportation (FDOT) has evaluated the comments from the US Environmental Protection Agency (USEPA) and recommends a Degree of Effect of Minimal. The project is located in an area which is designated attainment for all of the National Ambient Air Quality Standards under the criteria provided in the Clean Air Act. Therefore, the Clean Air Act conformity requirements do not apply to the project. As requested by the USEPA, the FDOT recommends that the implementing agency conduct an Air Quality Screening Analysis.

ETAT Reviews for Air Quality

2

ETAT Review by Madolyn Dominy, US Environmental Protection Agency (03/24/2008)

Air Quality Effect: Minimal

Coordination Document:No Selection

Dispute Information:N/A

Identified Resources and Level of Importance:

Resources: Air Quality

Level of Importance: Low, due to minimal degree of effect

Comments on Effects to Resources:

Pasco County has not been designated non-attainment or maintenance for ozone, carbon monoxide (CO) or particulate matter (PM) in accordance with the Clean Air Act. There are no violations of National Ambient Air Quality Standards (NAAQS). Nevertheless, the environmental review of this project should include an air impact analysis which documents the current pollutant concentrations recorded at the nearest air quality monitors, an evaluation of anticipated emissions, and air quality trend analyses. It is recommended that the environmental review also include a hot spot analysis at the point in time and place where congestion is expected to be greatest during the design life of the project.

Additional Comments (optional):

As population growth and vehicle volumes increase, there is the potential to have air quality conformity and non-attainment issues in the future. FDOT, MPOs, municipalities, and regional planning agencies should conduct air quality modeling as traffic forecasts increase.

Coordinator Feedback:None

- No review submitted from the Federal Highway Administration

Coastal and Marine

Coordinator Summary

N/
A

Summary Degree of Effect

Coastal and Marine Summary Degree of Effect: N/A / No Involvement

Reviewed By:

FDOT District 7 (6/04/2008)

Comments:

The Florida Department of Transportation (FDOT) has evaluated the comments from the Southwest Florida Water Management District (SWFWMD) and the National Marine Fisheries Service (NMFS) and recommends a Degree of Effect of N/A / No Involvement.

The NMFS staff conducted a site inspection of the project area on February 15, 2008 to assess potential concerns to living marine resources. The resources affected are not the ones for which NMFS, is responsible. Therefore, as a result of the site inspection, there are no comments to provide regarding impacts to Coastal and Marine resources.

No comments were received from the Federal Highway Administration (FHWA) and the Florida Department of Environmental Protection (FDEP).

ETAT Reviews for Coastal and Marine

N
/
A

ETAT Review by David A. Rydene, National Marine Fisheries Service (03/19/2008)

Coastal and Marine Effect: N/A / No Involvement

Coordination Document:No Involvement

Dispute Information:N/A

Identified Resources and Level of Importance:

None.

Comments on Effects to Resources:

NOAA's National Marine Fisheries Service (NMFS) has reviewed the information contained in the Environmental Screening Tool for ETDM Project # 9871. The project would add an interchange at the intersection of I-75 and Overpass Road, construct an extension of Overpass Road from just east of Boyette Road to US 301, and widen the existing sections of Overpass Road in Pasco County, Florida.

NMFS staff conducted a site inspection of the project area on February 15, 2008 to assess potential concerns to living marine resources. The resources affected are not ones for which NMFS is responsible and therefore, we have no comment to provide regarding the projects impacts.

Coordinator Feedback:None

N
/
A

ETAT Review by C. Lynn Miller, Southwest Florida Water Management District (03/28/2008)

Coastal and Marine Effect: N/A / No Involvement

Coordination Document:No Involvement

Dispute Information:N/A

Identified Resources and Level of Importance:

None found.

Comments on Effects to Resources:

None found.

Coordinator Feedback:None

- No review submitted from the Federal Highway Administration

Contaminated Sites

Coordinator Summary

3 Summary Degree of Effect

Contaminated Sites Summary Degree of Effect: Moderate

Reviewed By:

FDOT District 7 (6/04/2008)

Comments:

The Florida Department of Transportation (FDOT) has evaluated the comments from the Southwest Florida Water Management District (SWFWMD) and recommends a Degree of Effect of Moderate. The FDOT acknowledges the comments from the Federal Highway Administration (FHWA), the US Environmental Protection Agency (USEPA), and the Florida Department of Environmental Protection (FDEP).

A review of the Geographical Information Systems (GIS) analysis data indicates that within the 100-foot buffer area there are seven drainage basins, one wastewater treatment plant (Pasco County Saddlebrook), one well (Pasco County Saddlebrook), and nearly 30 septic tanks. Within the 200-foot buffer area, there is one petroleum tank located at the Lowes store in Zephyrhills, one limited use drinking water well and two FDEP regulated storage tanks at the Neukom Properties, Inc. Within the 500-foot buffer area there is one additional petroleum tank at the Lowes store in Zephyrhills, one Super Act well, and one USEPA National Pollutant Discharge Elimination System (NPDES).

The SWFWMD also indicated the presence of a sinkhole within one mile of the projects east terminus.

The FDOT recommends that the implementing agency prepare a Contamination Screening Evaluation Report (CSER) to determine whether there would be any contamination and hazardous material issues associated with the project. Risk for contamination in the project area from any source identified will be assessed to determine the need for remediation during construction.

ETAT Reviews for Contaminated Sites

ETAT Review by Madolyn Dominy, US Environmental Protection Agency (03/25/2008)

Contaminated Sites Effect: Minimal

Coordination Document:No Selection

Dispute Information:N/A

Identified Resources and Level of Importance:

Resources: Soils, groundwater, surface water which have the potential to be negatively affected by contaminated site features such as underground petroleum storage tanks, industrial or commercial facilities with onsite storage of hazardous materials, solid waste facilities, hazardous waste facilities, National Priority List (NPL) sites, etc.

Level of Importance: These resources are of a high level of importance in the State of Florida. A minimal degree of effect is being assigned for the proposed project (ETDM #9871, Overpass Road from Old Pasco Road to US 301).

Comments on Effects to Resources:

EPA reviewed the following contaminated sites GIS analysis data for the project at buffer distances of 100 feet through 500 feet: Brownfield Location Boundaries, Geocoded Dry Cleaners, Geocoded Gasoline Stations, Geocoded Petroleum Tanks, Hazardous Waste Sites, National Priority List Sites, Nuclear Site Locations, Solid Waste Facilities, Superfund Hazardous Waste Sites, Tanks - Nov 2007, and Toxic Release Inventory Sites.

The project description states that Eastern Pasco County is growing at a rapid pace. There are four Developments of Regional Impact (DRIs) and several Master Planned Unit Developments (MPUDs) within close proximity to the project corridor. These developments will result in the construction of over 50,000 residential units, in addition to over 700,000 square feet of retail and office space. Significant increases in both employment and population numbers are expected by year 2030.

The GIS analysis data reports few contaminated site features within the 500-foot buffer distance. Land use throughout the project corridor is primarily rural dominated by agricultural uses. However, with recent and ongoing development in the area, there may be additional features in the area that are not included in current GIS databases.

The following contaminated site features are identified:

Regulated and Unregulated Storage Tanks:

200-foot buffer distance:

NEUKOM PROPERTIES INC [VEHICULAR DIESEL 1]

NEUKOM PROPERTIES INC [GENERATOR/PUMP DIESEL 1]

500-foot buffer distance:

NEUKOM PROPERTIES INC [VEHICULAR DIESEL 1]

NEUKOM PROPERTIES INC [GENERATOR/PUMP DIESEL 1]

LOWES #1854 [EMERGENCY GENERATOR DIESEL 1]

Hazardous Waste Sites:

PASCO COUNTY UTILITIES - SADDLEBROOK WWTP

PASCO COUNTY UTILITIES - SADDLEBROOK WELL

EPA is assigning a minimal degree of effect to this issue because the identified roadway capacity improvement project should not have a significant impact on contaminated site features. However, EPA recommends that the environmental review (PD&E) phase of the project include a survey of the corridor to confirm the location of any current or past contaminated site features which are or may

have been previously located along the corridor and whether any environmental impact would result from construction or operation of the roadway. Note: Depending upon the selected alignment, there may be additional features not listed above.

Coordinator Feedback:None

3 ETAT Review by C. Lynn Miller, Southwest Florida Water Management District (03/28/2008)
Contaminated Sites Effect: Moderate

Coordination Document:PD&E Support Document As Per PD&E Manual

Dispute Information:N/A

Identified Resources and Level of Importance:

Within 500 feet of the project alignment, there is over 400 acres of pasture and agricultural crop lands. Field visits conducted on February 16, 2008, revealed that nearly 80% of the agricultural areas adjacent to the proposed alignment are active with cattle and citrus crops.

In addition to agricultural use, the majority of adjacent property owners within the proposed corridor alignment utilize septic tanks. Nearly 30 tanks are reported to occur within 100 feet of the proposed alignment.

Within 200 feet of the alignment, two FDEP regulated storage tanks are located at the Neukom Properties, Inc. (one for vehicular diesel and one for generator pump diesel). Other data analysis reports one petroleum tank within 100 feet of the project corridor at the Lowes store on the southwest corner of Kossik Road and US 301. The Lowes store also houses one emergency generator diesel fuel storage tank within 500 feet of the corridor. No other tanks or gas stations appear to occur within 0.75 miles of the project corridor.

The Pasco County Saddlebrook Wastewater Treatment Plant and Saddlebrook Well site are located within 100 feet of the project corridor at a point northeast of the current Overpass Rd bridge at I-75. The FDOH also reports that Global Unity Care, Inc. also has one limited use drinking water well located within 100 feet of the proposed project corridor. This is permitted (number 51-57-03454). Within 500 feet of the corridor, one additional well site is reported at the Bradford United Church of Christ. Additional domestic supply and irrigation wells are likely to be located within the final alignment, and they will need to be identified prior to construction. No Pasco County Wellhead Protection Zones are located within 500 feet of the project.

The DRASTIC Pollution Vulnerability Index for the Floridan Aquifer within the project area ranges from 104 to 171 on a relative scale and averages 138 (weighted), although this value may be overestimated somewhat (Swancar and Hutchinson 1992), making the Floridan susceptible to pollution from external sources. No DRASTIC indices are reported for the intermediate aquifer as it is discontinuous in the project area (SWFWMD, 2000, Comprehensive Watershed Management Plan Hillsborough River Basin). Recharge in the area is high and ranges from 1 to 10 inches/year.

No sinkholes are reported in the FDEP 2007 Sinkhole database for the area within 100 of the project. Sinkhole #14-608 is reported in S27T25SR21E to be within 1.0 mile of the projects east terminus. There is a natural feature that is a possible sinkhole located adjacent to the project alignment in S36T25SR20E that was observed on Feb 22, 2008.

There are no brownfields, dry cleaners or Superfund Hazardous Waste Sites known to exist within

the study area.

Pasco County has facilities located in the vicinity of the proposed Overpass Rd/I-75 interchange.

Comments on Effects to Resources:

If contaminated soils are encountered and disturbed during construction, the groundwater pollution potential will pose a risk to both the Floridan aquifer and the surficial aquifer. The project area is not characterized by a large number of contaminated sites. However, if unexpected contamination is encountered during construction, pollution entering the surficial aquifer can potentially degrade surface waters by contribution to seepage flows and runoff. The surficial aquifer also leaks downward to the Floridan Aquifer, depending upon potentiometric surface elevation, and pollution in the surficial has the potential to contaminate lower hydrogeologic units in the Floridan Aquifer. Further, construction-related pollution of the surficial aquifer could adversely affect ground water zones and ponds of significance to ground water supply facilities used for agricultural irrigation and stock watering.

Additional Comments (optional):

The degree of effect is considered moderate due to: (1) the vulnerability of the surficial and Floridan aquifers to pollution, (2) actual project design, site conditions and construction details are not known at this time, and (3) the number of known pollution sources is moderate.

It is possible that groundwater pollution is present within sites containing septic tanks. Additionally, agricultural areas and pasturelands have the potential to be contaminated within nutrients and pesticides used in previous years by the industry.

Contaminated soils, if discovered during the recommended soils investigation, should be avoided during construction activities. In addition, stormwater management facilities should be located outside of all potential contamination sites or steps must be taken (such as use of impermeable liners) to isolate stormwater from contaminated soil or groundwater.

The District recommends that an environmental audit be conducted at the appropriate level as the project develops to insure that pollution sources are identified and no contamination reaches surface and ground waters in the area.

Coordinator Feedback:None

2 ETAT Review by Nahir Detizio, Federal Highway Administration (03/27/2008)

Contaminated Sites Effect: Minimal

Coordination Document:PD&E Support Document As Per PD&E Manual

Dispute Information:N/A

Identified Resources and Level of Importance:

The GIS analysis indicates 1 petroleum storage tank and 2 hazardous waste sites located within 200 feet of the project.

Comments on Effects to Resources:

These should be assessed for their contamination risk, which may require special construction techniques that could increase project costs.

Coordinator Feedback:None

2 ETAT Review by Lauren P. Milligan, FL Department of Environmental Protection (03/28/2008)
Contaminated Sites Effect: Minimal

Coordination Document:No Selection

Dispute Information:N/A

Identified Resources and Level of Importance:

Bayou Lake, the New River and the Hillsborough River are in the vicinity of the corridor.

Comments on Effects to Resources:

It appears that there are very few potential contamination sites (including petroleum storage tanks and hazardous waste sites) within the roadway corridor. Contamination Screening Evaluations should outline specific procedures that would be followed by the applicant in the event that drums, wastes, tanks or potentially contaminated soils are encountered during construction.

In the event contamination is detected during construction, the Department and Pasco County should be notified, and the FDOT may need to address the problem through additional assessment and remediation activities. Reference should be made to the most recent FDOT specification entitled "Section 120 Excavation and Embankment -- Subarticle 120-1.2 Unidentified Areas of Contamination of the Standard Specifications for Road and Bridge Construction" in the project's construction contract documents that would require specific actions by the contractor in the event of any hazardous material or suspected contamination issue arises.

Depending on the findings of the Contamination Screening Evaluations and the proximity to known contaminated sites, projects involving "dewatering" should be discouraged or limited, since there is a potential to spread contamination to previously uncontaminated areas or less contaminated areas and affect contamination receptors, site workers and the public. Dewatering projects would require permits / approval from the Southwest Florida Water Management District.

Any land clearing or construction debris must be characterized for proper disposal. Potentially hazardous materials must be properly managed in accordance with Chapter 62-730, F.A.C. In addition, any solid wastes or other non-hazardous debris must be managed in accordance with Chapter 62-701, F.A.C. Petroleum cleanups must be managed in accordance with Chapter 62-770, F.A.C.

Please be advised that a new rule, 62-780, F.A.C., became effective on April 17, 2005. In addition, Chapters 62-770, 62-777, 62-782 and 62-785, F.A.C., were amended on April 17, 2005, to incorporate recent statutory changes. Depending on the findings of the environmental assessments, there are "off-property" notification responsibilities potentially associated with this project. These rules may be found at the following website: <http://www.dep.state.fl.us/waste/>

Based on our experience, the accurate identification, characterization and cleanup of sites requires experienced consulting personnel and laboratory support, management commitment of the project developers and their representatives, and will likely be very time-consuming. Early planning to address these issues is essential to meet construction and cleanup (if required) timeframes. Innovative technologies, such as special storm water management systems, engineering controls and institutional controls, such as conditions on water production wells and dewatering restrictions, may be required, depending on the results of environmental assessments.

Coordinator Feedback:None

Farmlands

Coordinator Summary

3 Summary Degree of Effect

Farmlands Summary Degree of Effect: Moderate

Reviewed By:

FDOT District 7 (6/04/2008)

Comments:

The Florida Department of Transportation (FDOT) has evaluated the comments from the Natural Resources Conservation Service (NRCS) and recommends a Degree of Effect of Moderate.

There are no prime farmlands within the project corridor. As of February 2008, a field review had not been conducted and comments from NRCS were based on photo interpretation. However, according to numbers received from the 2004 Land Use Data, nearly 40% of the land within the 100-foot buffer area is listed as Cropland/Pastureland and Tree Crops. Since this level of land use does exist in the project area and the NRCS has stated they consider any farmland used in the production of row (commodity) crops, citrus, or vegetable crops to have Unique Farmland status in south Florida, there is a potential impact until a ground visual assessment can be made on the tree crop parcels.

No comments were received from the Federal Highway Administration (FHWA).

ETAT Reviews for Farmlands

3 ETAT Review by Rick Allen Robbins, Natural Resources Conservation Service (02/14/2008)

Farmlands Effect: Moderate

Coordination Document:No Selection

Dispute Information:N/A

Identified Resources and Level of Importance:

There are no Prime Farmland resources within the project area. However, the USDA-NRCS considers any farmland used in the production of row (commodity) crops, citrus, or vegetable crops to have Unique Farmland status in south Florida. Based on the land use overlay, no Citrus Groves, row crops, or vegetables occur within the Project Area (based on 100', 200', and 500' buffer widths. There are a few questions on this project based on aerial photographic interpretation (2004). Most of the areas that are defined as "tree crops" appear to have the photographic footprint of citrus groves. This is based solely on photo interpretation of the 2004 photography.

Comments on Effects to Resources:

If the land use cover type of "tree crops" is citrus that these areas would classify as Unique Farmland and would warrant a Moderate or higher Degree of Effect. If these "tree crops" are pine

plantations, then there would be no level of impact on Unique Farmland resources.

Additional Comments (optional):

Until actual on-the-ground visual assessment is made on the "tree crop" parcels, a definitive assessment cannot be determined. Until more information is received, we are assigning a Moderate Degree of Effect based on a presumed impact on citrus groves.

CLC Commitments and Recommendations:

Coordinator Feedback:None

- No review submitted from the Federal Highway Administration

Floodplains

Coordinator Summary

3 Summary Degree of Effect

Floodplains Summary Degree of Effect: Moderate

Reviewed By:

FDOT District 7 (6/04/2008)

Comments:

The Florida Department of Transportation (FDOT) has evaluated the comments from the Southwest Florida Water Management District (SWFWMD) and recommends a Degree of Effect of Moderate. The FDOT acknowledges the comments from the US Environmental Protection Agency (USEPA).

A review of the Geographical Information Systems (GIS) analysis data indicates that Zone X of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps encompasses 100% of the acreage within the 500-foot buffer area. The SWFWMD also indicated concerns that there exists potential for portions of the project to be located within flood plains that are not identified on any FEMA flood plain map, including areas that could be within closed basins.

The FDOT acknowledges that an Environmental Resource Permit (ERP) will be required for this project and recommends that the implementing agency utilize data on flows from existing, and soon to be completed, flood studies in preference to generalized data on flows and stages and provide the bridge hydraulic reports in support of the SWFWMD ERP application

No comments were received from the Federal Highway Administration (FHWA) and the Florida Department of Environmental Protection (FDEP).

ETAT Reviews for Floodplains

0 ETAT Review by Madolyn Dominy, US Environmental Protection Agency (03/20/2008)

Floodplains Effect: None

Coordination Document:No Selection

Dispute Information:N/A

Identified Resources and Level of Importance:

None found.

Comments on Effects to Resources:

None found.

Coordinator Feedback:None

3

ETAT Review by C. Lynn Miller, Southwest Florida Water Management District (03/28/2008)
Floodplains Effect: Moderate

Coordination Document:Permit Required

Dispute Information:N/A

Identified Resources and Level of Importance:

The proposed alignment is not directly located within any FEMA identified flood plains. However, According to the 1996 FEMA FIRM maps, there are 507 acres of Flood Hazard Zone A and 4 acres of Flood Hazard Zone AE located between the 500 and 1.0 mile project buffers. This acreage is concentrated approximately 0.25 mile northeast of the existing Overpass Rd bridge over I-75.

The topography for the areas in and around the alignment is such that there could be areas of flood plain that have not been specifically identified by the FEMA flood plain maps. These areas will need to be reviewed for potential floodplain and historic basin storage issues. It will be necessary to determine that the project will not cause adverse flooding or other water quantity impacts to receiving waters and adjacent lands, and will not adversely affect existing surface water storage and conveyance capabilities. An effort to identify such areas and provide the appropriate compensation should be included with the overall stormwater analysis.

Comments on Effects to Resources:

Based on published floodplain data, the project and stormwater treatment facilities could be constructed with minimal floodplain impact, particularly if the proposed interchange at I-75 is located so as to avoid the known floodplain area located about 0.25 mile northeast of the current bridge. However, if the two areas that are located at: (1) the unnamed stream at the proposed intersection of the project with Handcart Rd, and; (2) in the northwest and southeast quadrants of the existing Overpass Rd I-75 intersection are designated as Flood Hazard Zones as a result of the Floodplain Mapping updating effort now underway, it will not be possible to avoid floodplain encroachment. In that case, floodplain encroachment may occur with resulting moderate impacts. Such impacts may include the reduction of storage capacity and the alteration of conveyance characteristics in the affected drainage basin. The reduction of discharge capacity in the unnamed stream at the proposed intersection at Handcart Rd could increase flooding upstream on Handcart Rd where a Pasco County bridge carries Handcart Rd over the unnamed stream.

Additional Comments (optional):

The degree of effect is considered Moderate due to the following factors: (1) the design details and the actual footprint of the proposed improvements are not known at this time, (2) there is a potential that floodplain encroachment will occur to currently unmapped floodplain areas; and (3) there is potential for cumulative effects, including decrease in historic basin storage combined with decrease

in hydraulic capacity of existing drainage features.

The degree of effect may be reduced by: (1) avoiding encroachment in known floodplain areas, (2) constructing stormwater treatment ponds outside floodplain areas, (3) minimizing the at grade project segments and cross sections in floodplain areas, and (4) providing compensation for lost floodplain storage.

An Environmental Resource Permit will be required for this project. However, the final determination of the type of permit will depend upon the final design configuration. If wetland impacts exceed threshold limits, the FDOT may want to consider applying for an Incidental Site Activities Permit (40D-40.302(6)(a), F.A.C.); particularly if the project is a design-build or fast-tracked project.

No net encroachment will be allowed into the flood plain, up to that encompassed by the 100-year event, which will adversely affect either conveyance, storage, water quality or adjacent lands. The District considers both floodplain and historic basin storage displacement in terms of the volume of displacement above and below the seasonal high water elevation between ground surface up to the 100-year flood elevation. Provision must be made to replace or otherwise mitigate the loss of historic basin storage provided by the project site.

There is a potential for portions of the project to be located within flood plains that are not identified on any FEMA flood plain map, including areas that could be within closed basins. The SWFWMD recommends that the FDOT quantify and verify flood plain and floodway impacts resulting from the project based on the best available existing or special basin hydrologic studies as needed. The FDOT typically completes a bridge hydraulics report for major bridge-culverts and bridges as a standard design task. The District recommends that the FDOT utilize data on flows from existing, and soon to be completed, flood studies in preference to generalized data on flows and stages and provide the bridge hydraulic reports in support of the SWFWMD ERP application. In addition, an analysis will be needed at each structure to demonstrate no adverse impact to the FEMA floodplain.

Coordinator Feedback:None

- No review submitted from the FL Department of Environmental Protection
- No review submitted from the Federal Highway Administration

Infrastructure

Coordinator Summary

2 Summary Degree of Effect

Infrastructure Summary Degree of Effect: Minimal

Reviewed By:

FDOT District 7 (6/04/2008)

Comments:

The Florida Department of Transportation (FDOT) has evaluated the comments from the Southwest Florida Water Management District (SWFWMD) and recommends a Degree of Effect of Minimal.

A review of the Geographic Information Systems (GIS) analysis data indicated that the Pasco County Saddlebrook well site is located within the 100-foot buffer area. Additionally, the SWFWMD reports that they have three monitoring well sites within the project area that could potentially be impacted by the project.

The FDOT recommends that the implementing agency coordinate with the Hydrologic Data Section at the SWFWMD office and to take measures to minimize impacts to these facilities in the project area.

No comments were received from the Federal Highway Administration (FHWA).

ETAT Reviews for Infrastructure

3 ETAT Review by C. Lynn Miller, Southwest Florida Water Management District (03/28/2008)
Infrastructure Effect: Moderate

Coordination Document:To Be Determined: Further Coordination Required

Dispute Information:N/A

Identified Resources and Level of Importance:

The Pasco County Utilities Saddlebrook Well site is located within 100 of the project to the northeast of the existing Overpass Rd bridge over I-75.

The District monitoring well sites listed below could be impacted by this project. Additional information can be obtained from the District's Hydrologic Data Section in Brooksville.

Site ID #	Site Name	Site Type	Activity	Status
18847	Hackney	FLDN	Ground Water	Active
18845	Zinger	FLDN	Ground Water	Active
18849	Kretschmar	FLDN	Ground Water	Active

Comments on Effects to Resources:

The project has the potential to eliminate all or some of the Districts monitoring equipment or impair the information value of the sites, resulting in the termination of an established data collection point for the Districts Hydrologic Data Program. Such loss could adversely affect the volume and quality of data for the Districts resource regulation effort.

The project has the potential to disrupt the operations of County pumping and transmission facilities having WUPs.

Additional Comments (optional):

The degree of effect is considered Moderate, because: (1) it is expected that FDOT will perform all necessary coordination with the District and Pasco County and will avoid impact to the facilities described above, and (2) no information is available at this time on the final alignment or design of the project.

The District requests that the FDOT provide specific information as to the location of all project facilities and to contact District staff in the Ecologic Evaluation Section or Hydrologic Data Section to make a final determination of whether any data collection point will be disturbed or eliminated to accommodate the project. If monitoring equipment must be removed or re-located, the expense will be borne by the FDOT, and the work will be done with close coordination with the District.

Project activities and facilities should not interfere with authorized public supply water withdrawal and transmission facilities.

Coordinator Feedback:None

- No review submitted from the Federal Highway Administration

Navigation

Coordinator Summary

N/
A

Summary Degree of Effect

Navigation Summary Degree of Effect: N/A / No Involvement

Reviewed By:

FDOT District 7 (6/04/2008)

Comments:

The Florida Department of Transportation (FDOT) has evaluated the comments from the US Coast Guard (USCG), the US Army Corps of Engineers (USACE), and the Southwest Florida Water Management District (SWFWMD) and recommends a Degree of Effect of N/A / No Involvement.

There does not appear to be any navigable waters within the project area. There will be no USCG involvement with this proposed project.

No comments were received from the Federal Highway Administration (FHWA).

ETAT Reviews for Navigation

N
/
A

ETAT Review by John Fellows, US Army Corps of Engineers (03/28/2008)

Navigation Effect: N/A / No Involvement

Coordination Document:No Involvement

Dispute Information:N/A

Identified Resources and Level of Importance:

There do not appear to be any navigable waters within the project area

Comments on Effects to Resources:

No navigable waters, no effects

Coordinator Feedback:None

N
/
A

ETAT Review by Randy Overton, US Coast Guard (02/20/2008)

Navigation Effect: N/A / No Involvement

Coordination Document:No Involvement

Dispute Information:N/A

Identified Resources and Level of Importance:

No Coast Guard involvement.

Comments on Effects to Resources:

None found.

Coordinator Feedback:None

N
/
A ETAT Review by C. Lynn Miller, Southwest Florida Water Management District (03/28/2008)
Navigation Effect: N/A / No Involvement

Coordination Document:No Involvement

Dispute Information:N/A

Identified Resources and Level of Importance:

None found.

Comments on Effects to Resources:

None found.

Coordinator Feedback:None

- No review submitted from the Federal Highway Administration

Special Designations

Coordinator Summary

0 Summary Degree of Effect
Special Designations Summary Degree of Effect: None

Reviewed By:

FDOT District 7 (6/04/2008)

Comments:

The Florida Department of Transportation (FDOT) has evaluated the comments from the Federal Highway Administration (FHWA) and the US Environmental Protection Agency (USEPA) and recommends a Degree of Effect of None. The FDOT acknowledges the comments from the Southwest Florida Water Management District (SWFWMD).

A review of the Geographic Information Systems (GIS) analysis data indicated that there are no areas within the 5,280-foot buffer area that are specially designated.

No comments were received from the Florida Department of Environmental Protection (FDEP).

ETAT Reviews for Special Designations

0 ETAT Review by Nahir Detizio, Federal Highway Administration (03/27/2008)

Special Designations Effect: None

Coordination Document:PD&E Support Document As Per PD&E Manual

Dispute Information:N/A

Identified Resources and Level of Importance:

The GIS analysis identifies no areas near the proposed project that are specially designated.

Comments on Effects to Resources:

none

Coordinator Feedback:None

2 ETAT Review by C. Lynn Miller, Southwest Florida Water Management District (03/28/2008)

Special Designations Effect: Minimal

Coordination Document:Permit Required

Dispute Information:N/A

Identified Resources and Level of Importance:

There are no special waterway designations within one mile of the project area. The project area contributes regional flow to tributaries of the Hillsborough River, which is designated as a Special Outstanding Florida Water from Fletcher Ave upstream to the Withlacoochee River/Hillsborough River Overflow. Cypress Creek, which is downstream of the project area, is also designated as an OFW.

Comments on Effects to Resources:

The project has the potential to contribute to water quality degradation in waters designated as Special Outstanding Florida Waters as a result of untreated or under-treated stormwater runoff, sedimentation during construction, and increased pollutant loads from additional areas of pavement.

Additional Comments (optional):

The degree of effect is considered to be Minimal due to the travel distance from the project to OFW-designated water bodies. The travel distance is expected to allow increased pollutant loads to be neutralized before reaching sensitive OFWs. Further, it is expected that the project will comply with all stormwater treatment and construction site water resources protection measures as specified in Chapter 40D-4, F.A.C., which will reduce or eliminate the projects pollution potential.

Coordinator Feedback:None

0 ETAT Review by Madolyn Dominy, US Environmental Protection Agency (03/20/2008)

Special Designations Effect: None

Coordination Document:No Selection

Dispute Information:N/A

Identified Resources and Level of Importance:

None found.

Comments on Effects to Resources:

None found.

Coordinator Feedback:None

- No review submitted from the FL Department of Agriculture and Consumer Services

Water Quality and Quantity

Coordinator Summary

3 Summary Degree of Effect

Water Quality and Quantity Summary Degree of Effect: Moderate

Reviewed By:

FDOT District 7 (6/04/2008)

Comments:

The Florida Department of Transportation (FDOT) has evaluated the comments from the Southwest Florida Water Management District (SWFWMD) and the Florida Department of Environmental Protection (FDEP) and recommends a Degree of Effect of Moderate. The FDOT acknowledges the comments from the US Environmental Protection Agency (USEPA).

A review of the Geographic Information Systems (GIS) analysis data indicated that the entire project is located in the Hillsborough River Basin. The SWFWMD indicated that the project is contained within the Cypress Creek, New River and Southside Branch sub-basins and occupies or traverses seven drainage basins. Surface waters within the entire project are designated as Class III waters for its potable water supply. According to the SWFWMD, 40 Environmental Resource Permits (ERPs) and Water Use Permits (WUP) have been issued within vicinity of the project.

The GIS analysis data also indicated that 100% of the acreage within the 500-foot buffer area is contained by the Principal Aquifers of the State of Florida. Additionally, Recharge Areas of the Floridian Aquifer Discharge/1 to 10 encompasses 100% of the acreage within the 500-foot buffer. Watershed Conditions 305(b) Good has 142.04 acres (58.23%) and unknown has 101.87 acres (41.77%) within the 100-foot buffer area, Good has 284.77 acres (59.88%) and unknown has 190.79 acres (40.12%) within the 200-foot buffer area, and Good has 717.07 acres (61.91%) and unknown has 441.18 acres (38.09%) within the 500-foot buffer area.

Improved structural stormwater treatment facilities and Best Management Practices (BMPs) will be needed for future pollution reductions. In accordance with Chapters 3 and 5 of the Environmental Resource Permit (ERP) Basis of Review, the FDOT recommends that the implementing agency take measures to protect and

treat in-stream water quality of stormwater discharge.

The FDOT recommends that the implementing agency take measures to not adversely affect State water quality standards when the project is implemented. To offset wetland impacts, the FDOT recommends that the implementing agency acquire an Environmental Resource Permit (ERP) that will be suitable to the type of project proposed.

No comments were received from the Federal Highway Administration (FHWA).

ETAT Reviews for Water Quality and Quantity

3 ETAT Review by C. Lynn Miller, Southwest Florida Water Management District (03/28/2008)
Water Quality and Quantity Effect: Moderate

Coordination Document: Permit Required

Dispute Information: N/A

Identified Resources and Level of Importance:

The entire project is located in the Hillsborough River Basin. Specifically the project is contained within the Cypress Creek, New River and Southside Branch sub-basins. From east to west, the project occupies and/or traverses the following drainage basins: a non-contributing area (WBID 1424), Southside Branch (WBID 1446), New River (WBID (1442), Bayou Lake Outlet (WBID 1438), Bayou Branch (WBID1418), Drain (WBID 1447), and unnamed Slough (WBID 1428).

There are three significant cross drainage facilities that may be affected by the project, including:

- (1) Along the proposed alignment on Fairview Heights Rd east of Handcart Rd in S31T25SR21E, where flow across the roadway is southward by means of two elliptical culverts of approximately 4 in longest dimension; on the downstream site, both culverts are blocked by chain link fence gates. On the 22FEB08 field visit, swift flow was observed from a forested wetland upstream of the roadway to a narrow, well-incised stream channel downstream;
- (2) The Pasco County bridge carrying Handcart Rd over an unnamed stream in S31T25SR21E, where flow in the narrow, well-incised channel is from east to west under Handcart Rd., then it continues southwestward to the Bayou Lake Outlet drainage basin; and
- (3) The crossing by I-75 of a large forested wetland area within the proposed footprint of the new Overpass Rd/I-75 interchange.

Lakes within 1.0 mile of the proposed alignment are King Lake (263 acres), Dick Lake (12 acres), and Bayou Lake (37 acres). Under its Minimum Flows and Levels Program (40D-8, F.A.C.), the District is scheduled to adopt Minimum Levels for King Lake located 1.0 mile north of the proposed alignment in the Bayou Branch drainage basin. The proposed Minimum Lake Level for King Lake is 70.8 feet above NGVD and the proposed High Minimum Lake Level for King Lake is 72.4 feet above NGVD (SWFWMD, November, 2007).

Surface waters within the entire project are designated Class III.

Section 303(d) of the Clean Water Act (CWA) directs states to identify those waters within their jurisdictions that are unable to meet certain water quality assessment criteria and are, therefore, considered impaired. Once the waters on the 303(d) List of Impaired Waters are verified for impairment, Total Maximum Daily Loads (TMDLs) will be developed for each pollutant of concern in each water body on the 303(d) List. The pollution load reductions associated with meeting a TMDL will affect permit holders in the watershed and will require a combination of more stringent permitted effluent limits and source controls, including specific Best Management Practices (BMPs) with high removal efficiencies for pollutants of concern.

Each TMDL specifies the load of pollutants that each waterbody can receive while meeting water quality standards for the designated use and a strategy consisting of reductions to achieve this amount. The reductions associated with meeting a TMDL will affect permit holders in the watershed and will require a combination of more stringent permitted effluent limits and more stringent nonpoint source controls, such as specific BMPs with high removal efficiencies for pollutants of concern. The project is located within the FDEP Group 5 Basin for TMDL assessment purposes.

The following TMDL activity is relevant to drainage basins in the project area:

New River (WBID 1442) This basin was included in the FDEP 1998 303(b) List of Impaired Waters for dissolved oxygen (DO) and coliform bacteria, nutrients, turbidity and total suspended solids (TSS). It is included on the FDEP Verified List (5/27/04) for fecal and total coliform bacteria, and a Final TMDL has been published for total and fecal coliform bacteria (September 2004) that calls for reductions in fecal coliform and total coliform of 35.3% and 43.6%, respectively. The basin is included on the FDEP Delist List (5/27/04) for nutrients, TSS, and turbidity.

Water quality data are available from the District for King Lake and for Cypress Creek, New River, and the Hillsborough River from FDEP. Hydrologic data are available from USGS for Cypress Creek and the Hillsborough River downstream of the project area.

The hydrogeologic flow system of the Hillsborough River watershed is comprised of five principal hydrogeologic units: 1) the surficial aquifer; 2) semi-confining beds and the intermediate aquifer; 3) the Upper Floridan aquifer; 4) the middle confining unit; and 5) the Lower Floridan aquifer although all units are not present in the Overpass Rd project area. The surficial aquifer consists of unconsolidated sands and sandy clays which generally range in thickness from 20 feet to 50 feet (Wolansky and Thompson 1987). The semi-confining beds and intermediate aquifer separate the surficial aquifer from the underlying Upper Floridan aquifer. The semi-confining unit is composed of silt, sandy clay, and clay that somewhat retards the movement of water (SWFWMD 1996). The intermediate aquifer consists of limestone and dolomite beds which are locally discontinuous or absent in the project area. The Floridan aquifer is the primary artesian aquifer throughout the project area and all of Florida. It consists of two transmissive zones, the Upper Floridan aquifer and the Lower Floridan aquifer, which are separated by a middle confining unit. The Floridan aquifer consists of the limestone and dolomite beds which have an average thickness of approximately 1100 feet in the Hillsborough Valley area (Wolansky and Thompson 1987). The DRASTIC Pollution Vulnerability Index for the Floridan Aquifer within the project area ranges from 104 to 171 on a relative scale and averages 138 (weighted), although this value may be overestimated somewhat (Swancar and Hutchinson, 1992), making the Floridan susceptible to pollution from external sources. No DRASTIC indices are reported for the intermediate aquifer as it is discontinuous in the project area (SWFWMD, 2000, Comprehensive Watershed Management Plan Hillsborough River Basin). Recharge in the area is high and ranges from 1 to 10 inches/year.

No sinkholes are reported in the FDEP 2007 Sinkhole database for the area within 100 of the project. Within 1.0 mile of the projects east terminus, sinkhole #14-608 is reported in S27T25SR21E. There is a natural feature that is a possible sinkhole located adjacent to the project alignment in S36T25SR20E that was observed on Feb 22, 2008.

No Pasco County Wellhead Protection Zones are located within 500 feet of the project.

No springs are reported within 500 feet of the proposed alignment.

Comments on Effects to Resources:

The project has the potential to produce direct adverse impacts on small, unnamed streams that may include the following: alteration of channel cross sections, disruption of flows, increased runoff volumes, decreased runoff quality, sedimentation, bank erosion, and increased flooding potential.

The project may require modification of the existing bridge crossing of the unnamed stream that

passes under Handcart Rd.

As a result of untreated or under treated stormwater runoff, sedimentation during construction, and increased pollutant loads from additional areas of pavement, the project has the potential to contribute to water quality degradation in waters designated as Special Outstanding Florida Waters (Hillsborough River, Cypress Creek) and to impair further the water quality of New River which has a Final TMDL specifying reductions in the loads of both total and fecal coliform bacteria.

Due to the high recharge characteristic of the Floridan Aquifer, contamination of the Florida Aquifer is possible as a result of untreated or under treated stormwater runoff, sedimentation during construction, and increased pollutant loads from additional areas of pavement.

The project has the potential to necessitate the modification of the WUP associated with the County Saddlebrook Pumping facility.

Additional Comments (optional):

The degree of effect is considered Moderate based on the remaining issues related to the project: (1) there is no information as to the selection of the final alignment and the design of the project, (2) potential for untreated stormwater runoff to contaminate the Floridan Aquifer by direct discharge to aquifer, particularly in the eastern portion of the project; and (3) potential to disrupt the operations of pumping, storage, and transmission capabilities of facilities having WUPs.

The travel distance from the project to OFW-designated water bodies could allow increased pollutant loads to be neutralized before reaching sensitive OFWs. It also is expected that the project will comply with all stormwater treatment and construction site water resources protection measures as specified in Chap. 40D-4 F.A.C., which will reduce or eliminate the projects pollution potential.

Further, it is expected that the project will comply with pollutant load reduction requirements of the FDEP Final TMDL for New River that addressed total and fecal coliform bacteria. New River (WBID 1442) basin is included on the FDEP Verified List (5/27/04) for fecal and total coliform bacteria, and a Final TMDL has been published for total and fecal coliform bacteria (September 2004) that calls for reductions in fecal coliform and total coliform of 35.3% and 43.6%, respectively. In support of the state TMDL program objectives, the District will encourage the FDOT to use enhanced WQ treatment BMPs for project discharges to and activities occurring in New River (WBID 1442) basin state waters that have been verified as being "impaired." Impaired surface waters are those that have one or more parameters that exceed state water quality standards and further comply with Chapter 62-303, F.A.C. Enhanced WQ treatment measures, appropriate to the impairment, should be undertaken by the road development to reduce pollution hazards to state waters and be consistent with the intent of section 62-302.700, F.A.C., (FDEP OFW rule), the requirements of District rule 40D-4.301(1)(e), F.A.C., and in keeping with TMDL regulations and objectives. Water quality data from SWFWMD and FDEP should be reviewed during the design phase of the project, and evaluation of the water quality dataset for the streams in the project area will be useful in determining the pre-development conditions of the water quality.

An Environmental Resource Permit will be required for this project. However, the final determination of the type of permit will depend upon the final design configuration. If wetland impacts exceed threshold limits, requiring an individual ERP permit, the FDOT may want to consider applying for an Incidental Site Activities Permit [F.A.C., 40D-40.302 (6)(a)]; particularly if the project is a design-build or fast-tracked project.

The following Environmental Resource Permits (ERPs) and Water Use Permits (WUPs) have been issued within vicinity of the proposed project. These permits are associated with existing and proposed land use activities.

ERP NO. Permittee Name Project Name

28079.000 PASCO CO FACILITIES MGMT DEPT WESLEY CHAPEL DISTRICT PARK
10271.002 DELORAS JOHNSON SWAN LAKE MINE
26736.000 LENNAR HOMES INC EPPERSON PROPERTY
20542.007 PALM COVE DEVELOPMENT PALM COVE PH 2B
20542.008 WATERS EDGE CHURCH INC WATERS EDGE CHURCH - PHASE 1
6666.002 CKB DEVELOPMENT WATERGRASS FKA COMAS TRUST PROPERTY
6666.005 CKB DEVELOPMENT WATERGRASS - PARCELS B1 B2 B3 B4
6666.012 CKB DEVELOPMENT WATERGRASS TOWN CENTER N&S PARCELS
23797.001 PASCO CO BOCC PASCO CO - CURLEY RD/CR 577
27996.000 HAYDON-RUBIN DEVELOPMENT T AND G GROVES
19730.001 PASCO CO BOCC HANDCART RD, CR 54 TO CR 579A
20152.000 NEUKOM PROPERTIES ARROWHEAD SUBDIVISION
14124.010 GRAND HORIZONS, INC GRAND HORIZONS-PHASE III
14124.011 GRAND HORIZONS, INC GRAND HORIZONS-PHS 4
25468.001 RT TAMPA FRANCHISE LTD LOWES-ZEPHYRHILLS-RUBY TUESDAY
25484.000 PASCO CO BOCC OLD PASCO RD-OVERPASS RD/SR 52
31895.000 PASCO CO ENGINEERING BOYETTE RD WIDENING
20542.005 PULTE HOME CORP PALM COVE - PH 1B
6666.008 CKB DEVELOPMENT WATERGRASS B1-4
23797.003 PASCO CO ENGINEERING SVS CURLEY RD FRM SR 54 N OF WELLS RD
27996.002 CENTEX HOMES ASHLEY GROVES - PARCEL B
6666.006 CKB DEVELOPMENT WATERGRASS - PARCELS C1-C2
6666.007 CKB DEVELOPMENT WATERGRASS PARCELS B5 B6
6666.010 CKB DEVELOPMENT WATERGRASS COMMUNITY PARK
6666.011 CKB DEVELOPMENT WATERGRASS - PARCELS C1-C2
6666.013 CKB DEVELOPMENT WATERGRASS PARCELS B5 B6
28650.001 NEUOAK LLC HANDCART HERITAGE ESTATES
24706.000 PASCO CO BOCC OTIS ALLEN RD - PHS 1
8065.000 BRADFORD UNITED CHURCH OF CHRIST BRADFORD UNITED CHURCH OF
CHRIST
23252.000 CITY OF ZEPHYRHILLS GREENSLOPE DR
32080.000 ZEPHYR COMMONS LLC ZEPHYR COMMONS

WUP NO. Permittee Name

2672.002 WILDCAT GROVES I
4233.003 HAROLD L KENT
25.006 PASCO CO UTILITIES
1821.003 PASCO CO FACILITIES MGMT DEPT
2644.004 EPCO RANCH, INC.
5973.004 NEUKOM PROPERTIES INC
2553.004 OWEN E GALL
9466.002 REUBEN E KENNEDY
2380.003 GORES DAIRY SUPPLY INC

Any existing wells within the project area should be located and identified prior to beginning construction. They must be properly plugged and abandoned as per Chapter 62-532, F.A.C., by licensed water well contractor who will acquire the appropriate well abandonment/construction permits.

An approved Construction Surface Water Management Plan (BOR, Section 2.8), or Stormwater Pollution Prevention Plan (SWPPP), must be prepared for this project. Best management practices shall be implemented to control erosion and shoaling during and after construction. The FDOT's contractor will be responsible for controlling turbidity from project area. Off-site discharge of water is limited to those amounts that will not cause off-site impacts, and equipment shall be operated and maintained to eliminate the discharge of oils, greases, fuels and lubricants to wetlands or other

surface waters (BOR 3.2.4.1 and 4.2).

Water quantity concerns must be addressed for the project in accordance with Chapter 4 of the SWFWMD's Environmental Resource Permit (ERP) Basis of Review (BOR). Water quantity concerns that must be addressed in accordance with the SWFWMD ERP Basis of Review include the following typical issues:

- a) Pre- and post-development peak discharge rate match for each sub-basin along the project corridor at each location runoff discharges from the right-of-way. Hydraulic routing through surface water storage areas and use of appropriate tailwater information will also be necessary.
- b) Making provisions to allow runoff from up-gradient areas to be conveyed to down-gradient areas without adversely affecting the stage point or manner of discharge and without degrading water quality. Refer to Section 4.8 of the ERP BOR.
- c) In addition for closed basins (internally drained or land-locked), the post-development volume of runoff from the project area must not exceed the pre-development volume of each specific, existing basin. This project appears to be located within basins that may be open, closed or semi-closed (i.e., closed for some storm events and open for others).
- d) Post-development peak discharge rates must not exceed pre-development rates at each of the existing stormwater discharge points from the roadway right-of-way for the storm event(s) required in the BOR. Hydrologic and hydraulic computations should be based on historic and local existing conditions, except for conditions caused by illegal activities and the effects of water withdrawals by pumping (B.O.R. Sections 1.7 and 4.6.2). Tailwater conditions should be thoroughly researched and based on the most current and defensible data determined by standard engineering methods. Off-site drainage areas and systems shall be conveyed to downstream areas without adversely affecting the stages, flow characteristics, or water quality.
- e) Provision must be made to replace or otherwise mitigate the loss of historic basin storage provided by the project site.

The Environmental Resource Permit Basis of Review document describes design approaches and criteria that will provide reasonable assurances that the proposed surface water management system will meet the conditions for issuance. Parameters that are frequently over- or underestimated include: seasonal high water, seasonal high groundwater table, historic basin storage, floodplain storage, floodway hydraulic capacity, peak discharge rates and timing, total discharged volume, and off-site hydrograph timing impacts. Site-specific design data is preferable to book values. It is recommended that the FDOT consider providing a pond siting report that addresses these design approaches and criteria.

This project traverses an area that has considerable pumping of high quality groundwater from nearby wells. The eastern terminus of this project is only a few miles northwest of Crystal Springs, a principle headwater source of the scenic Hillsborough River and a major water supply for the City of Tampa. Further, there is a significant potential for contamination of the Floridan Aquifer. It is recommended that FDOT perform a specific geotechnical and pond siting investigation for the project to determine whether sinkholes and other sub-surface connection areas, that receive stormwater runoff from the project area prior to treatment, will have the potential to contribute contamination to the groundwater. This investigation should present recommendations to reasonably assure protection of surface and ground waters, to further improve the design of the surface water management system, protect nearby wetlands from incidental effects of over drainage and reduce pond failures caused by sinkhole development. Should the results of the geotechnical study indicate a potential for ground water contamination as a result of stormwater pond construction/operation, the District may require additional stormwater quality treatment for the project surface water management systems.

The names and addresses of individuals or entities, whose property will be acquired for the roadway improvements, will need to be submitted with the ERP application. Since the FDOT and Pasco County have powers of eminent domain, this information will be needed to facilitate noticing such individuals, pursuant to Rule 40D-1.607(7), F.A.C. Since this project will require the acquisition of new right-of-way areas, any permit that is issued may include special conditions prohibiting construction until evidence of ownership and control is provided.

Data from several SWFWMD/Pasco County cooperative projects may be useful in the design stage of the project. The FDOT is encouraged to contact the SWFWMD project managers as listed below for further information. All project managers can be reached at the District Brooksville office at 352-796-7211.

1. Project K938 Pasco County Watershed Management Plan for Cypress Creek/SouthLakes; The District PM is Mr. Dave Arnold.
2. Project L271 Pasco County Watershed Management Plan for East Pasco Watersheds; the District PM is Mr. Richard Mayer.
3. Project L653 Pasco County Implementation of BMPs for East Pasco Watersheds; the District PM is Mr. Richard Mayer.
4. Project L729 Pasco County Overpass Road Reclaimed Water Transmission Main; the District PM is Mr. Carl Wright.
5. Project M118 FEMA Map Modernization Management Support; the District PM is Ms Dawn Turner.

The District has assigned a pre-application file (PA# 7285) for the purpose of tracking its participation in the ETDM review of this project. The pre-application file is maintained at the Districts Brooksville Service Office. Please refer to the pre-application file when contacting District regulatory staff regarding this project.

Coordinator Feedback:None

3 ETAT Review by Lauren P. Milligan, FL Department of Environmental Protection (03/28/2008)
Water Quality and Quantity Effect: Moderate

Coordination Document:Permit Required

Dispute Information:N/A

Identified Resources and Level of Importance:

The recreational, ecological, and commercial impacts of the Hillsborough River on West Central Florida make it a regionally significant environmental resource. Although the water quality of the river is generally good, the effects of development, stormwater runoff, recreational overuse, and industrial discharge or accidents are the greatest threats to its quality. Stormwater runoff from the road surface may alter adjacent wetlands and surface waters through increased pollutant loading. Natural resource impacts within and adjacent to the proposed roadway right-of-way will likely include alteration of the existing surface water hydrology and natural drainage patterns, and reduction in flood attenuation capacity of area flood zones and creeks, as a result of increased impervious surface within the watershed. Stormwater treatment should be designed to maintain the natural pre-development hydroperiod and water quality, as well as to protect the natural functions of adjacent wetlands, floodplains, and waterbodies.

Comments on Effects to Resources:

Every effort should be made to maximize the treatment of stormwater runoff from the proposed

project, as area stormwater for portions of the project ultimately discharges to the Hillsborough River, designated Outstanding Florida Waters. We recommend that the PD&E study include an evaluation of existing stormwater treatment adequacy and details on the future stormwater treatment facilities. Retro-fitting of stormwater conveyance systems would help reduce impacts to water quality.

Coordinator Feedback:None

2 ETAT Review by Madolyn Dominy, US Environmental Protection Agency (03/28/2008)

Water Quality and Quantity Effect: Minimal

Coordination Document:No Selection

Dispute Information:N/A

Identified Resources and Level of Importance:

Resources: Water quality, surface water, groundwater

Level of Importance: These resources are of a high level of importance in the State of Florida. A minimal degree of effect is being assigned to this issue.

Comments on Effects to Resources:

The project area encompasses several drainage basins within the Hillsborough River watershed. Drainage basins include Bayou Branch, Non-contributing Area, unnamed slough, Bayou Lake Outlet, New River, Southside Branch, and Drain.

The PD&E study should include a review of water quality standards within the Hillsborough River watershed, potential sources of water quality impairment, and TMDL requirements and how these regulations and/or requirements may affect the proposed project and environmental resource permits.

Stormwater runoff and its potential impact on water quality should be properly evaluated and addressed during the PD&E phase of the project. Potential impacts to surface water quality include stormwater runoff into nearby surface water bodies via drainage ditches or other conveyance systems. Stormwater runoff from urban sources, including roadways, carries pollutants such as volatile organics, petroleum hydrocarbons, heavy metals, and pesticides/herbicides. Proper stormwater conveyance, containment, and treatment will be required in accordance with state and federal regulations and guidelines. Every effort should be made to maximize the treatment of stormwater runoff from the proposed project.

Indirect and cumulative effects on water quality should be evaluated to identify and quantify incremental and cumulative impacts on natural resources (water quality - surface water, groundwater) as a result of past, present, and reasonably foreseeable actions, including the proposed project and other land use actions.

Coordinator Feedback:None

- No review submitted from the Federal Highway Administration

Wetlands

Coordinator Summary

3 Summary Degree of Effect

Wetlands Summary Degree of Effect: Moderate

Reviewed By:

FDOT District 7 (6/04/2008)

Comments:

The Florida Department of Transportation (FDOT) has evaluated the comments from the Florida Department of Environmental Protection (FDEP), the US Environmental Protection Agency (USEPA), the US Army Corps of Engineers (USACE), and the US Fish and Wildlife Service (USFWS) and recommends a Degree of Effect of Moderate. The FDOT acknowledges the comments from the National Marine Fisheries Service (NMFS) and the Southwest Florida Water Management District (SWFWMD).

A review of the Geographic Information Systems (GIS) analysis data indicated that the National Wetlands Inventory (NWI) reports there are 18.81 acres of palustrine wetlands within the 100-foot buffer area, 36.37 acres within the 200-foot buffer area, and 99.26 acres within the 500-foot buffer area.

The Florida Fish and Wildlife Conservation Commission (FFWCC) reports Priority Wetlands Habitat 15.51 acres (6.36 %) that support 1-3 focal species in upland areas and 3.20 acres (1.31%) that support 4-6 focal species in wetland areas within the 100-foot buffer area. There are 24.88 acres (5.23%) that support 1-3 focal species in upland areas and 4.90 acres (1.03%) that support 4-6 focal species in wetland areas within the 200-foot buffer area. There are 36.63 acres (3.16%) that support 1-3 focal species in upland areas and 17.39 acres (1.5%) that support 4-6 focal species in wetland areas within the 500-foot buffer area. There are 668.50 acres (4.83%) that support 1-3 focal species in upland areas, 279.32 acres (2.02%) that support 4-6 focal species in wetland areas, and 54.26 acres (0.39%) that support 7-9 focal species in wetlands areas within the 5,280-foot buffer area. These wetlands consist of freshwater marshes, stream and lake swamps (bottomland), wet prairies, and emergent aquatic vegetation. There are numerous listed species in the project area that are discussed under the Wildlife and Habitat Degree of Effect.

The FDOT recommends that the implementing agency consider the recommendation from the SWFWMD, the USEPA and the USFWS to delineate and analyze wetlands prior to permitting and to avoid and minimize wetlands to the greatest extent possible. Where impacts to wetlands and surface waters associated with the project are unavoidable, the FDOT recommends that the implementing agency coordinate with the appropriate agencies to provide adequate and appropriate wetland mitigation. The FDOT recommends that the implementing agency conduct a Uniform Mitigation Assessment Method (UMAM) analysis and consider preparing a Wetland Evaluation Report (WER) and an Endangered Species Biological Assessment (ESBA). These reports could then be coordinated with the USFWS and the FFWCC.

No comments were received from the Federal Highway Administration (FHWA).

ETAT Reviews for Wetlands

3 ETAT Review by Lauren P. Milligan, FL Department of Environmental Protection (03/28/2008)

Wetlands Effect: Moderate

Coordination Document: Permit Required

Dispute Information: N/A

Identified Resources and Level of Importance:

The proposed project traverses floodplains and wetlands associated with Bayou Lake. The wetlands of the lake are drained by the New River to the south and ultimately flow to the Hillsborough River, which is designated Outstanding Florida Waters. The EST indicates that there are 99.26 acres of palustrine wetlands within the 500-foot buffer zone of the project (8.57%).

Comments on Effects to Resources:

An Environmental Resource Permit (ERP) will be required from the Southwest Florida Water Management District - the ERP applicant will be required to eliminate or reduce the proposed wetland resource impacts of roadway construction to the greatest extent practicable:

- Minimization should emphasize avoidance-oriented corridor alignments, wetland fill reductions via pile bridging and steep/vertically retained side slopes, and median width reductions within safety limits.
- Wetlands should not be displaced by the installation of stormwater conveyance and treatment swales; compensatory treatment in adjacent uplands is the preferred alternative.
- After avoidance and minimization have been exhausted, mitigation must be proposed to offset the adverse impacts of the project to existing wetland functions and values. Significant attention is given to forested wetland systems, which are difficult to mitigate.
- The cumulative impacts of concurrent and future road improvement projects in the vicinity of the subject project should also be addressed.

Coordinator Feedback:None

3 ETAT Review by Madolyn Dominy, US Environmental Protection Agency (03/28/2008)

Wetlands Effect: Moderate

Coordination Document:No Selection

Dispute Information:N/A

Identified Resources and Level of Importance:

Resources: Wetlands, wetlands habitat, water quality

Level of Importance: These resources are of a high level of importance in the State of Florida and within the project area.

Comments on Effects to Resources:

A review of GIS analysis data (National Wetlands Inventory) in the EST for wetlands indicates that there are palustrine wetlands present along the proposed project corridor within the 100, 200, and 500 foot buffer distances. There are approximately 20 acres of palustrine wetlands within the 100 foot buffer distance; 40 acres within the 200 foot buffer distance; and 100 acres within the 500 foot buffer distance of the proposed roadway project. Depending upon the final alignment, there may be additional wetlands that could be impacted by the project.

The total length for the proposed project is approximately 9 miles. According to the project description, the capacity improvement project includes the addition of an interchange at the intersection of Overpass Road and I-75; the extension of Overpass Road as a two-lane facility from just east of Boyette Road to US 301; and the widening of both the existing two-lane undivided segment of Overpass Road (from Old Pasco Road to east of Boyette Road) and the new two-lane undivided Overpass road extension (from east of Boyette Road to US 301) to four lanes. This project may likely affect additional wetlands acreage outside the 500-foot buffer distance, depending upon final alignment. There is potential for adverse impacts to wetlands and their functions along the

proposed corridor. The degree of direct wetlands impacts associated with the project will be dependent upon the selected alignment and how much right-of-way will be needed in addition to stormwater treatment ponds and/or areas. There is also the potential to have indirect and cumulative impacts on wetlands as a result of the roadway project and ongoing and future development in this fast-growing section of Pasco County. Potential impacts include, but are not limited to, loss of wetlands function, loss of wildlife habitat, degradation of water quality in wetlands, and reduction in flood storage and capacity. Another issue of concern is increased stormwater runoff and the increase of pollutants into surface waters and wetlands as a result of the roadway project and other point and nonpoint sources.

The PD&E study should focus on identifying wetlands areas to be potentially impacted by the entire project. The PD&E study should include a delineation of wetlands; functional analysis of wetlands to determine their value and function; an evaluation of stormwater pond sites to determine their impact on wetlands; avoidance and minimization strategies for wetlands; and mitigation plans to compensate for adverse impacts. It is recommended that wetlands be avoided along the project corridor and that impact to wetlands be strongly considered when determining roadway alignment alternatives.

Indirect and cumulative effects on wetlands should be evaluated to identify and quantify incremental and cumulative impacts on natural resources (wetlands) as a result of past, present, and reasonably foreseeable actions, including the proposed project and other land use actions.

Coordinator Feedback:None

3 ETAT Review by John Fellows, US Army Corps of Engineers (03/28/2008)

Wetlands Effect: Moderate

Coordination Document:To Be Determined: Further Coordination Required

Dispute Information:N/A

Identified Resources and Level of Importance:

The GIS analyses for NWI and Wetlands 2004 revealed a small to moderate amount of palustrine/freshwater marsh & swamp wetlands within the 100', 200', and 500' buffers.

Comments on Effects to Resources:

Based on the GIS analyses and the EST maps, the project could impact a moderate-sized area of wetlands. FDOT should design the project to avoid and minimize wetlands to the greatest extent practicable. A permit application should also include a discussion of how alternative alignments with less wetland impact were considered and why they were not practicable.

Additional Comments (optional):

These comments are the Corps' informal pre-application review and may change if additional information is received. Corps staff is available to discuss the project and provide further review.

Coordinator Feedback:None

ETAT Review by David A. Rydene, National Marine Fisheries Service (03/19/2008)

N
/
A

Wetlands Effect: N/A / No Involvement

Coordination Document:No Involvement

Dispute Information:N/A

Identified Resources and Level of Importance:
None.

Comments on Effects to Resources:

NOAA's National Marine Fisheries Service (NMFS) has reviewed the information contained in the Environmental Screening Tool for ETDM Project # 9871. The project would add an interchange at the intersection of I-75 and Overpass Road, construct an extension of Overpass Road from just east of Boyette Road to US 301, and widen the existing sections of Overpass Road in Pasco County, Florida.

NMFS staff conducted a site inspection of the project area on February 15, 2008 to assess potential concerns to living marine resources. The resources affected are not ones for which NMFS is responsible and therefore, we have no comment to provide regarding the projects impacts.

Coordinator Feedback:None

4 ETAT Review by C. Lynn Miller, Southwest Florida Water Management District (03/28/2008)

Wetlands Effect: Substantial

Coordination Document:Permit Required

Dispute Information:N/A

Identified Resources and Level of Importance:

According to the 2004 SWFWMD database in the EST, within the 100-foot buffer corridor, impacts to wetlands involve numerous individual jurisdictional wetland systems composed of six wetland habitat types (FLUCFCS 615, 620, 621, 630, 641, and 642) and totaling 16.5 acres, of which 10.3 acres are forested and 6.2 acres are herbaceous systems (FFWCC 2003 Land Cover). Wetlands that would be adversely affected are located: (1) in S36T25SR20E and are associated with the Bayou Lake systems; (2) along the unnamed stream immediately west of Handcart Rd in S31T25SR21E; and (3) in the immediate area of the Overpass Rd/I-75 intersection. Smaller wetland areas are located just east of Curley Rd in S35T25SR20E. The total acreage figure does not include any additional wetlands that may be impacted by the construction of stormwater facilities or from temporary, construction-related impacts.

According to the FFWCCs database in the EST, there are 18.7 acres of FFWCC Priority Wetlands habitat capable of supporting 1-6 focal species. This figure is 2.2 acres higher than the total acreage of wetlands within the 100-foot buffer reported from the 2004 SWFWMD database in the EST. The discrepancy in these acreage figures may be due to the use by the FFWCC and SWFWMD of different imagery and interpretation techniques, or it may be due to an actual loss of wetland acreage in the area. At any rate, native wetland habitat types utilized by Focal Species include

cypress communities (FLUCFCS 620 and 621), wet prairie (FLUCFCS 643), stream and lake swamp/bottomland (FLUCFCS 615), freshwater marsh (FLUCFCS 641), and mixed wetland forest (FLUCFCS 630). Of particular importance are the Priority Wetlands located along the proposed alignment in S36T25SR20E. These systems are part of the large, contiguous Bayou Lake system that extends north of the proposed alignment for over two miles; much of the wetland system still remains today, and the wetlands are of good quality. The system also receives flow from highlands to the northeast and east and from the south, and except during high water conditions, the system may function as a closed basin. Hence, the system likely has both wildlife significance and local hydrologic importance.

The quality of wetland systems is good within the 100-foot buffer that would be adversely affected, although none of the wetlands are totally undisturbed. Past disturbances have resulted from the use of the land for agricultural purposes, residential development, and transportation facilities.

Comments on Effects to Resources:

Potential impacts to wetlands include: the elimination of the wetland system and loss of all wetland function relating to wildlife habitat, the impairment of wetland water quality, and the loss of flood storage/attenuation capacity. Depending on the design of the roadway and intersection improvements, it is estimated that the total wetland impact acreage, excluding stormwater treatment facilities, could be substantial. Habitat function may be lost and/or degraded. Construction activity may degrade water quality in the wetland, could cause disturbance due to erosion and sediment transport and result in intrusive damage to wetland vegetation. Depending upon the locations, levels and dimensions of stormwater ponds, the stormwater facilities adjacent to wetlands could intercept and divert ground water and surface water that formerly maintained wetland hydroperiods. Such wetlands could be either dewatered or flooded, resulting in alterations to plant communities, habitats, and wildlife populations. Stormwater runoff from road operations has the potential to introduce pollution into wetlands, causing further degradation. Further, adjacent and nearby wetland systems may be similarly adversely affected in relation to their proximity to the road project.

The result of unmitigated wetland acreage reduction and elimination will be a loss of wetland-dependent wildlife, a decrease in wildlife diversity, potential loss of Listed Species, deterioration of water quality, damage to remaining wetland vegetation, and a loss of hydrologic benefits now provided by wetlands.

Additional Comments (optional):

The degree of effect is considered Substantial due to: (1) the potential significant acreage of wetland impact; (2) the potential to degrade/eliminate some of the remaining relatively undisturbed wetland systems in the area; (3) the high potential for further wetland loss due the location and design of stormwater ponds and facilities in a manner that intercepts ground water and surface water that formerly maintained the adjacent wetlands; (4) the potential impact to significant Priority Wetlands located within 100 feet of the project; and (5) lack of significant design and construction details for the project.

Wetland impacts can be reduced by: (1) adjustment of the alignment and cross section to avoid direct impacts to wetlands to the degree practicable, (2) maintaining a 25 buffer around wetlands; (3) implementation of sufficient controls over sediment transport off site during construction, (4) limiting the activity of vehicles and equipment to only those areas that must be utilized for construction and staging, (5) avoiding Priority Wetlands; and (6) selection of treatment pond sites away from wetlands and with dimensions and levels that control the interception and diversion of ground water and surface water that formerly maintained the adjacent wetlands. It is recommended that new stormwater ponds be placed in areas where wetland impacts can be eliminated or reduced to the greatest extent feasible.

SWFWMDs programmatic goal is to achieve no net loss of wetlands (ERP Basis of Review, 3.1.0). The FDOT must provide reasonable assurance that the projects design will not adversely impact the value of functions provided to fish, wildlife, and listed species, including aquatic and wetland-

dependent species by wetlands and other surface waters. A wetland location map, formal delineation, and current acreage calculations will be required together with a UMAM assessment for all wetlands affected by the project, pursuant to Ch. 62-345, F.A.C. The District will require that the wetland and surface water features located within the project area be field verified by District staff, pursuant to Ch. 62-340, F.A.C. Secondary wetland impacts (e.g., water quantity, water quality, wetland buffer setbacks, wildlife habitat and utilization, etc.) will require further evaluation pursuant to subsection 3.2.7 of the B.O.R. Wetlands within and adjacent to the corridor provide high quality habitat for both Listed Species and non-Listed Species.

Adequate and appropriate wetland mitigation activities will be required for unavoidable wetland and surface water impacts associated with the project. The project mitigation needs may be addressed in the FDOT Mitigation Program (Chapter 373.4137, F.S.) which requires the submittal of anticipated wetland and surface water impact information to the SWFWMD. This information is utilized to evaluate mitigation options, followed by nomination and multi-agency approval of the preferred options. These mitigation options typically include enhancement of wetland and upland habitats within existing public lands, public land acquisition followed by habitat improvements, and the purchase of private mitigation bank credits. The SWFWMD may choose to exclude a project in whole or in part if the SWFWMD is unable to identify mitigation that would offset wetland and surface water impacts of the project. Under this scenario, the SWFWMD will coordinate with the FDOT on which impacts can be appropriately mitigated through the program as opposed to separate mitigation conducted independently. Depending on the quantity and quality of the proposed wetland impacts, the SWFWMD may propose purchasing credits from a mitigation bank and/or pursue and propose alternative locations for mitigation. For ERP purposes of mitigating any adverse wetland impacts within the same drainage basin, the project is located within the Hillsborough River Basin. The SWFWMD requests that the FDOT continue to collaborate on the potential wetland impacts as this segment proceeds into future phases, and include the associated impacts on FDOTs annual inventory.

The District will require the applicant to address elimination and reduction of wetland impacts (ERP BOR, 3.2.1), where applicable, including design alternatives where feasible. Therefore, SWFMWD may require practicable design modifications to reduce or eliminate impacts to wetlands, for example, minimizing the roadway cross section through the wetland area.

The names and addresses of individuals or entities, whose property will be taken for the roadway improvements, will need to be submitted to facilitate noticing such individuals, pursuant to District Rules.

The District has assigned pre-application file (PA# 7285) for the purpose of tracking its participation in the ETDM review of this project. The pre-application file is maintained at the Districts Brooksville Service Office. Please refer to the pre-application file when contacting District regulatory staff regarding this project.

Coordinator Feedback:None

3 ETAT Review by Todd Samuel Mecklenborg, US Fish and Wildlife Service (03/17/2008)
Wetlands Effect: Moderate

Coordination Document:PD&E Support Document As Per PD&E Manual

Dispute Information:N/A

Identified Resources and Level of Importance:

Federally listed plant and animal species, migratory birds, the habitats they occupy and are supported by (foraging, sheltering, and breeding), and wetlands. These trust resources have a high level of importance.

Comments on Effects to Resources:

The Service has reviewed the GIS database on the Environmental Screening Tool for recorded locations of federally listed threatened and endangered species and wetlands on or adjacent to the project study corridor. After a literature review utilizing the 500 foot buffer of the proposed alignment, the Service has the following comments and recommendations:

Land use throughout the project corridor is primarily rural dominated by agricultural uses. The area generally consists of low density scattered development, cropland and pasture, row crops, tree crops, extractive activities, and wetlands. All habitats should be surveyed for listed species and properly documented in the environmental report. A list of potentially occurring species for Pasco County is available on our web-page (www.fws.gov/northflorida). The following guidance is specific to species which have a high probability of occurring in the study corridor.

A major reason for the wood stork (*Mycteria americana*) decline has been the loss and degradation of feeding habitat. A variety of nearby wetland habitats such as roadside or agricultural ditches can provide good forage areas for storks, and storks typically do most of their feeding in wetlands between 5 and 40 miles from the colony. Wetlands in the project area should be delineated and evaluated using an evaluation technique such as the Wetland Rapid Assessment Procedure or the Uniform Mitigation Assessment Method. The Service recommends assessing any impacted wetland for potential wood stork usage, such as wetlands that are seasonally flooded and drawn down with littoral shelf areas. Wetlands occurring within 24 km (15 miles) of an active wood stork colony in central Florida are defined as a Core Foraging Area (CFA). If wetland impacts occur from the proposed action, type for type wetland creation would be recommended within the CFA.

The eastern indigo snake may occupy a broad range of habitats, from scrub and sandhill communities to wet prairies and flatwoods, adjacent to the proposed project. The eastern indigo snake is most strongly associated with high, dry, well-drained sandy soils, closely paralleling habitat preferred by the gopher tortoise (*Gopherus polyphemus*), a Florida listed species. The Service would recommend that FDOT implement the Services Standard Protection Measures for the Eastern Indigo Snake during the construction phase of the project. Those measures can be found at the Services Jacksonville Ecological Service Field Office website at <http://northflorida.fws.gov/IndigoSnakes/east-indigo-snake-measures-071299.htm>.

The Service encourages avoidance of all wetland areas in the study corridor. If impacts to wetlands are unavoidable, we would recommend minimizing the impacts to the greatest extent practicable and that all impacts to wetlands are mitigated in-kind within the same basin as the proposed impact. All opportunities to avoid and or minimize impacts and fragmentation to natural habitats should be explored to the greatest extent. Measures to promote wildlife movement such as wildlife crossings, fencing, and elevated structures near all remaining native lands should be evaluated and considered.

Additional Comments (optional):

Comments are provided in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), section 7 of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.), and the Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-712 et seq.).

Coordinator Feedback:None

- No review submitted from the Federal Highway Administration

Wildlife and Habitat

Coordinator Summary

3 Summary Degree of Effect

Wildlife and Habitat Summary Degree of Effect: Moderate

Reviewed By:

FDOT District 7 (6/04/2008)

Comments:

The Florida Department of Transportation (FDOT) has evaluated the comments from the Florida Fish and Wildlife Conservation Commission (FFWCC) and the US Fish and Wildlife Service (USFWS) and recommends a Degree of Effect of Moderate. The FDOT acknowledges the comments from the Southwest Florida Water Management District (SWFWMD) and the Federal Highway Administration (FHWA).

Wetland resources and avoidance, compensation, and mitigation of wetlands are described in the Wetlands Degree of Effect. The FFWCC identified the following protected species that may potentially occur within the project area: gopher tortoise, Suwannee cooter, gopher frog, eastern indigo snake, Florida pine snake, snowy egret, little blue heron, tricolored heron, white ibis, wood stork, Southeastern American kestrel, peregrine falcon, limpkin, Florida burrowing owl, Florida sandhill crane, reddish egret, limpkin, Shermans fox squirrel, and possibly the short-tailed snake. The following species may occur adjacent to the project area: Florida box turtle, river otter, spotted skunk, striped skunk, eastern cottontail rabbit, eastern hognose snake, northern bobwhite, common ground dove, northern flicker, eastern diamondback rattlesnake, and eastern kingsnake. A field review on February 22, 2008 by SWFWMD observed the following species: gopher tortoise, eastern indigo snake, Florida burrowing owl, wood stork, little blue heron, southeast American kestrel, snowy egret, American alligator, tricolored heron, snowy egret, Florida sandhill crane, southern bald eagle, roseate spoonbill, American oystercatcher, Florida scrub jay, and white ibis. Two bald eagles nests were reported within the three mile buffer area. No eagles nests were observed from the February 28, 2008 field survey by SWFWMD; however, it will be necessary to confirm the absence of nests within the project impact area.

A review of the Geographic Information Systems (GIS) analysis data indicated that Moderate Low Priority Greenways Ecological Priority Linkages are found on 229.16 acres (1.65%) within the 5,280-foot buffer area. The project is 100% within the Greater Tampa Bay Ecosystem Management Areas. The FFWCC Integrated Wildlife Habitat Results grid code 6 has 44.55 acres (0.32%), grid code 7 has 43.09 acres (0.31%), and grid code 8 has 66.52 acres (0.48%) all within the 5,280-foot buffer area. The FFWCC Biodiversity Hot Spots 7 or more focal species has 10.48 acres (4.3%) within the 100-foot buffer area, 18.33 acres (3.85%) within the 200-foot buffer area, 48.35 acres (4.17%) within the 500-foot buffer area, and 710.30 acres (5.13%) within the 5,280-foot buffer area. 5-6 Focal Species has 1.68 acres (0.01%) within the 5,280-foot buffer area.

Florida Natural Areas Inventory (FNAI) reports the Golden Aster Scrub Nature Preserve within the 200-foot buffer area. Three features of nonforest land and one feature of timberland is located within the 5,280-foot buffer area. Scrub Jay Service Area has 420.49 acres (3.04%) within the 5,280-foot buffer area. Scrub Jay Consultation Area includes 243.92 acres (100%) within the 100-foot buffer area, 475.56 acres (100%) within the 200-foot buffer area, 1,158.25 acres (100%) within the 500-foot buffer area, and 13,851.78 acres (100%) within the 5,280-foot buffer area. Water Management District Owned Lands Cypress Creek has 393.33 acres (2.84%) within the 5,280-foot buffer area. The FFWCC Strategic Habitat Conservation Area for wading birds includes 0.57 acres (0.12%) within the 200-foot buffer area, 11.42 acres (0.99%) within the 500-foot buffer area, and 221.23 acres (1.6%) within the 5,280-foot buffer area.

The FDOT recommends that the implementing agency evaluate and consider the recommendations from the commenting agencies including measures to promote wildlife movement, preparation of a Wetland

Evaluation Report (WER), and an Endangered Species Biological Assessment (ESBA). These products could then be coordinated with the USFWS and the FFWCC.

No comments were received from the Florida Department of Agriculture and Consumer Services or the US Forest Service (USFS).

ETAT Reviews for Wildlife and Habitat

4 ETAT Review by C. Lynn Miller, Southwest Florida Water Management District (03/28/2008)
Wildlife and Habitat Effect: Substantial

Coordination Document: Permit Required

Dispute Information: N/A

Identified Resources and Level of Importance:

The project is to be constructed in a rural area that is undergoing development, but segments of the project are entirely new alignment. Therefore, wildlife and habitat impacts are expected to occur.

Some upland habitat has been disturbed for agricultural, commercial and residential purposes. Within the 100-foot buffer, 72% of the area is disturbed by either: (1) alteration for low density residential purposes, (2) utilization for agricultural purposes (citrus groves and pasture), or (3) conversion to commercial uses (FFWCC 2003 Habitat and Landcover). Land within the 200-foot and 500-foot buffers that is disturbed or otherwise converted to man-made uses composes 71% and 68.5% of the area, respectively. The area is presently undergoing development, and it is likely that the percentage of upland converted from native land cover types to residential and commercial development is higher than reported in 2003.

Observations made during a field visit on 22Feb2008 indicated that high quality uplands are present in the form of hardwood hammocks, hardwood-pine forests, and pine flatwoods. While occupying less than 15% of the 100-500 foot buffer corridors, these high quality uplands represent important areas for listed wildlife species that are aquatic or wetland-dependent and that use upland habitats for nesting or denning. Such species that can be expected to utilize these areas in view of the habitats available and geographical location of the project include: wood stork (E), sandhill crane (T), Southern bald eagle (T), tricolored heron (SSC), snowy egret (SSC), little blue heron (SSC), white ibis (SSC). Much of the xeric habitat originally present in the project area has been converted to citrus grove which now occupies over 10% of the 100-500 foot buffer corridors. However, the well drained soils in the area that supported native longleaf pine-turkey oak cover type prior to the development of citrus groves still provide habitat opportunity for gopher tortoise and its associated species, including gopher frog (SSC). Burrowing owls (SSC) also can occupy xeric sites and have a range that extends into the project area. Listed upland species that have been observed in the area or can be expected to occur there are gopher tortoise (SSC), Florida sandhill crane (T) and Florida scrub jay (T). During field reviews conducted on 22FEB2008, environmental scientists observed foraging, nesting, and denning habitat for the following protected species within 100 feet of the project: gopher tortoise, eastern indigo snake, Florida burrowing owl, wood stork, little blue heron, southeast American kestrel, snowy egret, American alligator, tricolored heron, snowy egret, wood stork, Florida Sandhill Crane, Southern bald eagle, roseate spoonbill, American oystercatcher, Florida scrub jay, and white Ibis.

Within 100 feet of the project, the FFWCC database in the EST reports 18.7 acres of FFWCC Priority Wetlands habitat capable of supporting 1-6 focal species. The actual acreage may be less than 18.7 acres due to the discrepancy noted under the Wetlands Issue. Native wetland habitat types utilized by Focal Species include cypress communities (FLUCFCS 620 and 621), wet prairie (FLUCFCS 643), stream and lake swamp/bottomland (FLUCFCS 615), freshwater marsh

(FLUCFCS 641), and mixed wetland forest (FLUCFCS 630). Of particular importance are the Priority Wetlands located along the proposed alignment in S36T25SR20E. These systems are part of the large, contiguous Bayou Lake system that extends north of the proposed alignment for over two miles; much of the wetland system still remains today, and the wetlands are of good quality. The system also receives flow from highlands to the northeast and east and from the south, and except during high water conditions, the system may function as a closed basin. Hence, the system likely has both wildlife significance and local hydrologic importance. The quality of wetland systems within the 100-foot buffer is good, although none of the wetlands are totally undisturbed. Past disturbances have resulted from the use of the land for agricultural purposes, residential development, and transportation facilities.

Within the 100-foot corridor, FFWCC has identified 10.5 acres as Biodiversity Hot Spots supporting 7 or more Focal Species; and all of this acreage is located in S36T25SR20E east of Curley Rd.

The entire project area out to the 500-foot buffer is located within the Florida scrub jay consultation area.

There are two eagles nests reported within three miles of the project; the last recorded activity dates were in 2006 for both nests. During field visits on 22FEB2008, no eagles nests were observed from the roadway. However, it will be necessary to confirm the absence of nests within the project impact area.

Comments on Effects to Resources:

The project will eliminate upland habitat within the footprint of the roadway improvements and associated facilities. The projects potential impact on wildlife and habitat include: (1) the further dissection of remaining uplands and wetlands; (2) the elimination of wetland and upland habitat known to be utilized by listed species; (3) the disruption of foraging areas for listed species; (4) the disturbance of wetland edges, reducing their habitat quality; and (5) the degradation of water quality in wetlands and streams by construction activities and untreated or under-treated stormwater runoff. Following construction, disturbed habitats may be invaded by undesirable non-native plant species, further degrading former high quality habitats. The FFWCC Priority Wetlands and Biodiversity Hot Spots located immediately north of the alignment in S36T25SR20E may be eliminated or seriously impaired.

Temporary impacts during construction include: habitat damage by inadvertent construction, potential turbidity in discharge water, and fugitive sediment transport.

Animals crossing the roadway will be at risk upon completion of the project. This project impact is of particular concern in the case of gopher tortoises and certain bird species, particularly Florida sandhill crane. Further, the project may cause additional isolation of faunal species populations on either side of the roadway, as the presence of the roadway will lower the ability of wildlife to move across the facility to the remaining habitats on either side of the highway.

Additional Comments (optional):

The degree of effect is considered Substantial due to: (1) the acres of upland and wetland habitat that potentially will be eliminated and/or degraded; (2) the further dissection of the upland and floodplain habitats; (3) the potential to eliminate remaining remnants of high quality habitat; (4) the high potential for the elimination of foraging and roosting habitat for Listed Species in remaining upland and wetland areas; (5) the elimination or impairment of Priority Wetlands and Biodiversity Hot spots; (6) the direct impact to Listed Species, which would be adversely affected during construction; and (7) by the resulting increased area of pavement following project completion which will increase animal fatalities on the roadway. Further, the roadway has the potential to result in increased pollutant loads and runoff volumes to area wetlands used by Listed Species.

Because of the documented presence of Listed Species, it is recommended that the FDOT conduct a specific wildlife survey of the habitats within and immediately adjacent to the ROW for the

purposes of: (1) quantifying the diversity of species using the habitats, (2) identifying the Listed Species using the habitats, (3) determining the nature of the utilization by Listed Species (foraging, cover, protection, breeding), and (4) the abundance of wildlife utilizing the habitats. The survey should result in specific recommendations for eliminating and/or reducing adverse impacts including wildlife crossings and protection measures.

The new roadway has the potential to increase animal fatalities. Birds, amphibians, and reptiles moving across the roadway will be at additional risk upon completion of the project. A survey to determine the actual amount of animal traffic across the project corridor as it now exists should be conducted. The data collected should be analyzed for the purpose of determining the value of wildlife crossings and other accommodations. It is recommended that the FDOT prepare a Wetland Evaluation Report (WER) and an Endangered Species Biological Assessment (ESBA) for further analysis.

The District recommends coordination with FFWCC, USFWS and Bureau of Imperiled Species Management for the following Listed Species that are known to use the project corridor or have a high probability of using the project corridor for foraging, roosting, nesting, travel, and cover: wood stork, Florida sandhill crane, and eastern indigo snake.

Existing data should be collected and specific surveys should be conducted to detect the occurrence and abundance of other Listed Species that are very likely to utilize the wetlands and other surface waters within and adjacent to the ROW. The potential impact of the roadway project on these, and non-listed native animals, should be assessed.

The project has the potential for both temporary and permanent impacts to wetland-dependent wildlife and habitat. Temporary impacts during construction include: habitat damage by construction outside of ROW, turbidity in the ditches and streams crossing the project area, and fugitive sediment. Excessive habitat damage can be eliminated by sufficiently limiting construction equipment to the road ROW and designated staging areas. Turbidity and fugitive sediment transport will be addressed in the ERP and can be reduced by the use and maintenance of effective stormwater pollution prevention and control measures that are appropriate to the soils and terrain involved.

Specific surveys should be conducted to detect the occurrence and abundance of wildlife, both listed and non-listed, in order to assess the impact of the project on animals and plants and to determine the need for wildlife accommodations at particularly important locations along the project. The FFWCC data on the site should be updated to the present time and applied to this project. The information generated during this work should be used in project design to reduce wildlife impacts. The data collected should be analyzed for the purpose of determining the value of wildlife crossings.

For a project to meet permit criteria, it must be not contrary to the public interest. Chapter 3.2.3 of the SWFWMD Basis of Review describes the items to be reviewed when determining what is and is not contrary to public interest, and 3.2.3 specifically details impact to the conservation of fish and wildlife habitat, including endangered or threatened species, or their habitats, as well as impacts to public recreation. Such impacts could potentially be deemed contrary to the public interest.

Coordinator Feedback:None

2 ETAT Review by Nahir Detizio, Federal Highway Administration (03/27/2008)

Wildlife and Habitat Effect: Minimal

Confidential:Review will not be displayed on Public Access website

Coordination Document:PD&E Support Document As Per PD&E Manual

Dispute Information:N/A

Identified Resources and Level of Importance:

The EST identifies the following resources through the GIS analysis: Scrub jay consultation area.

Comments on Effects to Resources:

Coordination with the resources agencies needed to determine the analysis needed to address potential impacts, as well as appropriate avoidance, minimization and mitigation techniques.

Coordinator Feedback:None

3

ETAT Review by Todd Samuel Mecklenborg, US Fish and Wildlife Service (03/17/2008)

Wildlife and Habitat Effect: Moderate

Coordination Document:PD&E Support Document As Per PD&E Manual

Dispute Information:N/A

Identified Resources and Level of Importance:

Federally listed plant and animal species, migratory birds, the habitats they occupy and are supported by (foraging, sheltering, and breeding), and wetlands. These trust resources have a high level of importance.

Comments on Effects to Resources:

The Service has reviewed the GIS database on the Environmental Screening Tool for recorded locations of federally listed threatened and endangered species and wetlands on or adjacent to the project study corridor. After a literature review utilizing the 500 foot buffer of the proposed alignment, the Service has the following comments and recommendations:

Land use throughout the project corridor is primarily rural dominated by agricultural uses. The area generally consists of low density scattered development, cropland and pasture, row crops, tree crops, extractive activities, and wetlands. All habitats should be surveyed for listed species and properly documented in the environmental report. A list of potentially occurring species for Pasco County is available on our web-page (www.fws.gov/northflorida). The following guidance is specific to species which have a high probability of occurring in the study corridor.

A major reason for the wood stork (*Mycteria americana*) decline has been the loss and degradation of feeding habitat. A variety of nearby wetland habitats such as roadside or agricultural ditches can provide good forage areas for storks, and storks typically do most of their feeding in wetlands between 5 and 40 miles from the colony. Wetlands in the project area should be delineated and evaluated using an evaluation technique such as the Wetland Rapid Assessment Procedure or the Uniform Mitigation Assessment Method. The Service recommends assessing any impacted wetland for potential wood stork usage, such as wetlands that are seasonally flooded and drawn down with littoral shelf areas. Wetlands occurring within 24 km (15 miles) of an active wood stork colony in central Florida are defined as a Core Foraging Area (CFA). If wetland impacts occur from the proposed action, type for type wetland creation would be recommended within the CFA.

The eastern indigo snake may occupy a broad range of habitats, from scrub and sandhill communities to wet prairies and flatwoods, adjacent to the proposed project. The eastern indigo snake is most strongly associated with high, dry, well-drained sandy soils, closely paralleling habitat preferred by the gopher tortoise (*Gopherus polyphemus*), a Florida listed species. The Service would recommend that FDOT implement the Services Standard Protection Measures for the Eastern Indigo Snake during the construction phase of the project. Those measures can be found at the Services Jacksonville Ecological Service Field Office website at <http://northflorida.fws.gov/IndigoSnakes/east-indigo-snake-measures-071299.htm>.

The Service encourages avoidance of all wetland areas in the study corridor. If impacts to wetlands are unavoidable, we would recommend minimizing the impacts to the greatest extent practicable and that all impacts to wetlands are mitigated in-kind within the same basin as the proposed impact. All opportunities to avoid and or minimize impacts and fragmentation to natural habitats should be explored to the greatest extent. Measures to promote wildlife movement such as wildlife crossings, fencing, and elevated structures near all remaining native lands should be evaluated and considered.

Additional Comments (optional):

Comments are provided in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), section 7 of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.), and the Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-712 et seq.).

Coordinator Feedback:None

3 ETAT Review by Scott Sanders, FL Fish and Wildlife Conservation Commission (03/24/2008)
Wildlife and Habitat Effect: Moderate

Coordination Document:To Be Determined: Further Coordination Required

Dispute Information:N/A

Identified Resources and Level of Importance:

The Habitat Conservation Scientific Services Section of the Florida Fish and Wildlife Conservation Commission (FWC) has coordinated an agency review of ETDM #9871, Pasco County, and provides the following comments related to potential effects to fish and wildlife resources on this Programming Phase project.

The Project Description Summary states that this work involves expansion of the two-lane Overpass Road from Old Pasco Road to US-301. This project involves the addition of an interchange at the intersection of Overpass Road and I-75; the extension of Overpass Road as a two-lane facility from just east of Boyette Road to US-301; and the widening of portions of the existing two-lane undivided segment of Overpass Road to four lanes. In addition, a new two-lane undivided extension of Overpass Road will also be built from Old Pasco Road to east of Boyette Road. The project area is about 9.0 miles in length and is located mostly east of I-75 and just north and east of the town of Wesley Chapel.

A GIS inventory and analysis was performed to assess fish and wildlife and habitat resources within 500 feet along both sides of the Right-of-way (ROW). This assessment shows that the project is in a rural area dominated by 50.6 percent (586.0 acres) agricultural land uses, while native plant communities account for about 21.8 percent (253.0 acres) upland forests and shrub-land

communities, and 11.2 percent wetlands (129.6 acres). The project area and surrounding lands are characterized by uplands of dry prairie, upland hardwood hammocks, mixed pine-hardwood forests, pinelands, and shrub and brushland. Wetlands are represented by cypress swamp, freshwater marsh and wet prairie, hardwood swamp, mixed wetland forests, open water, and shrub swamp. The roadway bisects several small stream tributaries in the east-central portion of the project area. Agricultural land uses include citrus, improved pasture, row crops and fields, and other agriculture.

Based on known range and preferred habitat types, the following species, which are listed by our agency as Endangered (E), Threatened (T), or Species of Special Concern (SSC), may potentially occur within the project area, or equally as important, be adversely affected from indirect impacts in offsite areas: gopher tortoise (T), Suwannee cooter (SSC), gopher frog (SSC), eastern indigo snake (T), Florida pine snake (SSC), snowy egret (SSC), little blue heron (SSC), tricolored heron (SSC), white ibis (SSC), wood stork (E), Southeastern American kestrel (T), peregrine falcon (E), limpkin (SSC), Florida burrowing owl (SSC), Florida sandhill crane (T), reddish egret (SSC), limpkin (SSC), Shermans fox squirrel (SSC), and possibly the short-tailed snake (T).

In addition, the following species, while not officially listed, are considered by our agency as Species of Greatest Conservation Need due to changing land use and long-term loss and degradation of habitat statewide, and may occur in and adjacent to the project area: Florida box turtle, river otter, spotted skunk, striped skunk, eastern cottontail rabbit, eastern hognose snake, northern bobwhite, common ground dove, northern flicker, eastern diamondback rattlesnake, and eastern kingsnake.

The quality of the wetland, upland, and aquatic habitats within the 500-foot assessment area along the roadway is rated as good according to the results of the following FWC GIS data layers, which are based on past modeling of vegetation types and an assessment of habitat requirements or needs of a wide array of wildlife species: Biodiversity Hotspots have been established in the area which are capable of supporting 7 or more focal species; and FWCs Priority Wetlands for Wetland Dependent Listed Species data layer also shows that habitat in this area is capable of supporting 1 to 3 focal species in upland areas and 4 to 6 species in wetland areas. Our resource screening also shows the potential importance of this regional area for the support of species which have been designated by the U.S. Fish and Wildlife Service as part of a formal Consultation Area for the Florida scrub jay (T); and FWC has established a Strategic Habitat Conservation Area for wading birds adjacent to the project ROW.

Comments on Effects to Resources:

Significant amounts of both herbaceous and wooded freshwater wetlands, as well as diverse upland habitats, border the project area. Therefore, effects to wildlife and habitats associated with this project includes the loss of quality habitat which will have direct effects on listed species and Species of Greatest Conservation Need. Habitat that will be lost due to ROW expansion and the construction of Drainage Retention Areas (DRAs) could be at least moderate, and possibly substantial, due to the rural nature of this region. An additional resource issue is the nine-mile length of the project area; moderate to high amount of quality habitat types potentially involved; and the fact that portions of the project area consists of new construction to extend Overpass Road.

Additional Comments (optional):

The following recommendations and Best Management Practices (BMPs) are offered for consideration in planning the PD&E Study so that adequate funding can be justified and approved to design the project in a manner to avoid, minimize, or mitigate project effects to wildlife species and their habitat:

1. A vegetative cover map and accounting by acreage for each plant community type should be made for the affected project area. Compensatory mitigation for all upland and wetland habitat loss should be accomplished. If wetlands are mitigated under the provisions of Chapter 373.4137, F.S., the proposed mitigation sites should be located within the immediate or same regional area; be functionally equivalent; equal to or of higher functional value; and as or more productive as the affected wetlands. Land acquisition and restoration of appropriate tracts adjacent to existing public

lands, or tracts placed under conservation easement or located adjacent to large areas of jurisdictional wetlands that currently serve as regional core habitat areas, would be supported by FWC. An important focus of the selection process for mitigation lands for this project should include a strong consideration of, and habitat replacement for, the birds, mammals, amphibians, and reptiles which are discussed above as potentially occurring in the project area.

2. Surveys for listed species should be accomplished within and adjacent to the ROW and proposed sites for DRAs. The methodology for these surveys should be coordinated with FWC early in the PD&E Study and follow appropriate survey techniques or guidelines to determine presence, absence, or probability of occurrence of various species, and to assess habitat quality. These study methods should be designed considering the listed wildlife species discussed above. Please note that some species are known to use atypical habitat types and transitional habitat areas; therefore, due diligence and thorough coverage during field investigations are key to adequately determining presence or absence of all species. Based on the survey results, a plan should be developed to address direct, indirect, and cumulative effects of the project on wildlife and habitat resources, including listed species. Avoidance, minimization, and mitigation measures should also be formulated and implemented. Closure on the proposed mitigation plan, as it pertains to listed species, should be coordinated with our agency.

3. We recommend that FDOT accomplish a study of habitat systems connectivity needs along the project area as they pertain to adequately bridging freshwater wetlands, streams, and floodplain zones to reduce both the loss and degradation of habitat; protect and improve habitat for listed and recreationally important species; improve water quality; promote and restore beneficial hydrological processes, including the exchange of nutrients and production and dispersal of forage organisms; and protect the quality and landscape habitat linkage functions of existing lands potentially affected by the project. Furthermore, typically smaller structures necessary to carry upland runoff under the roadway to areas of lower elevation, could be designed to afford opportunities for safe passage of reptiles, amphibians, and small mammals, which are important components of these habitats. Small bridges over streams and wetlands can also be designed with dry shelves of natural soil constructed above the mean high water level to allow the passage of the grey fox, bobcat, striped skunk, whitetail deer, and many other species. Our biologists are available to assist in the consultation on the design and placement of these structures, as well as the need for and placement of exclusionary or funnel fencing.

4. We recommend that FDOT develop and implement customized BMPs especially formulated for this project as they pertain to dredging and filling, control of siltation and turbidity, and the nutrient loading associated with discharge of roadside runoff, to reduce effects within freshwater basin wetlands and riparian systems. These BMPs should be implemented only after all efforts to avoid and minimize effects are completed. Furthermore, use of the median and roadway swales could reduce the need for offsite DRAs, possibly resulting in significant reductions in habitat loss.

5. Construction equipment staging areas; storage of oils, greases, and fuel; fill and roadbed material; and equipment maintenance activities should be sited in previously disturbed areas far removed from streams, wetlands, or surface water bodies. Staging areas, along with borrow areas, should also be surveyed for listed species.

We appreciate the opportunity to provide input on highway design and the conservation of fish and wildlife resources. Please contact Terry Gilbert at (850) 402-6311 or email terry_gilbert@urscorp.com to initiate the process for agency coordination on this project.

Coordinator Feedback:None

- No review submitted from the US Forest Service

ETAT Reviews: Cultural

Historic and Archaeological Sites

Coordinator Summary

4 Summary Degree of Effect

Historic and Archaeological Sites Summary Degree of Effect: Substantial

Reviewed By:

FDOT District 7 (6/04/2008)

Comments:

The Florida Department of Transportation (FDOT) has evaluated the comments from the Florida Department of State and the Miccosukee Tribe of Indians of Florida and recommends a Degree of Effect of Substantial. The FDOT acknowledges the comments from the Federal Highway Administration (FHWA) and the Southwest Florida Water Management District (SWFWMD).

A review of the Geographic Information Systems (GIS) analysis data indicated that 11 Cultural Resource Assessment Surveys (CRAS) have been completed within the 100-foot buffer area. A Historic Standing Structure is located within the 500-foot buffer area (the newly acquired Fred L. Gore house) and a Historic Cemetery (Holton Cemetery) is located within the 5,280-foot buffer area. Within the 100-foot buffer area, there are 7 sites included in the Florida Site File Archeological or Historic Sites, with one archaeological site, Treatment Plant, being potentially eligible for listing in the National Register of Historic Places (NRHP). Gores Dairy Farm is a resource group within the 100-foot buffer area.

The FDOT recommends that the implementing agency prepare a CRAS. It will reflect the results of performing a systematic archaeological field survey and a historic structures survey for the projects Area of Potential Effect (APE) which includes the roadway, sidewalks, bicycle accommodations, interchange improvements, bridges, and stormwater management facilities. If applicable, Section 106 Consultation will be conducted to assess potential project impacts to any cultural resources that are determined eligible for listing in the NRHP.

No comments were received from the Seminole Tribe of Florida.

ETAT Reviews for Historic and Archaeological Sites

3 ETAT Review by Nahir Detizio, Federal Highway Administration (03/27/2008)

Historic and Archaeological Sites Effect: Moderate

Confidential: Review will not be displayed on Public Access website

Coordination Document: PD&E Support Document As Per PD&E Manual

Dispute Information: N/A

Identified Resources and Level of Importance:

None found.

Comments on Effects to Resources:

None found.

Additional Comments (optional):

Restrictions on Information Access. Two Florida state statutes effective January 1, 2002 call for the Site File to restrict access to particular categories of information. Florida Statutes 267.135-267.14 compel the Site File to withhold locations of archaeological sites in cases when the Division of Historical Resources finds that disclosure will put the sites at risk. Florida Statute 119.07(3)(ee) requires building plans of facilities used by state or local governments to be withheld unless (1) an agency of state or local government requires the information to perform its duties; (2) a contractor working on the facility needs the plans to complete work on the facility; or (3) a court of competent jurisdictions finds good cause for releasing information.

Coordinator Feedback:None

2 ETAT Review by C. Lynn Miller, Southwest Florida Water Management District (03/28/2008)
Historic and Archaeological Sites Effect: Minimal

Coordination Document:PD&E Support Document As Per PD&E Manual

Dispute Information:N/A

Identified Resources and Level of Importance:

A total of 11 Cultural Resource Assessments (CRAs) have been done within 100 feet of the project, including the Overpass Rd corridor and the Wesley Chapel District Park areas, making the project area well studied.

Within 100 feet of the project, there are seven sites included in the Florida Site File Archeological or Historic Sites, of which one (PA00465)is eligible for inclusion in the National Register of Historic Places (NRHP). This site is very large and intercepts Segments S-002 and S-003. Two other sites, PA02038 and PA02069, intercept S-001 along Pasco Rd at Overpass Rd.

Comments on Effects to Resources:

The project has a potential to produce adverse effects on cultural and historic resources, but the degree of effect is considered Minimal, Because the sites have already been identified, and coordination with the State Historic Preservation Office is expected as the project develops, it will be possible to avoid significant impact to any remaining cultural materials.

Additional Comments (optional):

If historical or archeological artifacts are discovered at any time on the project site, the FDOT shall notify the District and the Florida Department of State Division of Historic Resources immediately (40D-4.381 (1)(w).

Coordinator Feedback:None

4 ETAT Review by Sherry Anderson, FL Department of State (03/28/2008)
Historic and Archaeological Sites Effect: Substantial

Confidential:Review will not be displayed on Public Access website

Coordination Document:No Selection

Dispute Information:N/A

Identified Resources and Level of Importance:

None found.

Comments on Effects to Resources:

None found.

Additional Comments (optional):

Restrictions on Information Access. Two Florida state statutes effective January 1, 2002 call for the Site File to restrict access to particular categories of information. Florida Statutes 267.135-267.14 compel the Site File to withhold locations of archaeological sites in cases when the Division of Historical Resources finds that disclosure will put the sites at risk. Florida Statute 119.07(3)(ee) requires building plans of facilities used by state or local governments to be withheld unless (1) an agency of state or local government requires the information to perform its duties; (2) a contractor working on the facility needs the plans to complete work on the facility; or (3) a court of competent jurisdictions finds good cause for releasing information.

Coordinator Feedback:None

4

ETAT Review by Steve Terry, Miccosukee Tribe of Indians of Florida (02/19/2008)

Historic and Archaeological Sites Effect: Substantial

Coordination Document:No Selection

Dispute Information:N/A

Identified Resources and Level of Importance:

There are 6 archaeological sites within 100' and 14 archaeological sites within 1/4 mile of this project. A Cultural Resources Survey needs to be done to ascertain if the project will impact any archaeological sites.

Comments on Effects to Resources:

Once a Cultural Resources Survey has been done, then effects, if any, to archaeological sites can be ascertained.

Additional Comments (optional):

If the Cultural Resources Survey shows there are no archaeological sites that will be impacted by this project, then no further consultation is necessary. However, if the Cultural Resources Survey does show that archaeological sites will be impacted by this project, then further consultation with the Miccosukee Tribe should be done.

Coordinator Feedback:None

- No review submitted from the Seminole Tribe of Florida

Recreation Areas

Coordinator Summary

2 Summary Degree of Effect

Recreation Areas Summary Degree of Effect: Minimal

Reviewed By:

FDOT District 7 (6/04/2008)

Comments:

The Florida Department of Transportation (FDOT) has evaluated the comments from the Southwest Florida Water Management District (SWFWMD) and recommends a Degree of Effect of Minimal. The FDOT acknowledges the comments from the Florida Department of Environmental Protection (FDEP) and the US Environmental Protection Agency (USEPA).

A review of the Geographic Information Systems (GIS) analysis data indicates that within the 5,280-foot buffer area there exists two schools.

The SWFWMD made note of Wesley Chapel District Park, which is located in the southwest quadrant of the existing Overpass Road/Boyette Road intersection. The park, completed in the summer of 2007, is a new and developing active-use facility that houses indoor and outdoor sport recreational areas, as well as a community meeting area. The FDEP made note of the request from Pasco County for the possible inclusion of a trail along Overpass Road from Pasco Road to US 301. The need is reflected both in Pasco County Metropolitan Planning Organizations (MPOs) Long Range Transportation Plan (LRTP) and also in the proposed master plan for a countywide system of greenways, trails, and blueways.

The FDOT recommends that the implementing agency take all measures to develop avoidance alternatives and/or measures to minimize harm to existing resources.

No comments were received from the Federal Highway Administration (FHWA) and the National Park Service (NPS).

ETAT Reviews for Recreation Areas

0 ETAT Review by Madolyn Dominy, US Environmental Protection Agency (03/20/2008)

Recreation Areas Effect: None

Coordination Document:No Selection

Dispute Information:N/A

Identified Resources and Level of Importance:

None found.

Comments on Effects to Resources:

None found.

Coordinator Feedback:None

2 ETAT Review by C. Lynn Miller, Southwest Florida Water Management District (03/28/2008)

Recreation Areas Effect: Minimal

Coordination Document:PD&E Support Document As Per PD&E Manual

Dispute Information:N/A

Identified Resources and Level of Importance:

The Wesley Chapel District Park is located in the southwest quadrant of the existing Overpass Rd/Boyette Rd intersection. The park, completed in the summer of 2007, is a new and developing active-use facility that houses indoor and outdoor sport recreational areas, as well as a community meeting area. Existing entrance ways to the new park facility are located to the east off Boyette Rd. and to the north off the existing Overpass road, between I-75 and Boyette Road.

Comments on Effects to Resources:

Dependent upon the final project design and placement of the alignment, this project may encroach on the park and reduce availability of recreational opportunity to the public, especially during construction. This project will diminish the natural resources value of lands surrounding the existing park. Impacts may occur as the results of habitat destruction, air and water pollution, and noise.

Additional Comments (optional):

The Degree of Effect is considered minimal due to: (1) the potential for temporary adverse impacts to a public recreational area entrance, and (2) the design details and actual footprint of the proposed improvements are not known at this time.

To the maximum, practicable extent, it is recommended that water management facilities not be located on recreational lands.

Coordinator Feedback:None

0 ETAT Review by Lauren P. Milligan, FL Department of Environmental Protection (03/28/2008)
Recreation Areas Effect: None

Coordination Document:No Selection

Dispute Information:N/A

Identified Resources and Level of Importance:

Please note that the DEP Office of Greenways and Trails received the following comments from Manny Lajmiri, Transportation Planner II, of the Pasco County MPO:

Pasco County would like to see a trail along Overpass Road from Pasco Road to US 301. The need is reflected both in Pasco County MPO's LRTP, and also in the proposed master plan for a countywide system of greenways, trails and blueways. It is important to propose this trail as part of the proposed road widening, as we are in the early stages of planning for Overpass Road.

Comments on Effects to Resources:

None found.

Coordinator Feedback:None

- No review submitted from the Federal Highway Administration

- No review submitted from the National Park Service

Section 4(f) Potential

Coordinator Summary

3 Summary Degree of Effect

Section 4(f) Potential Summary Degree of Effect: Moderate

Reviewed By:

FDOT District 7 (6/04/2008)

Comments:

The Florida Department of Transportation (FDOT) has evaluated the comments from the Federal Highway Administration (FHWA) and recommends a Degree of Effect of Moderate. The FDOT acknowledges the comments from the Southwest Florida Water Management District (SWFWMD).

A review of the Geographical Information Systems (GIS) analysis data and comments from the agencies indicated a public park, potential recreation areas, and archaeological and historic sites within the 100-foot buffer area may be impacted by the proposed project. Potential Section 4(f) resources are described in the Historic and Archaeological and the Recreational Areas Degree of Effects respectively.

The FDOT recommends that the implementing agency take all measures to develop avoidance alternatives and/or measures to minimize harm to these resources. If it is likely that the project will potentially impact any of the resources and their functions, the implementing agency will need to prepare a determination of Section 4(f) applicability. If Section 4(f) is applicable a Section 4(f) Evaluation will need to be conducted to assess impacts to parklands, recreational trails and facilities, and eligible historic and archaeological sites.

ETAT Reviews for Section 4(f) Potential

2 ETAT Review by C. Lynn Miller, Southwest Florida Water Management District (03/28/2008)

Section 4(f) Potential Effect: Minimal

Coordination Document:PD&E Support Document As Per PD&E Manual

Dispute Information:N/A

Identified Resources and Level of Importance:

The Wesley Chapel District Park is located in the southwest quadrant of the existing Overpass Rd/Boyette Rd intersection. The park is a new and developing active-use facility and access is off Boyette Rd. No water-based recreation will be accommodated at the facility.

Comments on Effects to Resources:

The proposed improvements to existing Overpass Rd may result in impact to the park in terms of encroachment and access during construction.

Additional Comments (optional):

The Degree of Effect is considered minimal due to: (1) the potential for impacts to outer boundary of public lands, and (2) the design details and actual footprint of the proposed improvements are not known at this time.

Coordinator Feedback:None

3 ETAT Review by Nahir Detizio, Federal Highway Administration (03/27/2008)

Section 4(f) Potential Effect: Moderate

Coordination Document:PD&E Support Document As Per PD&E Manual

Dispute Information:N/A

Identified Resources and Level of Importance:

The EST lists two areas that are described as forest recreation areas. These appear to be located just east of I-75.

Comments on Effects to Resources:

Please coordinate with FHWA on potential Section 4(f) process needs, such as a determination of applicability.

Coordinator Feedback:None

ETAT Reviews: Community

Aesthetics

Coordinator Summary

2 Summary Degree of Effect

Aesthetics Summary Degree of Effect: Minimal

Reviewed By:

FDOT District 7 (6/04/2008)

Comments:

The Florida Department of Transportation (FDOT) recommends a Degree of Effect of Minimal.

According to data from Florida Geographic Data Library (FGDL), the majority of the land use is: cropland and pastureland, tree crops, other open lands rural, and residential low density. The existing land use has 1.35 acres (0.12%) of high density, 44.66 acres (3.86%) of medium density, and 142.74 acres (12.32%) of low density residential use within the 500-foot buffer area. The FDOT recognizes the potential impact of the proposed project on these residents. In order to preserve community values and provide a safe and operationally efficient transportation improvement, the FDOT will consider alternatives during project development that are context sensitive.

No comments were received from the Federal Highway Administration (FHWA) and the Pasco County Metropolitan Planning Organization (MPO).

ETAT Reviews for Aesthetics

No reviews found for the Aesthetics Issue.

- No review submitted from the Federal Highway Administration
- No review submitted from the Pasco County MPO

Economic

Coordinator Summary

2 Summary Degree of Effect

Economic Summary Degree of Effect: Minimal

Reviewed By:

FDOT District 7 (6/04/2008)

Comments:

The Florida Department of Transportation (FDOT) recommends a Degree of Effect of Minimal based upon the following factors: the existing land use has 1.35 acres (0.12%) of high density, 44.66 acres (3.86%) of medium density, and 142.74 acres (12.32%) of low density residential use within the 500-foot buffer area. The proposed roadway improvements would not result in any businesses being bypassed. Business impacts due to Right of Way are expected to be minimal. A greater emphasis on pedestrian enhancements and improvements along Overpass Road would increase safety, pedestrian mobility, connectivity between residential and non-residential areas, and would provide access for transportation disadvantaged populations. There is one approved Developments of Regional Impact (DRIs) in the project area, Epperson Ranch. There are four Planned Unit Developments (PUD) in the project area: Boyette Road (a.k.a. Palm Cove), Watergrass (a.k.a. Comas), Comas Trust MPUD Property, and Grantham. Blockgroup data indicates that there is no median family income less than \$25,000 and no minority populations over 40% within the 500-foot buffer area.

This project should be developed in accordance with the Civil Rights Act of 1964, as amended by the Civil Rights Act of 1968, along with Title VI of the Civil Rights Act, Executive Order 12898 (Environmental Justice), which ensures that minority and/or low-income households are neither disproportionately adversely impacted by major transportation projects, nor denied reasonable access to them by excessive costs or physical barriers (Environmental Protection Agency [EPA], 1994).

No comments were received from the Federal Highway Administration (FHWA) and the Pasco County Metropolitan Planning Organization (MPO).

ETAT Reviews for Economic

No reviews found for the Economic Issue.

- No review submitted from the Federal Highway Administration
- No review submitted from the Pasco County MPO

Land Use

Coordinator Summary

2 Summary Degree of Effect

Land Use Summary Degree of Effect: Minimal

Reviewed By:

FDOT District 7 (6/04/2008)

Comments:

The Florida Department of Transportation (FDOT) has evaluated the comments from the Florida Department of Community Affairs (DCA) and recommends a Degree of Effect of Minimal. According to data from Florida Geographic Data Library (FGDL), the majority of land use within the 500-foot buffer area is: cropland and pastureland, tree crops, other open lands rural, and residential low density.

This project is consistent with the Pasco County Comprehensive Plan and has been identified as a needed capacity project and addressed within the Pasco County 2025 Future Roadway Functional Classification Map and the Pasco County 2025 Future Roadway Level of Service Map. The project is listed in the Pasco County Metropolitan Planning Organizations (MPO) 2025 Coast Affordable Plan as prepared in January 2005. The 2025 Pasco County MPO Long Range Transportation Plan (LRTP) identifies the two- to four-lane expansion of Overpass Road from Old Pasco Road to US 301 (including the extension) as a needs project. While the LRTP and the Comprehensive Plan do not currently identify an interchange at I-75 and Overpass Road as a cost feasible project, the Comprehensive Plan classifies the I-75/Overpass Road interchange as a future potential high volume intersection (entering traffic volumes exceed 75,000 vehicles).

The DCA recommends that Pasco County staff, in future comprehensive plan amendments, provide an update to the Countys transportation element to include this project in an adopted future number of lanes map.

No comments were received from the Federal Highway Administration (FHWA) and the Pasco County MPO.

ETAT Reviews for Land Use

2 ETAT Review by Gary Donaldson, FL Department of Community Affairs (03/28/2008)

Land Use Effect: Minimal

Coordination Document:No Selection

Dispute Information:N/A

Identified Resources and Level of Importance:

The Department of Community Affairs (DCA) has reviewed the referenced project and, based on current information, this project is addressed within the local governments comprehensive plan as indicated in the Pasco County 2025 Future Roadway Functional Classification Map (Map 7-24) and the Pasco County 2025 Future Roadway Level of Service Map (Map 7-25). The proposed roadway improvement project is needed in order to provide additional relief to high traffic volumes occurring along State Road 52 and State Road 54 which parallel the project. In addition, though the project, including the proposed interchange at I-75 appears to promote urban sprawl, the project is intended to better service the currently approved development located along the future corridor alignment.

Staff recommends that Pasco County staff, in future comprehensive plan amendments, provide an update to the Countys transportation element to include this project in an adopted future number of lanes map.

Comments on Effects to Resources:

see above

Coordinator Feedback:None

- No review submitted from the Federal Highway Administration

- No review submitted from the Pasco County MPO

Mobility

Coordinator Summary



Summary Degree of Effect

Mobility Summary Degree of Effect: Enhanced

Reviewed By:

FDOT District 7 (6/04/2008)

Comments:

The Florida Department of Transportation (FDOT) recommends a Degree of Effect of Enhanced.

A review of the Geographical Information Systems (GIS) analysis data indicated that a group care facility is located within the 200-foot buffer area and two schools located within the 5,280-foot buffer area.

The FDOT recommends that the implementing agency coordinate with transit and local government officials to determine what multi-modal accommodations will be considered during the projects design phase.

No comments were received from the Pasco County Metropolitan Planning Organization (MPO), the Federal Highway Administration (FHWA), and the Federal Transit Administration (FTA).

ETAT Reviews for Mobility

No reviews found for the Mobility Issue.

- No review submitted from the Federal Highway Administration
- No review submitted from the Federal Transit Administration
- No review submitted from the Pasco County MPO

Relocation

Coordinator Summary



Summary Degree of Effect

Relocation Summary Degree of Effect: Moderate

Reviewed By:

FDOT District 7 (6/04/2008)

Comments:

The Florida Department of Transportation (FDOT) recommends a Degree of Effect of Moderate. The existing land use has 1.35 acres (0.12%) of high density, 44.66 acres (3.86%) of medium density, and 142.74 acres (12.32%) of low density residential use within the 500-foot buffer area. According to data from Florida Geographic Data Library (FGDL), the majority of land use within the 500 foot buffer is: cropland and pastureland, tree crops, other open lands rural, and residential low density.

The FDOT recommends that the implementing agency consider impacts to these land uses and to develop alternatives to avoid or minimize relocations during project development. Any relocation should be evaluated so that there are no disproportionate adverse impacts to any distinct minority, ethnic, elderly, or handicapped groups and/or low-income households.

No comments were received from the Federal Highway Administration (FHWA) and the Pasco County

Metropolitan Planning Organization (MPO).

ETAT Reviews for Relocation

No reviews found for the Relocation Issue.

- No review submitted from the Federal Highway Administration
- No review submitted from the Pasco County MPO

Social

Coordinator Summary

3 Summary Degree of Effect

Social Summary Degree of Effect: Moderate

Reviewed By:

FDOT District 7 (6/04/2008)

Comments:

The Florida Department of Transportation (FDOT) has evaluated the comments from the US Environmental Protection Agency (USEPA) and recommends a Degree of Effect of Moderate. The FDOT acknowledges the comments from the Federal Highway Administration (FHWA) and the Florida Department of Community Affairs (DCA).

Social resources associated with land use, contamination, infrastructure, economic, mobility, relocations, recreation areas, Section 4(f), historic and archaeological are identified in their respective Degree of Effects.

Few additional social features are identified along the project corridor. Those resources found within the 500-foot buffer area include: Cypress Point Community Church, Bradford United Church of Christ, and one Community Center.

The DCA noted that the proposed roadway improvement project is needed in order to provide additional relief to high traffic volumes on State Road 52 (SR 52) and SR 54 which parallel the project. Two public workshops were held for this project. The first workshop had concerns arise for both Alternatives O-1 and O-2 due to the potential loss of residences that have been built in recent years. The second workshop presented Alternatives O-2 and O-3. Alternative O-3 was developed due to concerns about Alternatives O-1 and O-2. Alternative O-3 was favored, but residents still had questions and concerns with the overall project.

The FHWA noted that the proposed project would include a road in a new location, as well as introduce regional traffic onto a 2-lane road that currently serves only residential areas. The public workshops have indicated that there is some concerns with relocations, as well as the changing character of the area. Noise and traffic concerns may also be a factor for existing residents.

The FDOT recommends that the implementing agency consider impacts to these land uses and develop alternatives to avoid or minimize harm to these resources during the projects design phase. The FDOT recommends that the implementing agency continue public involvement activities. Additionally, noise and traffic impacts will need to be fully addressed during the Project Development and Environment (PD&E) study.

No comments were received from the Florida Department of Environmental Protection (FDEP) and the Pasco County Metropolitan Planning Organization (MPO).

ETAT Reviews for Social

2 ETAT Review by Gary Donaldson, FL Department of Community Affairs (03/28/2008)

Social Effect: Minimal

Coordination Document:No Selection

Dispute Information:N/A

Identified Resources and Level of Importance:

The Department of Community Affairs (DCA) has reviewed the referenced project and, based on current information, the proposed roadway improvement project is needed in order to provide additional relief to high traffic volumes occurring along State Road 52 and State Road 54 which parallel the project. In addition, though the project, including the proposed interchange at I-75 appears to promote urban sprawl, the project is intended to better service the currently approved development located along the future corridor alignment.

Comments on Effects to Resources:

see above

Coordinator Feedback:None

4 ETAT Review by Nahir Detizio, Federal Highway Administration (03/27/2008)

Social Effect: Substantial

Coordination Document:PD&E Support Document As Per PD&E Manual

Dispute Information:N/A

Identified Resources and Level of Importance:

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Comments on Effects to Resources:

The proposed project would include a road in a new location, as well as introduce regional traffic onto a 2-lane road that currently serves only residential areas. The public workshops have indicated that there is some concern with relocations, as well as changing the character of the area. Noise may also be a factor for existing residents. Please continue to provide outreach to the affected areas to identify concerns, possible solutions, and provide information regarding the studies that would be conducted as part of the environmental documentation to assess and impacts and identify mitigation/minimization strategies. The environmental document will need to extensively address noise and traffic concerns for existing residential areas.

Coordinator Feedback:None

3 ETAT Review by Madolyn Dominy, US Environmental Protection Agency (03/28/2008)

Social Effect: Moderate

Coordination Document:No Selection

Dispute Information:N/A

Identified Resources and Level of Importance:

Resources: Residential communities and properties, commercial businesses and properties, social service facilities, religious facilities or centers, schools, healthcare facilities, public parks and recreation areas, etc.

Level of Importance: These resources are of a high level of importance. There are few of these types of social features within proximity of the proposed roadway project; however, a moderate degree of effect is being assigned to this issue due to residential concerns and comments regarding potential project impacts.

Comments on Effects to Resources:

Land use along the project corridor is primarily rural agricultural. The area includes both pasture and crop lands. However, eastern Pasco County is growing at a rapid pace. There are four Developments of Regional Impact (DRIs) and several Master Planned Unit Developments (MPUDs) within close proximity to the project corridor. These developments will result in the construction of over 50,000 residential units, in addition to over 700,000 square feet of retail and office space. Significant increases in both employment and population numbers are expected by year 2030. The project is being proposed to ensure that mobility is maintained on the Florida Interstate and Intrastate Highway Systems and enhanced between existing and proposed developments along the roadway network in eastern Pasco County.

EPA is assigning a moderate degree of effect to this issue based on comments received during public information workshops. At the workshops, alignment concept displays, analysis matrix, and project information were available for public viewing. The workshops allowed interested persons the opportunity to review the revised concepts and express comments concerning the proposed alignments and the social, economic, and environmental effects of the proposed improvements. Representatives and consultants were available to answer questions and receive comments. Alternatives O-1 and O-2 were presented at the first workshop and Alternatives O-2 and O-3 were presented at the second workshop.

Both verbal and written comments were received from the two workshops. Verbal comments received during the first public workshop indicated major concerns from both Alternatives (O-1 and O-2) due to the potential loss of residences that have been built in recent years. Residents offered verbal recommendations for alignment options. There were also other comments received regarding various parcels of land within the project corridor.

A second public workshop was held for proposed alternatives O-2 and O-3. Verbal comments supported alternative O-3, which was developed as a result of major residential concerns with the alignments of Alternatives O-1 and O-2. However, there were still concerns from residents regarding high traffic volumes resulting from the roadway project. From the comments received (both verbal and written), Alternative O-3 was favored, but residents still had questions and concerns with the overall project.

Based on the GIS analysis Social data, there are few social features identified along the project corridor. This is primarily due to the fact that the majority of land along the project corridor is agricultural (crop and pasture land).

EPA recommends that FDOT continue public involvement activities and that the PD&E phase of the project include a thorough evaluation of sociocultural effects. Efforts should be made to avoid or minimize social impacts and negative community impacts to the greatest extent practicable.

Coordinator Feedback:None

- No review submitted from the Pasco County MPO

ETAT Reviews: Secondary and Cumulative

Secondary and Cumulative Effects

Coordinator Summary

4 Summary Degree of Effect

Secondary and Cumulative Effects Summary Degree of Effect: Substantial

Reviewed By:

FDOT District 7 (8/11/2008)

Comments:

The Florida Department of Transportation (FDOT) in conjunction with the Federal Highway Administration (FHWA) is currently facilitating a task force to evaluate and provide guidance on Indirect (Secondary) and Cumulative Effects. This task force consists of representatives from the FHWA, the FDOT, various agencies, regional planning councils, and Metropolitan Planning Organizations (MPOs). The output of this task force will be guidance in the form of a White Paper along with possible revisions to the Environmental Screening Tool (EST) to facilitate Indirect and Cumulative Effects Analysis. The FDOT recommends that the implementing agency consider this issue further when these necessary tools and guidance are in place. In consideration of these factors and agency comments, the FDOT recommends a Degree of Effect of Substantial.

ETAT Reviews for Secondary and Cumulative Effects

3 ETAT Review by C. Lynn Miller, Southwest Florida Water Management District (03/28/2008)

Secondary and Cumulative Effects Effect: Moderate

Coordination Document:Permit Required

Dispute Information:N/A

At-Risk Resource:Wetlands

Comments on Effects:

Construction of a new interchange and the improved access along Overpass Road may increase impacts associated with the additional development opportunities presented by the proposed transportation improvement.

The area has been disturbed in the past as a result of agricultural, commercial, and residential

development. Potential impacts to wetlands include: the further elimination of wetland systems and loss of all wetland function relating to wildlife habitat, the impairment of wetland water quality, and the loss of flood storage/attenuation capacity. The total wetland impact acreage, excluding stormwater treatment facilities, could be substantial. Habitat function may be lost and/or further degraded. Construction activity will further degrade water quality in the nearby wetlands, cause disturbance due to fugitive sediment, and other inadvertent intrusion damage to wetland vegetation.

The result of unmitigated wetland acreage reduction and elimination will be a further loss of wetland-dependent wildlife, a decrease in wildlife diversity, potential loss of Listed Species, deterioration of water quality, damage to remaining wetland vegetation, and a loss of hydrologic benefits now provided by wetlands.

As the current alignment bisects Priority Wetlands and Biodiversity Hotspots, widening of the roadway will further reduce habitat diversity, the abundance of wildlife species, and the abundance of Listed Species by eliminating remote nest sites and foraging areas.

Pursuant to 40D-4.301 and 40D-3.302, F.A.C., the District will consider secondary and cumulative effects to wetlands in accordance with the ERP basis of Review 3.2.7 and 3.2.8.

Recommended Avoidance, Minimization, and Mitigation Measures:

An approved Stormwater Pollution Prevention Plan (SWPPP) or Construction Surface Water Management Plan (BOR, Section 2.8) is recommended during the design phase of this project in order to minimize turbidity and degradation of water quality in wetlands during the construction phase of the new roadway alignment.

Elimination or reduction of potential impacts is a part of the permitting process. The results from the recommended Wetland Evaluation Report should be utilized to eliminate serious impacts to wetlands. Wetland impacts can be reduced by: (1) selecting alignments for the new areas of construction that maintain a 25 buffer around all wetlands; (2) adjusting the alignment and minimizing roadway cross section of the selected alternative to cause the least amount of wetland impacts and avoid direct impacts, (3) implementing sufficient controls over erosion and sediment transport off site during construction, (4) limiting the activity of vehicles and equipment to only those authorized areas that must be utilized for construction and staging, and 5) selecting treatment pond sites away from wetlands.

Recommended Actions to Improve At-Risk Resources:

The District will consider secondary and cumulative effects as described in the ERP Basis of Review 3.2.7 and 3.2.8. FDOT must provide reasonable assurance that: (1) water quality standards will not be violated, and (2) buffers of a minimum width of 15 feet and an average width of 25 feet will be utilized or that other means will be used to eliminate secondary impacts to wetlands. Due to the increased potential for wildlife fatalities, the District recommends that a plan be prepared and implemented to mitigate for any adverse impacts. The plan should use either the habitat guidelines developed by the US Fish and Wildlife Service or some other combination of acceptable

alternatives.

At-Risk Resource:Wildlife and Habitat

Comments on Effects:

Construction of a new interchange and the improved access along Overpass Road may increase impacts associated with the additional development opportunities presented by the proposed transportation improvement.

The project will eliminate remaining upland habitat within the footprint of the roadway improvements and associated facilities. The projects impact on wildlife and habitat may include: the further dissection of remaining uplands and wetlands; the elimination of wetland and upland habitat known to be utilized by listed species; the further disruption of foraging areas for listed species; the disturbance of wetland edges, further reducing their habitat quality; and the further degradation of water quality in wetlands and streams by construction activities and untreated or under-treated stormwater runoff. Following construction, disturbed habitats may be invaded by undesirable non-native plant species, further degrading former high quality habitats. The FFWCC Priority Wetlands and Biodiversity Hot Spots located immediately north of the alignment in S36T25SR20E may be eliminated or seriously impaired.

Animals crossing the roadway will be at increased risk upon completion of the project. This project impact is of particular concern in the case of turtles and certain bird species. Further, the project may cause additional isolation of faunal species populations on either side of the roadway, as the presence of the roadway will lower the ability of wildlife to move across the facility to the remaining habitats on either side of the highway.

Recommended Avoidance, Minimization, and Mitigation Measures:

The results from the recommended Wetland Evaluation Report and Endangered Species Biological Assessment, together with coordination with USFWS and FFWCC and an analysis of road kill potential should be utilized to eliminate serious impacts to wildlife and habitats. It is recommended that wildlife movement accommodations be considered in the design of this project to allow for wildlife movement between the remaining wetlands on either side of the proposed roadway improvements. A detailed plan should be prepared and implemented to mitigate adverse impacts. The plan should use either the habitat guidelines developed by the US Fish and Wildlife Service or some combination of other acceptable alternatives. Construction and staging should be limited to only those areas that are necessary in order to minimize wildlife habitat impacts.

Recommended Actions to Improve At-Risk Resources:

Pursuant to 40D-4.301 and 40D-4.302, F.A.C., the District will consider secondary and cumulative effects to wildlife in accordance with the ERP Basis of Review 3.2.7 and 3.2.8. The FDOT must provide reasonable assurance that: (1) water quality standards will not be violated in aquatic

habitats, and (2) buffers of a minimum width of 15 and an average width of 25 will be utilized, or that other means will be used to eliminate secondary impacts to wetland habitats. Due to the increased potential for wildlife fatalities, the District recommends that a plan be prepared and implemented to mitigate adverse impacts.

At-Risk Resource:Water Quality and Quantity

Comments on Effects:

Construction of a new interchange and the improved access along Overpass Road may increase impacts associated with the additional development opportunities presented by the proposed transportation improvement.

The travel distance from the project to OFW-designated water bodies may allow increased pollutant loads to be neutralized before reaching sensitive OFWs. Further, it is expected that the project will comply with all stormwater treatment and construction site water resources protection measures as specified in Chap. 40D-4 F.A.C., which will reduce or eliminate the projects pollution potential. There is a potential to contaminate the Floridan Aquifer due to stormwater runoff entering the aquifer, particularly in the eastern portion of the project. There is the potential to further degrade the water quality of New River which has a Final TMDL document addressing total and fecal coliform.

Recommended Avoidance, Minimization, and Mitigation Measures:

Compliance with existing permit requirements, future TMDL and MFL requirements will help assure that minimum water quality standards are met. Water quantity concerns will also be addressed during the ERP process. In general, limiting or otherwise offsetting encroachment on the streams and floodplains in the area can reduce quantity concerns. For groundwater resources, ensure that stormwater treatment ponds do not intrude into the limerock or confining material of the surficial aquifer, either directly or by sinkhole formation.

Recommended Actions to Improve At-Risk Resources:

For surface water resources, reduce pollutant loads to the streams in the project area by treating stormwater runoff from currently untreated areas, by controlling erosion from the project site, by limiting activities in surface water, by protecting surface water from the ingress of grease and oils from equipment, by not locating new roadway facilities in or around known sinkholes; and by timing construction to avoid periods of high flows.

Coordinator Feedback:None

Secondary and Cumulative Effects Effect: Substantial

Coordination Document:To Be Determined: Further Coordination Required

Dispute Information:N/A

At-Risk Resource:Wildlife and Habitat

Comments on Effects:

Indirect effects could be substantial on this project within the region, since capacity improvements are planned, and a new interchange will be constructed at the intersection of Overpass Road and I-75. Increased stormwater runoff and sedimentation could lower water quality within some freshwater wetlands and stream systems. Long-term water quality degradation could also occur from increased residential and commercial development in the region facilitated by the new I-75 interchange and road extension. In addition, this increased development would require improved flood control, potentially resulting in inter-basin transfer of water, increased surface water discharge and sedimentation, and increased nutrient loading within area tributary streams. The proposed extension of Old Pasco Road could also result in improved access for additional residential and commercial development. Furthermore, due to the additional travel lanes and vehicle speeds, roadkills may increase for many amphibian, reptile, mammal and bird species, including listed species and habitat degradation could occur due to fragmentation and isolation.

Recommended Avoidance, Minimization, and Mitigation Measures:

We recommend that FDOT accomplish a study of habitat systems connectivity needs along the project area as they pertain to adequately bridging freshwater wetlands, streams, and floodplain zones to reduce both the loss and degradation of habitat; protect and improve habitat for listed and recreationally important species; improve water quality; promote and restore beneficial hydrological processes, including the exchange of nutrients and production and dispersal of forage organisms; and protect the quality and landscape habitat linkage functions of existing lands potentially affected by the project.

Recommended Actions to Improve At-Risk Resources:

Smaller structures necessary to carry upland runoff under the roadway to areas of lower elevation, could be designed to afford opportunities for safe passage of reptiles, amphibians, and small mammals, which are important components of these habitats. Small bridges over streams and wetlands can also be designed with dry shelves of natural soil constructed above the mean high water level to allow the passage of the grey fox, bobcat, striped skunk, whitetail deer, and many other species.

Coordinator Feedback:None

4 ETAT Review by Sherry Anderson, FL Department of State (03/28/2008)

Secondary and Cumulative Effects Effect: Substantial

Coordination Document:No Selection

Dispute Information:N/A

At-Risk Resource:Archaeological and Historic Resources

Comments on Effects:

Given the presence of a potentially significant site within 100 feet of the project corridor, secondary and cumulative effects could be substantial. Staging activities and/or any related construction should avoid significant archaeological sites. Other impacts such as noise, visual, vibration, etc. should be considered for all significant resources identified during the cultural resource assessment survey.

Recommended Avoidance, Minimization, and Mitigation Measures:

None found.

Recommended Actions to Improve At-Risk Resources:

None found.

Coordinator Feedback:None

General Project Commitments

Date	Description
6/4/2008	In response to FHWA's comments on the Purpose and Need Statement expressed during the ETAT review, we offer the following: a) The FDOT will coordinate with the Pasco County Growth Management staff and also the Pasco Metropolitan Planning Organization (MPO) staff in order to address consistency between the County's comprehensive plan and the MPO's Cost Feasible Plan. We understand that consistency between these plans must be obtained prior to receiving Location and Design Concept Acceptance (LDCA) of the PD&E study document from the Federal Highway Administration. b) We acknowledge FHWA's comments regarding no identification of a funding source and cost estimate for this project. Prior to amending the MPO's Cost Feasible Plan and the County's Comprehensive Plan Capital Improvements Element, a committed source of funding for this project will need to be identified. c) We acknowledge the need for an Interchange Justification Report (IJR) for the proposed interchange at I-75 and Overpass Road. We will coordinate closely with FHWA during the process leading to development of an approved IJR at this location. The FDOT trusts this provides adequate clarification in response to your comments and concerns.
8/11/2008	In response to FHWA's comments on the Class of Action the FDOT is adding the following general commitments: a. Confirm absence of eagle nests in APE. b. Collaborate with SWFWMD re wetland impacts and will avoid and minimize wetland impacts to greatest extent possible. c. Fully address noise and traffic impacts during the PD&E study and will continue public involvement activities to address residents' concerns over the change in the area caused by introduction of regional traffic onto what was formerly a 2-lane road serving a residential area. d. Use data on flows from existing and soon to be completed flood studies in preference to generalized data on flows and stages and will provide the bridge hydraulic reports in support of the SWFWMD ERP application. e. Coordinate with the Hydrologic Data Section at the SWFWMD office to minimize impacts to the Pasco County Saddlebrook well site and three monitoring well sites within the project area. f. Evaluate and consider the recommendations from the commenting agencies for measures to promote and protect wildlife movement across the road and to protect Florida Species of Greatest Conservation Need. g. Develop this project to avoid disproportionate impacts to minority and low-income households. h. Coordinate with transit and local government officials to determine what multi-modal accommodations will be considered during the project's design phase to accommodate the group care facility located within the 200' buffer and two schools located within the 1 mile buffer. i. Emphasize pedestrian enhancements and improvements along Overpass Road to increase safety, pedestrian mobility, connectivity between residential and non-residential areas and provide transportation access for disadvantaged populations.
8/11/2008	As a result of coordination with the Federal Highway Administration (FHWA), the project is being Re-Published (8-11-08) for the following reasons: - A note has been added to the commitments section explaining this update. - The Florida Department of Transportation ETDM Coordinator's Degree of Effect for Secondary and Cumulative Effects was increased from Minimal to Substantial. - A list of technical studies was added. - General project commitments were added. - Information was added to the Project Description to give a better description on the Alternatives evaluated and the reasons for elimination. - A project cost estimate was added to the Purpose and Need Statement to assist the Metropolitan Planning Organizations (MPO) in programming projects and in deciding to what extent this project should have priority over other projects.

Permits

Permit Name	Type	Review Org	Review Date
Environmental Resource Permit	Water	FDOT District 7	05/07/08
FDEP NPDES General Permit	Other	FDOT District 7	05/07/08
FWC Gopher Tortoise Permit	Other	FDOT District 7	05/07/08

Technical Studies

Technical Study Name	Type	Review Org	Review Date
Noise Study Report	ENVIRONMENTAL	FDOT District 7	08/11/08
Public Hearing Transcript	ENVIRONMENTAL	FDOT District 7	08/11/08
Draft Environmental Assessment	ENVIRONMENTAL	FDOT District 7	08/11/08
Project Development Summary Report (PDSR)	ENGINEERING	FDOT District 7	08/11/08

Farmlands Assessment	Other	FDOT District 7	08/11/08
Air Quality Report	ENVIRONMENTAL	FDOT District 7	08/11/08
Cultural Resource Assessment	ENVIRONMENTAL	FDOT District 7	08/11/08
Endangered Species Biological Assessment	ENVIRONMENTAL	FDOT District 7	08/11/08
Environmental Assessment	ENVIRONMENTAL	FDOT District 7	08/11/08
Contamination Screening Evaluation Report	ENVIRONMENTAL	FDOT District 7	08/11/08
4 (f) Determination	Other	FDOT District 7	08/11/08
Wetlands Evaluation Report	ENVIRONMENTAL	FDOT District 7	08/11/08
Section 4f Evaluation	ENVIRONMENTAL	FDOT District 7	08/11/08
Class of Action Determination	ENVIRONMENTAL	FDOT District 7	08/11/08

Class of Action

Class of Action	Other Actions
Environmental Assessment	None
Lead Agency	Cooperating Agency/Agencies
Federal Highway Administration	

Signatures

	Name	Review Status	Date
FDOT ETDM Coordinator	Steve C. Love (FDOT District 7)	ACCEPTED	6/4/2008
Comments	No comments were found.		
	Name	Review Status	Date
Lead Agency ETAT Member	Linda Anderson (Federal Highway Administration)	ACCEPTED	8/12/2008
Comments	No comments were found.		

Dispute Resolution Activity Log

No Dispute Actions Found.

Legend			
Color Code	Meaning	ETAT	Public Involvement
0	None	The issue is present, but the project will have no impact on the issue; project has no adverse effect on ETAT resources; permit issuance or consultation involves routine interaction with the agency.	No community opposition to the planned project. No adverse effect on the community.
1	Enhanced	Project has positive effect on the ETAT resource or can reverse a previous adverse effect leading to environmental improvement.	Affected community supports the proposed project. Project has positive effect.
2	Minimal to None	Project has little adverse effect on ETAT resources. Permit issuance or consultation involves routine interaction with the agency. Low cost options are available to address concerns.	Minimum community opposition to the planned project. Minimum adverse effect on the community.
3	Moderate	Agency resources are affected by the proposed project, but avoidance and minimization options are available and can be addressed during development with a moderated amount of agency involvement and moderate cost impact.	Project has adverse effect on elements of the affected community. Public Involvement is needed to seek alternatives more acceptable to the community. Moderate community interaction will be required during project development.
4	Substantial	The project has substantial adverse effects but ETAT understands the project need and will be able to seek avoidance and minimization or mitigation options during project development. Substantial interaction will be required during project development and permitting.	Project has substantial adverse effects on the community and faces substantial community opposition. Intensive community interaction with focused Public Involvement will be required during project development to address community concerns.
5	Dispute Resolution	Project does not conform to agency statutory requirements and will not be permitted. Dispute resolution is required before the project proceeds to programming	Community strongly opposes the project. Project is not in conformity with local comprehensive plan and has severe negative impact on the affected community.
	No ETAT Consensus	ETAT members from different agencies assigned a different degree of effect to this project, and the ETDM coordinator has not assigned a summary degree of effect.	
	No ETAT Reviews	No ETAT members have reviewed the corresponding issue for this project, and the ETDM coordinator has not assigned a summary degree of effect.	

Durrance, Susan

From: Poole, MaryAnn <MaryAnn.Poole@MyFWC.com>
Sent: Friday, January 25, 2013 3:42 PM
To: Durrance, Susan
Cc: Conservation Planning Services
Subject: RE: Overpass Road Threatened and Endangered Species information request

I have received your correspondence and am forwarding it to the Florida Fish and Wildlife Conservation Commission (FWC), Conservation Planning Service's **new centralized e-mail box** for project reviews and assistance. Please be assured that the appropriate FWC review staff will receive your e-mail. **Please send all future notifications and documents to FWCConservationPlanningServices@myfwc.com.** You may remove my name (maryann.poole@myfwc.com) from your mailing list; however, all other FWC staff that you send information to will remain the same. If you wish to mail any hard copies, please address them to:

Conservation Planning Services
Florida Fish and Wildlife Conservation Commission
620 S. Meridian Street, MB 5B5
Tallahassee, FL 32399-1600

If you have any questions, please contact Jane Chabre by email at FWCConservationPlanningServices@myfwc.com or by phone at (850) 410-5367. Thank you.

From: Durrance, Susan [<mailto:susan.durrance@urs.com>]
Sent: Friday, January 25, 2013 3:39 PM
To: Poole, MaryAnn
Subject: Overpass Road Threatened and Endangered Species information request

Hello Mary Ann,

I sent a letter requesting updated information regarding threatened and endangered species for the Overpass Road project on January 4, 2013. I have attached a copy of the letter just in case you failed to receive it. If there have been any changes to the species in the vicinity of this project area, please let me know.

Thanks-

Susan Durrance
Environmental Scientist
URS CORPORATION SOUTHERN
7650 W. Courtney Campbell Causeway
Tampa, FL 33607-1462
Office Phone: 813-675-6862
Cell Phone: 813-220-7053

Durrance, Susan

From: Monaghan, Jane <jane_monaghan@fws.gov>
Sent: Monday, January 28, 2013 8:06 AM
To: Durrance, Susan
Subject: Re: Overpass Road Threatened and Endangered Species information request

Please visit our website for the information you requested.

www.northflorida.fws.gov

Feel free to call us if you have any questions after going to the website. You will find your County species list, survey guidelines, effect determination keys, standard protection measures, etc.

We no longer respond via letter to individual projects requests such as this and we have sent several emails, such as this one to your company informing them of this procedure. We have not done species list request for over 13 years. Our official response must be to ask the customer to go to the website.

Jane

On Fri, Jan 25, 2013 at 3:46 PM, Durrance, Susan <susan.durrance@urs.com> wrote:

Hi Jane,

I sent a letter requesting updated information regarding threatened and endangered species for the Overpass Road project on January 4, 2013. I have attached a copy of the letter just in case you failed to receive it. If there have been any changes to the species in the vicinity of this project area, please let me know.

Thanks-

Susan Durrance

Environmental Scientist

URS CORPORATION SOUTHERN

7650 W. Courtney Campbell Causeway

Tampa, FL 33607-1462

Office Phone: 813-675-6862

Cell Phone: 813-220-7053

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Jane Monaghan
Fish and Wildlife Biologist
USFWS
7915 Baymeadows Way, Suite 200
Jacksonville, FL 32256-7517
904-731-3119
904-731-3116 (main office)

Durrance, Susan

From: Gilbert, Terry <Terry.Gilbert@MyFWC.com>
Sent: Monday, January 28, 2013 4:55 PM
To: Durrance, Susan
Cc: Sanders, Scott; Gorham, Bonita; Chabre, Jane
Subject: Overpass Road Pasco County - Request for Protected Species Information
Attachments: Environmental Resource Analysis.htm

Susan: Attached is a habitat and wildlife resource GIS analysis of the Overpass Road project area in Pasco County as you requested in your letter dated January 4, 2013 to FWC. The technician ran a 1-mile buffer centered on the project area roadway map you provided. This preliminary information, which includes both FWC and some known Florida Natural Inventory (NFAI) data base records shows that the project area is rural, with both forested and herbaceous wetlands in addition to small streams along with natural ponds and lakes, together with scattered pinelands and both hardwoods and mixed hardwood pine uplands. Based on vegetation modeling, habitat quality of these systems appears to be good. Overall, a summary of the GIS information shows the following:

- Project area is within an official Consultation Area for the Florida Scrub Jay (FT) as designated by the U.S. Fish and Wildlife Service.
- Eight nesting colonies of the Federally Endangered wood stork are located with 15 miles of the roadway are partially supported by wetlands within the assessment area.
- The Florida burrowing owl (SSC) has been documented within the assessment area according to both FWC and FNAI records in 1999.
- FWC's Rare Fish Drainage Basins data base shows that the rare Ironcolor shiner has been documented in area streams and FWC and FNAI data base records shows that the Florida burrow owl (SSC) was documented in the assessment area in 1999.
- Modeling for potential habitat for imperiled and listed species based on upland and wetland vegetation indicates a number of listed species could be supported within the assessment area: Florida sandhill crane (ST), Sherman's fox squirrel (SSC), eastern indigo snake (FT), gopher frog (SSC), Florida pine snake (SSC), little blue heron (SSC), and wood stork (FE).

Please note that the above information is based on information within our GIS data base and does not of course substitute for onsite field surveys as were recommended in our March 24, 2008 EDTM Programming Phase comments. Based on the documented occurrence of the Florida burrowing owl in the assessment area, other species characteristic of xeric plant community types such as the gopher tortoise (ST), gopher frog (SSC), Eastern indigo snake (FT), Sherman's fox squirrel (SSC), and other listed species could potentially be present in and around the project area. Please call me if you have any questions or want to discuss, or need additional information.

FT – Federally Threatened

ST – State Threatened

SSC Species of Special Concern

Terry Gilbert
Wildlife Biologist
Florida Fish and Wildlife Conservation Commission

27 West Point Drive
Crawfordville, FL 32327

Cell: (850) 728-1103
terry.gilbert@MyFWC.com

Environmental Resource Analysis

Overpass_Road_Project_17091_.5milebuf_ERA_Analysis

Analysis Shape Type: Polyline

Analysis Timestamp: 01142013 10:43:15

Shape Name: Overpass_Road_Project_17091

Boundary Area: 0 acres

Buffer Area: 6061.09 acres

Total Area: 6061.09 acres

Log Projects

Log Projects in area- Polygons

Project Name and Log Number

Epperson_Ranch_3568

Date Created

8/3/2011 10:50:03 AM

Log Projects in area- Polygons (within buffer)

Project Name and Log Number

Epperson_Ranch_3568

Date Created

8/3/2011 10:50:03 AM

Log Projects in area- Lines

Project Name and Log Number

I75_from_CR54_to_SR52_15768

Date Created

1/9/2012 9:03:30 AM

Log Projects in area- Lines (within buffer)

Project Name and Log Number

I75_from_CR54_to_SR52_15768

Date Created

1/9/2012 9:03:30 AM

Log Projects in area- Points

No Records Found

Log Projects in area- Points (within buffer)

No Records Found

General Information

Township/Range/Section

PLSCODE

25S20E28

25S20E29

25S20E33

25S20E34

25S20E35

25S20E36

25S21E27

25S21E31

25S21E32

25S21E33

25S21E34

Township/Range/Section (within buffer)

PLSCODE

25S20E25

25S20E26

25S20E27

25S20E28

25S20E29

- 25S20E32
- 25S20E33
- 25S20E34
- 25S20E35
- 25S20E36
- 25S21E26
- 25S21E27
- 25S21E28
- 25S21E29
- 25S21E30
- 25S21E31
- 25S21E32
- 25S21E33
- 25S21E34
- 25S21E35

Counties

Counties

PASCO

Counties (within buffer)

Counties

PASCO

Coastal Construction Control

No Records Found

Federal Critical Habitat and Consultation Areas

FWS Critical Habitat Piping Plover

No Records Found

FWS Critical Habitat Piping Plover (within buffer)

No Records Found

FWS Consultation Area Piping Plover

No Records Found

FWS Consultation Area RCW

No Records Found

FWS Critical Habitat Flatwoods Salamander

No Records Found

FWS Critical Habitat (River) Gulf Sturgeon

No Records Found

FWS Critical Habitat (River) Gulf Sturgeon (within buffer)

No Records Found

FWS Critical Habitat (Marine) Gulf Sturgeon

No Records Found

FWS Critical Habitat (Marine) Gulf Sturgeon (within buffer)

No Records Found

Scrub Jay Consultation Area (Noted)

ACRES

16635701.5608

Scrub Jay Consultation Area (within buffer)

ACRES

16635701.5608

Florida Wood Stork Nesting Colony Core Foraging Areas (Noted)

Name

Buffer Distance in miles

611310	15
L Hillborough River/Swamp	15
Cypress Creek	15
Cross Creek	15
Devil's Creek	15
Little Gator Creek	15
Saddlebrook Resort	15
Heron Point	15

(Noted)
✓

Florida Wood Stork Nesting Colony Core Foraging Areas (within buffer)

Name	Buffer Distance in miles
611310	15
L Hillborough River/Swamp	15
Cypress Creek	15
Cross Creek	15
Devil's Creek	15
Little Gator Creek	15
Saddlebrook Resort	15
Heron Point	15
Lone Palm	18.6

FWS Sand Skink Consultation Area (if a value greater than 0 appears it is IN)

No Records Found

FWS Sand Skink Consultation Area (if a value greater than 0 appears it is IN) (within buffer)

No Records Found

Florida Grasshopper Sparrow Consultation Area (if a value greater than 0 appears it is IN)

No Records Found

Florida Grasshopper Sparrow Consultation Area (if a value greater than 0 appears it is IN) (within buffer)

No Records Found

FWS Caracara Consultation Area

No Records Found

FWC Panther Consultation Zone

No Records Found

Occurrence Information

FLEO

No Records Found

FLEO (within buffer)

Common Name	Scientific Name
Florida Burrowing Owl	Athene cunicularia floridana

FNAI Listed Species

Common Name	Scientific name	State Listing Status	Federal Listing status	# Features
✓ Florida Burrowing Owl	Athene cunicularia floridana	SSC	N	1
TOTAL:				1

(No total)

WILDOBS Listed Species see location notes for additional information

No Records Found

WILDOBS Listed Species see location notes for additional information

(within buffer)**Common Name**

Burrowing owl

Scientific Name

Speotyto cunicularia

SITE DATE

1999/07/13

Rarefish drainages

No Records Found

Rarefish drainages (within buffer)

No Records Found

Rare fish drainages update**Common Name**

Ironcolor shiner

Scientific Name

Notropis chalybaeus

Last Year Reported

1972

(Not Listed)

Rare fish drainages update (within buffer)**Common Name**

Ironcolor shiner

Scientific Name

Notropis chalybaeus

Last Year Reported

1972

Rare Fish

No Records Found

Rare Fish (within buffer)

No Records Found

Rare Fish Point Update

No Records Found

Rare Fish Point Update (within buffer)

No Records Found

Eagle Nests

No Records Found

Wading Bird Rookeries

No Records Found

USFWS Mussel Data

No Records Found

USFWS Mussel Data (within buffer)

No Records Found

Bear Kills 1976 to 2010

No Records Found

Bear Kills 1976 to 2010 (within buffer)

No Records Found

Scrub Jays Points

No Records Found

Scrub Jays Points (within buffer)

No Records Found

Snail Kite- Points

No Records Found

Snail Kite- Points (within buffer)

No Records Found

FWC RCW

No Records Found

FWC RCW (within buffer)

No Records Found

Caracara

No Records Found

Caracara (within buffer)

No Records Found

Burrowing Owl

No Records Found

Burrowing Owl (within buffer)

FID	SITE ID	SITE NAME	DATE OBSERVED
931	41634	PASC010007B	1999/07/13
2357	0		

Manatee Mortality (1974-2010) Coordinate with FWC Imperiled Species Management for manatee issues

No Records Found

Manatee Mortality (1974-2010) Coordinate with FWC Imperiled Species Management for manatee issues (within buffer)

No Records Found

Potential Habitat

Bear Range

No Records Found

FNAI Rare Imperiled spp Hab

Common Name	Scientific Name
Florida Sandhill Crane	Grus canadensis pratensis
Florida Sandhill Crane	Grus canadensis pratensis

FNAI Rare Imperiled spp Hab (within buffer)

Common Name	Scientific Name
Florida Sandhill Crane	Grus canadensis pratensis
Florida Sandhill Crane	Grus canadensis pratensis

FNAI Potential Natural Areas

NAME	PRIORITY	Site Description
ZZ	P5	Potential features - Basin swamp, xeric hammock, upland mixed forest, dome swamp, sinkhole lake (Hilsenbeck). // Wet flatwoods and mesic flatwoods (Sec. 36, Orange), bog, upland hardwood forest, basin swamp, strand swamp, flatwoods lake. Natural flatwood

FNAI Potential Natural Areas (within buffer)

NAME	PRIORITY	Site Description
ZZ	P5	Potential features - Basin swamp, xeric hammock, upland mixed forest, dome swamp, sinkhole lake (Hilsenbeck). // Wet flatwoods and mesic flatwoods (Sec. 36, Orange), bog, upland hardwood forest, basin swamp, strand swamp, flatwoods lake. Natural flatwood

FWC Mammal Potential Habitat

SPECIES	Total Area (acres)	Percent of Area
Bobcat	2.96	0.05 %
Florida black bear	111.62	1.84 %
Northern yellow bat (Common NL)	316.81	5.23 %
River otter NL	109.52	1.81 %
Round-tailed muskrat NL	58.72	0.97 %
Sherman's fox squirrel	114.52	1.89 %
TOTAL:	714.16	11.78 %

FWC Reptiles and Amphibians Potential Habitat

SPECIES	Total Area (acres)	Percent of Area
Eastern indigo snake	1,542.15	25.44 %
American alligator	186.05	3.07 %
Central Florida crowned snake	58.65	0.97 %
Peninsula mole skink	1.46	0.02 %
Gopher frog	49.03	0.81 %
Florida pine snake	2.47	0.04 %

TOTAL: 1,839.83 30.35 %

FWC Wading Birds Potential Habitat

SPECIES	Total Area (acres)	Percent of Area
Black rail (N)	41.21	0.68 %
Least bittern (N)	3.44	0.06 %
Great egret (N)	85.62	1.41 %
√ Little blue heron (SSC)	96.60	1.59 %
Black-crowned night-heron (N)	33.63	0.55 %
TOTAL:	260.50	4.3 %

FWC Songbirds Raptors Turkey Potential Habitat

SPECIES	Total Area (acres)	Percent of Area
Osprey (SSC) - <i>not in pasco - HUNTER CO. ONLY</i>	253.74	4.19 %
Hairy woodpecker (N)	19.51	0.32 %
Cooper's hawk (N)	193.44	3.19 %
√ Florida sandhill crane (T)	194.63	3.21 %
American swallow-tailed kite (N)	9.88	0.16 %
Wild turkey (N)	2.96	0.05 %
TOTAL:	674.18	11.12 %

SHCAs Total Acreage (caution- use at the county level or higher-not for parcel use)

Conservation Status	Total Area (acres)	Percent of Area
Priority Habitat	69.02	1.14 %
TOTAL:	69.02	1.14 %

SHCA Species Listing (caution- use at the county level or higher-not for parcel use)

SPECIES1	SPECIES2	SPECIES3	SPECIES4	SPECIES5	SPECIES6	SPECIES7	Total Area (acres)	Percent of Area
Wading birds							69.02	1.14 %
TOTAL:							69.02	1.14 %

SHCA Rank 6 being highest (caution- use at the county level or higher-not for parcel use)

RANKING	Total Area (acres)	Percent of Area
4	67.15	1.11 %
TOTAL:	67.15	1.11 %

Turtle Nesting Beaches

No Records Found

Turtle Nesting Beaches (within buffer)

No Records Found

Lands

FNAI Managed Areas

No Records Found

FNAI Managed Areas (within buffer)

No Records Found

Acquisition List - Florida Forever

No Records Found

Acquisition List - Florida Forever (within buffer)

No Records Found

Conservation lands 2006

No Records Found

Conservation lands 2006 (within buffer)

No Records Found

Florida Springs

No Records Found

Florida Springs (within buffer)

No Records Found

FNAI ConservationNeeds- Priority Habitats (ranked 1-6 1 is highest)

Priority Rank	Total Area (acres)	Percent of Area
Priority 4	2,294.82	37.86 %
	2,565.69	42.33 %
Priority 3	106.11	1.75 %
Priority 5	201.79	3.33 %
TOTAL:	5,168.42	85.27 %

FNAI ConservationNeeds- Under Represented Natural Communities

Community Type	Total Area (acres)	Percent of Area
Upland Hardwood Forest (G4)	41.92	0.69 %
Pine Flatwoods (G4)	7.16	0.12 %
TOTAL:	49.08	0.81 %

FNAI ConservationNeeds- Landscape-Sized Protection Areas (ranked 1-6 1 is highest)

No Records Found

FNAI ConservationNeeds- Sustainable Forestry Areas (ranked 1-6 1 is highest)

Priority Rank	Total Area (acres)	Percent of Area
	329.94	5.44 %
Priority 3	317.39	5.24 %
Priority 5	1,869.55	30.85 %
TOTAL:	2,516.87	41.53 %

Landowner Assistance Program Information

DOF_WHIP Longleaf Pine Priority Areas

Priority Area

West Central

DOF_WHIP Longleaf Pine Priority Areas (within buffer)

Priority Area

West Central

Landowner Assistance Program Focal Areas

No Records Found

Landowner Assistance Program Focal Areas (within buffer)

No Records Found

Cultural Resources

SHPO All Sites

No Records Found

SHPO All Sites (within buffer)

Site ID	SITE NAME	SITE TYPE 1	CULTURE1
PA00215	GATES	Indeterminate	Late Archaic
PA00444	DBD	Specialized site for procurement of raw materials	Twentieth century American, 1900-present
PA00448	COMAS # 8	Prehistoric quarry	Late Archaic
PA00464	MILLHOPPER	Land-terrestrial	Prehistoric lacking pottery

PA00465	CORAL TREATMENT PLANT	Campsite (prehistoric)	Late Archaic
PA00623	GOLDEN GROVE	Campsite (prehistoric)	Late Archaic
PA02005	COMAS # 1	Campsite (prehistoric)	Late Archaic
PA02006	COMAS # 2	Prehistoric lithics only, but not quarry	Late Archaic
PA02007	COMAS # 3	Campsite (prehistoric)	Late Archaic
PA02008	COMAS # 4	Campsite (prehistoric)	Late Archaic
PA02009	COMAS # 5	Campsite (prehistoric)	Late Archaic
PA02010	COMAS # 6	Campsite (prehistoric)	Archaic, 8500 B.C.-1000 B.C.
PA02011	COMAS # 7	Campsite (prehistoric)	Archaic, 8500 B.C.-1000 B.C.
PA02014	Palm Cove #1	Lithic scatter/quarry (prehistoric: no ceramics)	Prehistoric lacking pottery
PA02015	Palm Cove #2	Lithic scatter/quarry (prehistoric: no ceramics)	Prehistoric lacking pottery
PA02016	Palm Cove #3	Lithic scatter/quarry (prehistoric: no ceramics)	Prehistoric lacking pottery
PA02017	Palm Cove #4	Prehistoric quarry	Middle Archaic
PA02031	CURLEY ROAD	Lithic scatter/quarry (prehistoric: no ceramics)	
PA02032	ELAM ROAD	Lithic scatter/quarry (prehistoric: no ceramics)	
PA02038	Overpass Opine Site	Campsite (prehistoric)	Prehistoric with pottery
PA02063	Sanibel Site	Campsite (prehistoric)	Late Archaic
PA02139	Ashley Grove 1	Prehistoric lithics only, but not quarry	Prehistoric lacking pottery
PA02140	Dick Lake South	Prehistoric lithics only, but not quarry	Prehistoric lacking pottery
PA02141	Ashley Grove 2	Prehistoric lithics only, but not quarry	Prehistoric lacking pottery
PA02142	Ashley Grove 3	Prehistoric lithics only, but not quarry	Prehistoric lacking pottery
PA02344	Point Break	Campsite (prehistoric)	Early Archaic
PA02345	Johnny Utah	Specialized site for procurement of raw materials	Archaic, 8500 B.C.-1000 B.C.

SHPO Cemeteries

No Records Found

SHPO Cemeteries (within buffer)

No Records Found

SHPO Historic Structures

No Records Found

SHPO Historic Structures (within buffer)

SITE NAME	DESTROYED	YEAR BUILT
36405 Fairview Heights Road	NO	1926
Country Cottages	NO	c1950
Fred L. Gore Residence	NO	1920
Fred L. Gore Offices	YES	1957
Fred L. Gore--just acquired house	YES	1920
Fred L. Gore Feed Barn	NO	1925
8011 Gall Boulevard	NO	c1948
8044 Gall Boulevard	NO	c1948
Country Cottages - Building A	NO	c1950
Country Cottages - Building B	NO	c1950

Country Cottages - Building C	NO	c1950
Country Cottages - Building D	NO	c1950
Country Cottages - Building E	NO	c1950

Landcover

CooperativeLandCover_2010

Florida Land Cover Classification Name	All FLUCCS and Land Cover Name	Generalized Land Cover Name	Total Area (acres)	Percent of Area
Artificial Impoundment/Reservoir	3220 - Artificial Impoundment/Reservoir	8000 - Open Water	52.04	0.86 %
Bay Swamp	22311 - Bay Swamp	2230 - Other Hardwood Wetlands	30.55	0.5 %
Commercial & Services	18223 - Commercial & Services	1822 - High Intensity Urban	61.49	1.01 %
Coniferous Plantations	183232 - Coniferous Plantations	18323 - Tree Plantations	134.80	2.22 %
Cropland/Pasture	18321 - Cropland/Pasture	1832 - Agriculture	1,216.55	20.07 %
Cypress	2211 - Cypress	2210 - Cypress/Tupelo	154.65	2.55 %
Extractive	1870 - Extractive	1870 - Extractive	127.25	2.1 %
Floating/Emergent Aquatic Vegetation	2140 - Floating/Emergent Aquatic Vegetation	2100 - Freshwater Non-Forested Wetlands	10.03	0.17 %
Freshwater Marshes	2120 - Freshwater Marshes	2120 - Freshwater Marshes	297.11	4.9 %
Low Intensity Urban	1821 - Low Intensity Urban	1821 - Low Intensity Urban	90.23	1.49 %
Low Structure Density	18212 - Low Structure Density	1821 - Low Intensity Urban	864.09	14.26 %
Mesic Flatwoods	1311 - Mesic Flatwoods	1311 - Mesic Flatwoods	91.21	1.5 %
Mixed Hardwood-Coniferous	1400 - Mixed Hardwood-Coniferous	1400 - Mixed Hardwood-Coniferous	87.11	1.44 %
Mixed Wetland Hardwoods	2233 - Mixed Wetland Hardwoods	2230 - Other Hardwood Wetlands	186.87	3.08 %
Natural Lakes & Ponds	3100 - Natural Lakes & Ponds	8000 - Open Water	75.68	1.25 %
Non-vegetated Wetland	2300 - Non-vegetated Wetland	2300 - Non-vegetated Wetland	5.98	0.1 %
Orchards/Groves	18322 - Orchards/Groves	1832 - Agriculture	531.45	8.77 %
Other Coniferous Wetlands	2220 - Other Coniferous Wetlands	2220 - Other Coniferous Wetlands	42.60	0.7 %
Other Wetland Forested Mixed	2240 - Other Wetland Forested Mixed	2240 - Other Wetland Forested Mixed	156.27	2.58 %
Residential, High Density > 5 Dwelling Units/AC	18222 - Residential, High Density > 5 Dwelling Units/AC	1822 - High Intensity Urban	237.09	3.91 %
Residential, Med. Density	18221 - Residential, Med. Density - 2-5 Dwelling	1822 - High	241.08	3.98 %

2-5 Dwelling Units/AC	Units/AC	Intensity Urban		
Rural Open	1831 - Rural Open	1830 - Rural Lands	938.68	15.49 %
Rural Open Forested	18311 - Rural Open Forested	1830 - Rural Lands	7.25	0.12 %
Shrub and Brushland	1500 - Shrub and Brushland	1500 - Shrub and Brushland	80.69	1.33 %
Transportation	1840 - Transportation	1840 - Transportation	49.17	0.81 %
Upland Coniferous	1230 - Upland Coniferous	1200 - Other High Pine and Scrub	1.16	0.02 %
Urban Open Land	18211 - Urban Open Land	1821 - Low Intensity Urban	235.45	3.88 %
Utilities	1860 - Utilities	1860 - Utilities	5.00	0.08 %
Wet Prairie	2111 - Wet Prairie	2110 - Prairies and Bogs	49.56	0.82 %
		TOTAL:	6,061.09	100 %

Wetlands and Soils

Coastal Barrier Resources Unit COBRA

COBRA	Total Area (acres)	Percent of Area
COBRA_OUT	2,860.72	47.2 %
TOTAL:	2,860.72	47.2 %

NWI Statewide Composite

Wetland Code	WETLAND Type	Total Area (acres)	Percent of Area
L1UBH	Lake	36.58	0.6 %
PUBHx	Freshwater Pond	9.30	0.15 %
PAB3H	Freshwater Pond	5.53	0.09 %
PUBH	Freshwater Pond	65.20	1.08 %
PAB4H	Freshwater Pond	3.61	0.06 %
PAB4Hx	Freshwater Pond	0.55	0.01 %
PAB3G	Freshwater Pond	8.43	0.14 %
PFO7A	Freshwater Forested/Shrub Wetland	3.79	0.06 %
PFO1/4C	Freshwater Forested/Shrub Wetland	30.61	0.51 %
PFO1C	Freshwater Forested/Shrub Wetland	3.82	0.06 %
PFO4/1C	Freshwater Forested/Shrub Wetland	2.91	0.05 %
PSS3A	Freshwater Forested/Shrub Wetland	6.50	0.11 %
PSS1C	Freshwater Forested/Shrub Wetland	0.00	0 %
PSS3C	Freshwater Forested/Shrub Wetland	11.69	0.19 %
PFO3F	Freshwater Forested/Shrub Wetland	9.22	0.15 %
PFO6F	Freshwater Forested/Shrub Wetland	6.20	0.1 %
PFO7C	Freshwater Forested/Shrub Wetland	26.76	0.44 %
PFO4C	Freshwater Forested/Shrub Wetland	85.53	1.41 %
PFO1/4A	Freshwater Forested/Shrub Wetland	39.41	0.65 %
PFO4A	Freshwater Forested/Shrub Wetland	41.54	0.69 %
PFO2F	Freshwater Forested/Shrub Wetland	146.34	2.41 %
PFO3C	Freshwater Forested/Shrub Wetland	21.99	0.36 %
PEM1F	Freshwater Emergent Wetland	116.91	1.93 %
PEM1A	Freshwater Emergent Wetland	44.49	0.73 %
PEM1C	Freshwater Emergent Wetland	33.05	0.55 %
PEM1Fx	Freshwater Emergent Wetland	11.92	0.2 %
	TOTAL:	771.90	12.74 %

Priority wetlands class breakout

CLASS	SPECIES1	SPECIES2	SPECIES3	SPECIES4	SPECIES5	SPECIES6	Total Area (acres)	Percent of Area
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1-3 species, upland habitat	Black bear			112.96	1.86 %
1-3 species, upland habitat	Black bear	Florida sandhill crane		20.73	0.34 %
1-3 species, upland habitat	Florida sandhill crane			148.77	2.45 %
1-3 species, upland habitat	Gopher frog			29.28	0.48 %
1-3 species, wetland habitat	American alligator			14.07	0.23 %
1-3 species, wetland habitat	American alligator	Florida sandhill crane		4.94	0.08 %
1-3 species, wetland habitat	American alligator	Little blue heron	Wood stork	8.61	0.14 %
1-3 species, wetland habitat	Black bear			1.19	0.02 %
1-3 species, wetland habitat	Black bear	American alligator	Florida sandhill crane	4.94	0.08 %
1-3 species, wetland habitat	Black bear	Florida sandhill crane		4.94	0.08 %
1-3 species, wetland habitat	Florida sandhill crane			22.34	0.37 %
1-3 species, wetland habitat	Gopher frog			14.82	0.24 %
1-3 species, wetland habitat	Little blue heron	Florida sandhill crane	Wood stork	3.66	0.06 %
1-3 species, wetland habitat	Little blue heron	Wood stork		17.30	0.29 %

4-6 species, wetland habitat	American alligator	Little blue heron	Snowy egret	Tricolored heron	Wood stork	4.94	0.08 %
4-6 species, wetland habitat	American alligator	Little blue heron	Florida sandhill crane	Wood stork		7.41	0.12 %
4-6 species, wetland habitat	Black bear	American alligator	Little blue heron	Wood stork		2.47	0.04 %
4-6 species, wetland habitat	Black bear	American alligator	Little blue heron	Florida sandhill crane	Wood stork	7.41	0.12 %
4-6 species, wetland habitat	Gopher frog	Little blue heron	Snowy egret	Tricolored heron	Wood stork	4.94	0.08 %
4-6 species, wetland habitat	Little blue heron	Snowy egret	Tricolored heron	Wood stork		9.88	0.16 %
TOTAL:						445.62	7.35 %

Priority Wetlands Priority Values 1 being highest

PRIORITY	VAS	SPECIES1	SPECIES2	SPECIES3	SPECIES4	SPECIES5	SPECIES6	Total Area (acres)	Percent of Area
1		Black bear						112.96	1.86 %
1		Black bear	Florida sandhill crane					20.73	0.34 %
1		Florida sandhill crane						148.77	2.45 %
1		Gopher frog						29.28	0.48 %
3		American alligator						14.07	0.23 %
3		American alligator	Florida sandhill crane					4.94	0.08 %
3		American alligator	Little blue heron	Wood stork				8.61	0.14 %
3		Black bear						1.19	0.02 %
3		Black bear	American alligator	Florida sandhill crane				4.94	0.08 %
3		Black bear	Florida sandhill crane					4.94	0.08 %
3		Florida sandhill crane						22.34	0.37 %

3	Gopher frog					14.82	0.24 %
3	Little blue heron	Florida sandhill crane	Wood stork			3.66	0.06 %
3	Little blue heron	Wood stork				17.30	0.29 %
4	American alligator	Little blue heron	Snowy egret	Tricolored heron	Wood stork	4.94	0.08 %
4	American alligator	Little blue heron	Florida sandhill crane	Wood stork		7.41	0.12 %
4	Black bear	American alligator	Little blue heron	Wood stork		2.47	0.04 %
4	Black bear	American alligator	Little blue heron	Florida sandhill crane	Wood stork	7.41	0.12 %
4	Gopher frog	Little blue heron	Snowy egret	Tricolored heron	Wood stork	4.94	0.08 %
4	Little blue heron	Snowy egret	Tricolored heron	Wood stork		9.88	0.16 %
TOTAL:						445.62	7.35 %

Hydric Soils_SJRWMD

No Records Found

Hydric Soils_SFWMD

Soil Name	Hydric Ratng	Total Area (acres)	Percent of Area
Tavares-Urban land complex, 0 to 5 percent slopes	Unknown Hydric	10.35	0.17 %
Water	Unknown Hydric	112.29	1.85 %
Myakka fine sand	Partially Hydric	80.50	1.33 %
Blichton fine sand, 2 to 5 percent slopes	Partially Hydric	0.28	0 %
Pits	Partially Hydric	62.00	1.02 %
Blichton fine sand, 0 to 2 percent slopes	Partially Hydric	7.52	0.12 %
Smyrna fine sand	Partially Hydric	131.30	2.17 %
Okeelanta-Terra Ceia association	Partially Hydric	8.07	0.13 %
Pompano fine sand	Partially Hydric	43.81	0.72 %
Ona fine sand	Partially Hydric	30.13	0.5 %
Kanapaha fine sand, 0 to 5 percent slopes	Partially Hydric	8.12	0.13 %
Wauchula fine sand, 0 to 5 percent slopes	Partially Hydric	27.30	0.45 %
Basinger fine sand	Partially Hydric	5.45	0.09 %
Blichton fine sand, 5 to 8 percent slopes	Partially Hydric	14.11	0.23 %
Felda fine sand	Partially Hydric	22.31	0.37 %
Pomona fine sand	Partially Hydric	1,664.22	27.47 %
Chobee soils, frequently flooded	Partially Hydric	220.90	3.65 %
Narcoossee fine sand	Not Hydric	59.87	0.99 %
Pomello fine sand, 0 to 5 percent slopes	Not Hydric	17.57	0.29 %
Zolfo fine sand	Not Hydric	114.44	1.89 %
Sparr fine sand, 0 to 5 percent slopes	Not Hydric	607.91	10.03 %
Millhopper fine sand, 0 to 5 percent slopes	Not Hydric	247.70	4.09 %
Arredondo fine sand, 0 to 5 percent slopes	Not Hydric	529.38	8.74 %
Electra Variant fine sand, 0 to 5 percent slopes	Not Hydric	33.08	0.55 %
Tavares sand, 0 to 5 percent slopes	Not Hydric	152.82	2.52 %

Lochloosa fine sand, 0 to 5 percent slopes	Not Hydric	88.65	1.46 %
Kendrick fine sand, 5 to 8 percent slopes	Not Hydric	10.56	0.17 %
Lake fine sand, 0 to 5 percent slopes	Not Hydric	45.20	0.75 %
Adamsville fine sand	Not Hydric	63.36	1.05 %
Newnan fine sand, 0 to 5 percent slopes	Not Hydric	348.04	5.74 %
Kendrick fine sand, 0 to 5 percent slopes	Not Hydric	491.69	8.12 %
Cassia fine sand, 0 to 5 percent slopes	Not Hydric	97.19	1.6 %
Delray mucky fine sand	All Hydric	3.53	0.06 %
Zephyr muck	All Hydric	43.11	0.71 %
Anclote fine sand	All Hydric	24.74	0.41 %
Sellers mucky loamy fine sand	All Hydric	115.50	1.91 %
Placid fine sand	All Hydric	41.74	0.69 %
Basinger fine sand, depressional	All Hydric	108.16	1.79 %
Palmetto-Zephyr-Sellers complex	All Hydric	365.63	6.04 %
	TOTAL:	6,058.53	100 %

Hydric Soils_SFWMD

No Records Found

Gopher Tortoise_soils

No Records Found

Gopher Tortoise_soils (within buffer)

No Records Found

Gopher Tortoise_soils

mukeySoil Name	water depth to surface annual min centimeters	Drainage Classification
323213 Arredondo fine sand, 0 to 5 percent slopes		Well drained
323192 Basinger fine sand, depressional	0	Very poorly drained
323192 Basinger fine sand, depressional	0	Very poorly drained
323216 Cassia fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323208 Chobee soils, frequently flooded	8	Very poorly drained
323186 Electra Variant fine sand, 0 to 5 percent slopes	84	Somewhat poorly drained
323215 Kendrick fine sand, 0 to 5 percent slopes		Well drained
323202 Lake fine sand, 0 to 5 percent slopes		Excessively drained
323241 Millhopper fine sand, 0 to 5 percent slopes	129	Moderately well drained
323220 Myakka fine sand	7	Poorly drained
323195 Narcoossee fine sand	84	Somewhat poorly drained
323230 Newnan fine sand, 0 to 5 percent slopes	76	Somewhat poorly drained
323230 Newnan fine sand, 0 to 5 percent slopes	76	Somewhat poorly drained
323232 Palmetto-Zephyr-Sellers complex	0	Poorly drained
323232 Palmetto-Zephyr-Sellers complex	0	Poorly drained
323232 Palmetto-Zephyr-Sellers complex	0	Poorly drained
Palmetto-Zephyr-Sellers		

323232	complex	0	Poorly drained
323232	Palmetto-Zephyr-Sellers complex	0	Poorly drained
323232	Palmetto-Zephyr-Sellers complex	0	Poorly drained
323188	Pomona fine sand	7	Poorly drained
323188	Pomona fine sand	7	Poorly drained
323188	Pomona fine sand	7	Poorly drained
323188	Pomona fine sand	7	Poorly drained
323188	Pomona fine sand	7	Poorly drained
323250	Sellers mucky loamy fine sand	0	Very poorly drained
323190	Smyrna fine sand	7	Poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323231	Tavares sand, 0 to 5 percent slopes	145	Moderately well drained
323231	Tavares sand, 0 to 5 percent slopes	145	Moderately well drained
323177	Wauchula fine sand, 0 to 5 percent slopes	7	Poorly drained
323246	Zolfo fine sand	84	Somewhat poorly drained

Gopher Tortoise_soils (within buffer)

mukeySoil Name	water depth to surface annual min centimeters	Drainage Classification
323179Adamsville fine sand	84	Somewhat poorly drained
323179Adamsville fine sand	84	Somewhat poorly drained
323179Adamsville fine sand	84	Somewhat poorly drained
323179Adamsville fine sand	84	Somewhat poorly drained
323179Adamsville fine sand	84	Somewhat poorly drained
323179Adamsville fine sand	84	Somewhat poorly drained
323179Adamsville fine sand	84	Somewhat poorly drained
323179Adamsville fine sand	84	Somewhat poorly drained
323179Adamsville fine sand	84	Somewhat poorly drained

323196	Anclote fine sand	0	Very poorly drained
323196	Anclote fine sand	0	Very poorly drained
323213	Arredondo fine sand, 0 to 5 percent slopes		Well drained
323213	Arredondo fine sand, 0 to 5 percent slopes		Well drained
323213	Arredondo fine sand, 0 to 5 percent slopes		Well drained
323213	Arredondo fine sand, 0 to 5 percent slopes		Well drained
323213	Arredondo fine sand, 0 to 5 percent slopes		Well drained
323213	Arredondo fine sand, 0 to 5 percent slopes		Well drained
323191	Basinger fine sand	7	Poorly drained
323192	Basinger fine sand, depressional	0	Very poorly drained
323192	Basinger fine sand, depressional	0	Very poorly drained
323192	Basinger fine sand, depressional	0	Very poorly drained
323192	Basinger fine sand, depressional	0	Very poorly drained
323192	Basinger fine sand, depressional	0	Very poorly drained
323192	Basinger fine sand, depressional	0	Very poorly drained
323192	Basinger fine sand, depressional	0	Very poorly drained
323192	Basinger fine sand, depressional	0	Very poorly drained
323192	Basinger fine sand, depressional	0	Very poorly drained
323192	Basinger fine sand, depressional	0	Very poorly drained
323192	Basinger fine sand, depressional	0	Very poorly drained
323192	Basinger fine sand, depressional	0	Very poorly drained
323192	Basinger fine sand, depressional	0	Very poorly drained
323192	Basinger fine sand, depressional	0	Very poorly drained
323192	Basinger fine sand, depressional	0	Very poorly drained
323219	Blichton fine sand, 0 to 2 percent slopes	7	Poorly drained
323221	Blichton fine sand, 2 to 5 percent slopes	7	Poorly drained
323222	Blichton fine sand, 5 to 8 percent slopes	7	Poorly drained
323216	Cassia fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323216	Cassia fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323208	Chobee soils, frequently flooded	8	Very poorly drained
323208	Chobee soils, frequently flooded	8	Very poorly drained
323235	Delray mucky fine sand	0	Very poorly drained
323186	Electra Variant fine sand, 0 to 5 percent slopes	84	Somewhat poorly drained
323186	Electra Variant fine sand, 0 to 5 percent slopes	84	Somewhat poorly drained
323186	Electra Variant fine sand, 0 to 5 percent slopes	84	Somewhat poorly drained
323209	Felda fine sand	7	Poorly drained
323239	Kanapaha fine sand, 0 to 5 percent slopes	7	Poorly drained
323215	Kendrick fine sand, 0 to 5 percent slopes		Well drained
323215	Kendrick fine sand, 0 to 5 percent slopes		Well drained

323215	Kendrick fine sand, 0 to 5 percent slopes		Well drained
323215	Kendrick fine sand, 0 to 5 percent slopes		Well drained
323215	Kendrick fine sand, 0 to 5 percent slopes		Well drained
323215	Kendrick fine sand, 0 to 5 percent slopes		Well drained
323215	Kendrick fine sand, 0 to 5 percent slopes		Well drained
323215	Kendrick fine sand, 0 to 5 percent slopes		Well drained
323234	Kendrick fine sand, 5 to 8 percent slopes		Well drained
323202	Lake fine sand, 0 to 5 percent slopes		Excessively drained
323202	Lake fine sand, 0 to 5 percent slopes		Excessively drained
323218	Lochloosa fine sand, 0 to 5 percent slopes	114	Somewhat poorly drained
323218	Lochloosa fine sand, 0 to 5 percent slopes	114	Somewhat poorly drained
323218	Lochloosa fine sand, 0 to 5 percent slopes	114	Somewhat poorly drained
323218	Lochloosa fine sand, 0 to 5 percent slopes	114	Somewhat poorly drained
323218	Lochloosa fine sand, 0 to 5 percent slopes	114	Somewhat poorly drained
323241	Millhopper fine sand, 0 to 5 percent slopes	129	Moderately well drained
323241	Millhopper fine sand, 0 to 5 percent slopes	129	Moderately well drained
323220	Myakka fine sand	7	Poorly drained
323220	Myakka fine sand	7	Poorly drained
323195	Narcoossee fine sand	84	Somewhat poorly drained
323230	Newnan fine sand, 0 to 5 percent slopes	76	Somewhat poorly drained
323230	Newnan fine sand, 0 to 5 percent slopes	76	Somewhat poorly drained
323230	Newnan fine sand, 0 to 5 percent slopes	76	Somewhat poorly drained
323230	Newnan fine sand, 0 to 5 percent slopes	76	Somewhat poorly drained
323230	Newnan fine sand, 0 to 5 percent slopes	76	Somewhat poorly drained
323230	Newnan fine sand, 0 to 5 percent slopes	76	Somewhat poorly drained
323230	Newnan fine sand, 0 to 5 percent slopes	76	Somewhat poorly drained
323230	Newnan fine sand, 0 to 5 percent slopes	76	Somewhat poorly drained
323230	Newnan fine sand, 0 to 5 percent slopes	76	Somewhat poorly drained
323230	Newnan fine sand, 0 to 5 percent slopes	76	Somewhat poorly drained
323230	Newnan fine sand, 0 to 5 percent slopes	76	Somewhat poorly drained
323230	Newnan fine sand, 0 to 5 percent slopes	76	Somewhat poorly drained
323230	Newnan fine sand, 0 to 5 percent slopes	76	Somewhat poorly drained

323188	Pomona fine sand	7	Poorly drained
323188	Pomona fine sand	7	Poorly drained
323188	Pomona fine sand	7	Poorly drained
323188	Pomona fine sand	7	Poorly drained
323188	Pomona fine sand	7	Poorly drained
323188	Pomona fine sand	7	Poorly drained
323203	Pompano fine sand	8	Poorly drained
323250	Sellers mucky loamy fine sand	0	Very poorly drained
323250	Sellers mucky loamy fine sand	0	Very poorly drained
323250	Sellers mucky loamy fine sand	0	Very poorly drained
323250	Sellers mucky loamy fine sand	0	Very poorly drained
323250	Sellers mucky loamy fine sand	0	Very poorly drained
323250	Sellers mucky loamy fine sand	0	Very poorly drained
323250	Sellers mucky loamy fine sand	0	Very poorly drained
323250	Sellers mucky loamy fine sand	0	Very poorly drained
323250	Sellers mucky loamy fine sand	0	Very poorly drained
323190	Smyrna fine sand	7	Poorly drained
323190	Smyrna fine sand	7	Poorly drained
323190	Smyrna fine sand	7	Poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323242	Sparr fine sand, 0 to 5 percent slopes	77	Somewhat poorly drained
323231	Tavares sand, 0 to 5 percent slopes	145	Moderately well drained
323231	Tavares sand, 0 to 5 percent slopes	145	Moderately well drained
323231	Tavares sand, 0 to 5 percent slopes	145	Moderately well drained
323231	Tavares sand, 0 to 5 percent	145	Moderately well

	slopes		drained
323231	Tavares sand, 0 to 5 percent slopes	145	Moderately well drained
323231	Tavares sand, 0 to 5 percent slopes	145	Moderately well drained
323231	Tavares sand, 0 to 5 percent slopes	145	Moderately well drained
323231	Tavares sand, 0 to 5 percent slopes	145	Moderately well drained
323231	Tavares sand, 0 to 5 percent slopes	145	Moderately well drained
323231	Tavares sand, 0 to 5 percent slopes	145	Moderately well drained
323231	Tavares sand, 0 to 5 percent slopes	145	Moderately well drained
323183	Tavares-Urban land complex, 0 to 5 percent slopes	145	Moderately well drained
323252	Water		
323252	Water		
323252	Water		
323252	Water		
323252	Water		
323252	Water		
323252	Water		
323252	Water		
323252	Water		
323252	Water		
323252	Water		
323252	Water		
323252	Water		
323177	Wauchula fine sand, 0 to 5 percent slopes	7	Poorly drained
323177	Wauchula fine sand, 0 to 5 percent slopes	7	Poorly drained
323184	Zephyr muck	0	Very poorly drained
323184	Zephyr muck	0	Very poorly drained
323184	Zephyr muck	0	Very poorly drained
323184	Zephyr muck	0	Very poorly drained
323246	Zolfo fine sand	84	Somewhat poorly drained
323246	Zolfo fine sand	84	Somewhat poorly drained
323246	Zolfo fine sand	84	Somewhat poorly drained

Gopher Tortoise_soils

No Records Found

Gopher Tortoise_soils (within buffer)

No Records Found

Soils Information-SJRWMD

No Records Found

Soils Information-SJRWMD (within buffer)

No Records Found

Soils Information-SWFMD

mukey	Soil Name	drainage class	runoff potential	Highly Erodible Land
323213	Arredondo fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Poorly drained	High	No
323192	Basinger fine sand, depressional	Poorly drained	High	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323216	Cassia fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323216	Cassia fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very low	No
323216	Cassia fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323216	Cassia fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323216	Cassia fine sand, 0 to 5 percent slopes	Poorly drained	High	No
323208	Chobee soils, frequently flooded	Somewhat poorly drained	Very high	No
323208	Chobee soils, frequently flooded	Very poorly drained	Very high	No
323208	Chobee soils, frequently flooded	Very poorly drained	Negligible	No
323208	Chobee soils, frequently flooded	Very poorly drained	Negligible	No
323208	Chobee soils, frequently flooded	Very poorly drained	Very high	No
323208	Chobee soils, frequently flooded	Poorly drained	High	No
323186	Electra Variant fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323186	Electra Variant fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Poorly drained	Very high	No
323202	Lake fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323202	Lake fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323202	Lake fine sand, 0 to 5 percent	Well drained	Negligible	No

	slopes			
323202	Lake fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323202	Lake fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323241	Millhopper fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323241	Millhopper fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323241	Millhopper fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323241	Millhopper fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323241	Millhopper fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323241	Millhopper fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323241	Millhopper fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323220	Myakka fine sand	Somewhat poorly drained	Negligible	No
323220	Myakka fine sand	Poorly drained	High	No
323220	Myakka fine sand	Somewhat poorly drained	Low	No
323220	Myakka fine sand	Poorly drained	High	No
323220	Myakka fine sand	Poorly drained	High	No
323220	Myakka fine sand	Poorly drained	High	No
323220	Myakka fine sand	Poorly drained	High	No
323195	Narcoossee fine sand	Poorly drained	High	No
323195	Narcoossee fine sand	Somewhat poorly drained	Low	No
323195	Narcoossee fine sand	Somewhat poorly drained	Negligible	No
323230	Newnan fine sand, 0 to 5 percent slopes	Somewhat poorly drained	High	No
323230	Newnan fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323230	Newnan fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323230	Newnan fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323230	Newnan fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323230	Newnan fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323230	Newnan fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323230	Newnan fine sand, 0 to 5 percent slopes	Somewhat poorly drained	High	No
323232	Palmetto-Zephyr-Sellers complex	Very poorly drained	Negligible	No
323232	Palmetto-Zephyr-Sellers complex	Very poorly drained	Negligible	No
323232	Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232	Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232	Palmetto-Zephyr-Sellers complex	Very poorly drained	Negligible	No
323232	Palmetto-Zephyr-Sellers complex	Very poorly drained	Negligible	No
323232	Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No

323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No

323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323231	Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323231	Tavares sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323231	Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323231	Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323231	Tavares sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323177	Wauchula fine sand, 0 to 5 percent slopes	Poorly drained	High	No
323177	Wauchula fine sand, 0 to 5 percent slopes	Poorly drained	High	No
323177	Wauchula fine sand, 0 to 5 percent slopes	Poorly drained	High	No
323177	Wauchula fine sand, 0 to 5 percent slopes	Poorly drained	High	No
323177	Wauchula fine sand, 0 to 5 percent slopes	Poorly drained	High	No
323246	Zolfo fine sand	Moderately well drained	Negligible	No
323246	Zolfo fine sand	Somewhat poorly drained	Negligible	No
323246	Zolfo fine sand	Poorly drained	High	No
323246	Zolfo fine sand	Somewhat poorly drained	Negligible	No
323246	Zolfo fine sand	Moderately well drained	Low	No

Soils Information-SFWMD (within buffer)

mukeySoil Name	drainage class	runoff potential	Highly Erodible Land
323179Adamsville fine sand	Somewhat poorly drained	Negligible	No
323179Adamsville fine sand	Moderately well drained	Negligible	No
323179Adamsville fine sand	Somewhat poorly drained	Negligible	No
323179Adamsville fine sand	Somewhat poorly drained	Low	No
323179Adamsville fine sand	Somewhat poorly drained	Low	No
323179Adamsville fine sand	Somewhat poorly drained	Low	No
323179Adamsville fine sand	Somewhat poorly drained	Low	No
323179Adamsville fine sand	Somewhat poorly drained	Negligible	No
323179Adamsville fine sand	Moderately well drained	Negligible	No
323179Adamsville fine sand	Somewhat poorly drained	Negligible	No
323179Adamsville fine sand	Somewhat poorly drained	Low	No
323179Adamsville fine sand	Moderately well drained	Negligible	No
323179Adamsville fine sand	Somewhat poorly drained	Negligible	No
323179Adamsville fine sand	Somewhat poorly drained	Negligible	No
323179Adamsville fine sand	Moderately well drained	Negligible	No
323179Adamsville fine sand	Somewhat poorly drained	Negligible	No
323179Adamsville fine sand	Somewhat poorly drained	Negligible	No
323179Adamsville fine sand	Somewhat poorly drained	Low	No
323179Adamsville fine sand	Somewhat poorly drained	Negligible	No
323179Adamsville fine sand	Moderately well drained	Negligible	No
323179Adamsville fine sand	Somewhat poorly drained	Negligible	No
323179Adamsville fine sand	Moderately well drained	Negligible	No
323179Adamsville fine sand	Somewhat poorly drained	Low	No
323179Adamsville fine sand	Somewhat poorly drained	Negligible	No
323179Adamsville fine sand	Somewhat poorly drained	Low	No
323179Adamsville fine sand	Somewhat poorly drained	Negligible	No

323179	Adamsville fine sand	Somewhat poorly drained	Low	No
323179	Adamsville fine sand	Somewhat poorly drained	Negligible	No
323179	Adamsville fine sand	Moderately well drained	Negligible	No
323179	Adamsville fine sand	Somewhat poorly drained	Negligible	No
323179	Adamsville fine sand	Moderately well drained	Negligible	No
323179	Adamsville fine sand	Moderately well drained	Negligible	No
323179	Adamsville fine sand	Somewhat poorly drained	Negligible	No
323179	Adamsville fine sand	Somewhat poorly drained	Negligible	No
323179	Adamsville fine sand	Somewhat poorly drained	Negligible	No
323179	Adamsville fine sand	Somewhat poorly drained	Negligible	No
323196	Anclote fine sand	Poorly drained	High	No
323196	Anclote fine sand	Very poorly drained	Negligible	No
323196	Anclote fine sand	Very poorly drained	Negligible	No
323196	Anclote fine sand	Very poorly drained	Negligible	No
323196	Anclote fine sand	Very poorly drained	Negligible	No
323196	Anclote fine sand	Very poorly drained	Negligible	No
323196	Anclote fine sand	Very poorly drained	Negligible	No
323196	Anclote fine sand	Poorly drained	High	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No

323213	Arredondo fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323213	Arredondo fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323191	Basinger fine sand	Very poorly drained	Negligible	No
323191	Basinger fine sand	Poorly drained	High	No
323191	Basinger fine sand	Poorly drained	High	No
323191	Basinger fine sand	Poorly drained	Very high	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Poorly drained	High	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Poorly drained	High	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No

323192	Basinger fine sand, depressional	Poorly drained	High	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Poorly drained	High	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Poorly drained	High	No
323192	Basinger fine sand, depressional	Poorly drained	High	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Poorly drained	High	No
323192	Basinger fine sand, depressional	Poorly drained	High	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Poorly drained	High	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Poorly drained	High	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Poorly drained	High	No
323192	Basinger fine sand, depressional	Poorly drained	High	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Poorly drained	High	No
323192	Basinger fine sand, depressional	Very poorly drained	Negligible	No
323192	Basinger fine sand, depressional	Poorly drained	High	No
323192	Basinger fine sand, depressional	Poorly drained	High	No
323219	Blichton fine sand, 0 to 2 percent slopes	Poorly drained	Very high	No
323219	Blichton fine sand, 0 to 2 percent slopes	Poorly drained	Very high	No
323219	Blichton fine sand, 0 to 2 percent slopes	Poorly drained	High	No
323219	Blichton fine sand, 0 to 2 percent slopes	Somewhat poorly drained	Very high	No
323219	Blichton fine sand, 0 to 2 percent slopes	Somewhat poorly drained	Low	No
323219	Blichton fine sand, 0 to 2 percent slopes	Poorly drained	Very high	No
323221	Blichton fine sand, 2 to 5 percent slopes	Poorly drained	Very high	No
323221	Blichton fine sand, 2 to 5 percent slopes	Poorly drained	Very high	No
323221	Blichton fine sand, 2 to 5 percent slopes	Somewhat poorly drained	Low	No

323221	Blichton fine sand, 2 to 5 percent slopes	Somewhat poorly drained	Very high	No
323221	Blichton fine sand, 2 to 5 percent slopes	Poorly drained	High	No
323221	Blichton fine sand, 2 to 5 percent slopes	Poorly drained	Very high	No
323222	Blichton fine sand, 5 to 8 percent slopes	Somewhat poorly drained	Low	No
323222	Blichton fine sand, 5 to 8 percent slopes	Poorly drained	Very high	No
323222	Blichton fine sand, 5 to 8 percent slopes	Poorly drained	Very high	No
323222	Blichton fine sand, 5 to 8 percent slopes	Poorly drained	Very high	No
323222	Blichton fine sand, 5 to 8 percent slopes	Somewhat poorly drained	Very high	No
323222	Blichton fine sand, 5 to 8 percent slopes	Poorly drained	High	No
323216	Cassia fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323216	Cassia fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323216	Cassia fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very low	No
323216	Cassia fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very low	No
323216	Cassia fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323216	Cassia fine sand, 0 to 5 percent slopes	Poorly drained	High	No
323216	Cassia fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323216	Cassia fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323216	Cassia fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323216	Cassia fine sand, 0 to 5 percent slopes	Poorly drained	High	No
323208	Chobee soils, frequently flooded	Somewhat poorly drained	Very high	No
323208	Chobee soils, frequently flooded	Poorly drained	High	No
323208	Chobee soils, frequently flooded	Very poorly drained	Very high	No
323208	Chobee soils, frequently flooded	Very poorly drained	Negligible	No
323208	Chobee soils, frequently flooded	Very poorly drained	Very high	No
323208	Chobee soils, frequently flooded	Very poorly drained	Very high	No
323208	Chobee soils, frequently flooded	Very poorly drained	Very high	No
323208	Chobee soils, frequently flooded	Poorly drained	High	No
323208	Chobee soils, frequently flooded	Somewhat poorly drained	Very high	No
323208	Chobee soils, frequently flooded	Very poorly drained	Negligible	No
323208	Chobee soils, frequently flooded	Very poorly drained	Negligible	No
323208	Chobee soils, frequently flooded	Very poorly drained	Negligible	No
323235	Delray mucky fine sand	Very poorly drained	Negligible	No
323235	Delray mucky fine sand	Very poorly drained	Negligible	No
323235	Delray mucky fine sand	Very poorly drained	Negligible	No
	Electra Variant fine sand, 0 to 5	Somewhat poorly		

323186	percent slopes	drained	Low	No
323186	Electra Variant fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323186	Electra Variant fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323186	Electra Variant fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323186	Electra Variant fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323186	Electra Variant fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323209	Felda fine sand	Poorly drained	High	No
323209	Felda fine sand	Poorly drained	High	No
323209	Felda fine sand	Poorly drained	High	No
323239	Kanapaha fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323239	Kanapaha fine sand, 0 to 5 percent slopes	Poorly drained	High	No
323239	Kanapaha fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323239	Kanapaha fine sand, 0 to 5 percent slopes	Poorly drained	High	No
323239	Kanapaha fine sand, 0 to 5 percent slopes	Poorly drained	Very high	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Poorly drained	Very high	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Poorly drained	Very high	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Poorly drained	Very high	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Well drained	Negligible	No

323215	Kendrick fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Poorly drained	Very high	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Poorly drained	Very high	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Poorly drained	Very high	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Poorly drained	Very high	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Poorly drained	Very high	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323215	Kendrick fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323234	Kendrick fine sand, 5 to 8 percent slopes	Somewhat poorly drained	Low	No
323234	Kendrick fine sand, 5 to 8 percent slopes	Well drained	Very low	No
323234	Kendrick fine sand, 5 to 8 percent slopes	Well drained	Low	No
323202	Lake fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323202	Lake fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323202	Lake fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323202	Lake fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323202	Lake fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323202	Lake fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323202	Lake fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323202	Lake fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323202	Lake fine sand, 0 to 5 percent slopes	Well drained	Negligible	No

323202	Lake fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323218	Lochloosa fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323218	Lochloosa fine sand, 0 to 5 percent slopes	Poorly drained	Very high	No
323218	Lochloosa fine sand, 0 to 5 percent slopes	Poorly drained	Very high	No
323218	Lochloosa fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323218	Lochloosa fine sand, 0 to 5 percent slopes	Poorly drained	Very high	No
323218	Lochloosa fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323218	Lochloosa fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323218	Lochloosa fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323218	Lochloosa fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323218	Lochloosa fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323218	Lochloosa fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323218	Lochloosa fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323218	Lochloosa fine sand, 0 to 5 percent slopes	Poorly drained	Very high	No
323218	Lochloosa fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323218	Lochloosa fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323218	Lochloosa fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323218	Lochloosa fine sand, 0 to 5 percent slopes	Poorly drained	Very high	No
323218	Lochloosa fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323218	Lochloosa fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323218	Lochloosa fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323241	Millhopper fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323241	Millhopper fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323241	Millhopper fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323241	Millhopper fine sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323241	Millhopper fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323241	Millhopper fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323241	Millhopper fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No

323241	Millhopper fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323241	Millhopper fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323241	Millhopper fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323241	Millhopper fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323241	Millhopper fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323241	Millhopper fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323241	Millhopper fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323220	Myakka fine sand	Poorly drained	High	No
323220	Myakka fine sand	Poorly drained	High	No
323220	Myakka fine sand	Poorly drained	High	No
323220	Myakka fine sand	Poorly drained	High	No
323220	Myakka fine sand	Somewhat poorly drained	Negligible	No
323220	Myakka fine sand	Poorly drained	High	No
323220	Myakka fine sand	Poorly drained	High	No
323220	Myakka fine sand	Somewhat poorly drained	Low	No
323220	Myakka fine sand	Poorly drained	High	No
323220	Myakka fine sand	Poorly drained	High	No
323220	Myakka fine sand	Poorly drained	High	No
323220	Myakka fine sand	Somewhat poorly drained	Low	No
323220	Myakka fine sand	Somewhat poorly drained	Negligible	No
323220	Myakka fine sand	Poorly drained	High	No
323195	Narcoossee fine sand	Somewhat poorly drained	Negligible	No
323195	Narcoossee fine sand	Somewhat poorly drained	Low	No
323195	Narcoossee fine sand	Poorly drained	High	No
323230	Newnan fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323230	Newnan fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323230	Newnan fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323230	Newnan fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323230	Newnan fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323230	Newnan fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323230	Newnan fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323230	Newnan fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323230	Newnan fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323230	Newnan fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No

323232Palmetto-Zephyr-Sellers complex	Poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Negligible	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Negligible	No
323232Palmetto-Zephyr-Sellers complex	Poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Negligible	No
323232Palmetto-Zephyr-Sellers complex	Poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Negligible	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Negligible	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Negligible	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Negligible	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Negligible	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Negligible	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Negligible	No
323232Palmetto-Zephyr-Sellers complex	Poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Negligible	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No
323232Palmetto-Zephyr-Sellers complex	Very poorly drained	Very high	No

323250	Sellers mucky loamy fine sand	Very poorly drained	Negligible	No
323250	Sellers mucky loamy fine sand	Very poorly drained	Negligible	No
323250	Sellers mucky loamy fine sand	Very poorly drained	Negligible	No
323250	Sellers mucky loamy fine sand	Very poorly drained	Negligible	No
323250	Sellers mucky loamy fine sand	Very poorly drained	Negligible	No
323190	Smyrna fine sand	Poorly drained	High	No
323190	Smyrna fine sand	Poorly drained	High	No
323190	Smyrna fine sand	Somewhat poorly drained	Low	No
323190	Smyrna fine sand	Poorly drained	High	No
323190	Smyrna fine sand	Somewhat poorly drained	Low	No
323190	Smyrna fine sand	Poorly drained	High	No
323190	Smyrna fine sand	Poorly drained	High	No
323190	Smyrna fine sand	Poorly drained	High	No
323190	Smyrna fine sand	Poorly drained	High	No
323190	Smyrna fine sand	Poorly drained	High	No
323190	Smyrna fine sand	Somewhat poorly drained	Low	No
323190	Smyrna fine sand	Poorly drained	High	No
323190	Smyrna fine sand	Poorly drained	High	No
323190	Smyrna fine sand	Somewhat poorly drained	Negligible	No
323190	Smyrna fine sand	Poorly drained	High	No
323190	Smyrna fine sand	Poorly drained	High	No
323190	Smyrna fine sand	Somewhat poorly drained	Negligible	No
323190	Smyrna fine sand	Poorly drained	High	No
323190	Smyrna fine sand	Somewhat poorly drained	Negligible	No
323190	Smyrna fine sand	Poorly drained	High	No
323242	Sparr fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No

323242	slopes Sparr fine sand, 0 to 5 percent slopes	drained Somewhat poorly drained	Very high	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323242	Sparr fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323242	Sparr fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Very high	No
323242	Sparr fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No

323242	slopes	drained	Very high	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323242	Sparr fine sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323242	Sparr fine sand, 0 to 5 percent slopes	Well drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323231	Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323231	Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323231	Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323231	Tavares sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323231	Tavares sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323231	Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323231	Tavares sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323231	Tavares sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323231	Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No

323231Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323231Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323231Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323231Tavares sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323231Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323231Tavares sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323231Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323231Tavares sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323231Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323231Tavares sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323231Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained		

323231	Tavares sand, 0 to 5 percent slopes	drained	Low	No
323231	Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Low	No
323231	Tavares sand, 0 to 5 percent slopes	Moderately well drained	Low	No
323231	Tavares sand, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323231	Tavares sand, 0 to 5 percent slopes	Excessively drained	Negligible	No
323183	Tavares-Urban land complex, 0 to 5 percent slopes	Excessively drained	Negligible	No
323183	Tavares-Urban land complex, 0 to 5 percent slopes			
323183	Tavares-Urban land complex, 0 to 5 percent slopes	Somewhat poorly drained	Negligible	No
323183	Tavares-Urban land complex, 0 to 5 percent slopes	Moderately well drained	Negligible	No
323252	Water			
323252	Water			
323252	Water			
323252	Water			
323252	Water			
323252	Water			
323252	Water			
323252	Water			
323252	Water			
323252	Water			
323252	Water			
323252	Water			
323252	Water			
323177	Wauchula fine sand, 0 to 5 percent slopes	Poorly drained	High	No
323177	Wauchula fine sand, 0 to 5 percent slopes	Poorly drained	High	No
323177	Wauchula fine sand, 0 to 5 percent slopes	Poorly drained	High	No
323177	Wauchula fine sand, 0 to 5 percent slopes	Poorly drained	High	No
323177	Wauchula fine sand, 0 to 5 percent slopes	Poorly drained	High	No
323177	Wauchula fine sand, 0 to 5 percent slopes	Poorly drained	High	No
323177	Wauchula fine sand, 0 to 5 percent slopes	Poorly drained	High	No
323177	Wauchula fine sand, 0 to 5 percent slopes	Poorly drained	High	No
323177	Wauchula fine sand, 0 to 5 percent slopes	Poorly drained	High	No
323177	Wauchula fine sand, 0 to 5 percent slopes	Poorly drained	High	No
323177	Wauchula fine sand, 0 to 5 percent slopes	Poorly drained	High	No

323184Zephyr muck	Very poorly drained	Negligible	No
323184Zephyr muck	Very poorly drained	Negligible	No
323184Zephyr muck	Poorly drained	High	No
323184Zephyr muck	Poorly drained	High	No
323184Zephyr muck	Very poorly drained	Negligible	No
323184Zephyr muck	Very poorly drained	Negligible	No
323184Zephyr muck	Poorly drained	High	No
323184Zephyr muck	Very poorly drained	Negligible	No
323184Zephyr muck	Very poorly drained	Negligible	No
323184Zephyr muck	Poorly drained	High	No
323184Zephyr muck	Very poorly drained	Negligible	No
323184Zephyr muck	Very poorly drained	Negligible	No
323246Zolfo fine sand	Somewhat poorly drained	Negligible	No
323246Zolfo fine sand	Somewhat poorly drained	Negligible	No
323246Zolfo fine sand	Moderately well drained	Negligible	No
323246Zolfo fine sand	Somewhat poorly drained	Negligible	No
323246Zolfo fine sand	Moderately well drained	Low	No
323246Zolfo fine sand	Poorly drained	High	No
323246Zolfo fine sand	Moderately well drained	Negligible	No
323246Zolfo fine sand	Moderately well drained	Low	No
323246Zolfo fine sand	Poorly drained	High	No
323246Zolfo fine sand	Somewhat poorly drained	Negligible	No
323246Zolfo fine sand	Somewhat poorly drained	Negligible	No
323246Zolfo fine sand	Moderately well drained	Low	No
323246Zolfo fine sand	Poorly drained	High	No
323246Zolfo fine sand	Moderately well drained	Negligible	No
323246Zolfo fine sand	Somewhat poorly drained	Negligible	No
Soils Information-SFWMD			
No Records Found			
Soils Information-SFWMD (within buffer)			
No Records Found			



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Susan Durrance
URS Corporation
7650 West Courtney Campbell Causeway
Tampa, FL 33607

February 22, 2012

Dear Ms. Durrance,

Thank you for requesting information from the Florida Natural Areas Inventory (FNAI). We have compiled the following information for your project area.

Project: Overpass Road
Date Received: 02/21/2012
Location: Pasco County

Element Occurrences

A search of our maps and database indicates that we currently have several element occurrences mapped in the vicinity of the study area (see enclosed map and element occurrence table). Please be advised that a lack of element occurrences in the FNAI database is not a sufficient indication of the absence of rare or endangered species on a site.

Also attached are a map and table of wood stork occurrences in the vicinity of the project site. Seven documented wood stork occurrences fall within a 15 mile radius of the project site.

The element occurrences data layer includes occurrences of rare species and natural communities. The map legend indicates that some element occurrences occur in the general vicinity of the label point. This may be due to lack of precision of the source data, or an element that occurs over an extended area (such as a wide ranging species or large natural community). For animals and plants, element occurrences generally refer to more than a casual sighting; they usually indicate a viable population of the species. Note that some element occurrences represent historically documented observations which may no longer be extant. Extirpated element occurrences will be marked with an 'X' following the occurrence label on the enclosed map.

*Several of the species and natural communities tracked by the Inventory are considered **data sensitive**. Occurrence records for these elements contain information that we consider sensitive due to collection pressures, extreme rarity, or at the request of the source of the information. The Element Occurrence Record has been labeled "Data Sensitive." We request that you not publish or release specific locational data about these species or communities without consent from the Inventory. If you have any questions concerning this please do not hesitate to call.*

Likely and Potential Rare Species

In addition to documented occurrences, other rare species and natural communities may be identified on or near the site based on habitat models and species range models (see enclosed Biodiversity Matrix Report). These species should be taken into consideration in field surveys, land management, and impact avoidance and mitigation.



Florida Resources
and Environmental
Analysis Center

Institute of Science
and Public Affairs

The Florida State University

Tracking Florida's Biodiversity

FNAI habitat models indicate areas, which based on land cover type, offer suitable habitat for one or more rare species that is known to occur in the vicinity. Habitat models have been developed for approximately 300 of the rarest species tracked by the Inventory, including all federally listed species.

FNAI species range models indicate areas that are within the known or predicted range of a species, based on climate variables, soils, vegetation, and/or slope. Species range models have been developed for approximately 340 species, including all federally listed species.

The FNAI Biodiversity Matrix Geodatabase compiles Documented, Likely, and Potential species and natural communities for each square mile Matrix Unit statewide.

The Inventory always recommends that professionals familiar with Florida's flora and fauna conduct a site-specific survey to determine the current presence or absence of rare, threatened, or endangered species.

Please visit www.fnai.org/trackinglist.cfm for county or statewide element occurrence distributions and links to more element information.

The database maintained by the Florida Natural Areas Inventory is the single most comprehensive source of information available on the locations of rare species and other significant ecological resources. However, the data are not always based on comprehensive or site-specific field surveys. Therefore this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. Inventory data are designed for the purposes of conservation planning and scientific research, and are not intended for use as the primary criteria for regulatory decisions.

Information provided by this database may not be published without prior written notification to the Florida Natural Areas Inventory, and the Inventory must be credited as an information source in these publications. FNAI data may not be resold for profit.

Thank you for your use of FNAI services. An invoice will be mailed separately. If I can be of further assistance, please contact me at (850) 224-8207 or at mobrien@fnai.org.

Sincerely,

Michael O'Brien

Michael O'Brien
GIS / Data Services

Encl



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Florida Natural Areas Inventory

DOCUMENTED ELEMENT OCCURRENCES ON OR NEAR Overpass Road Site



		Global State Federal State Observation				EO Comments		
Map Label	Scientific Name	Common Name	Rank	Status	Listing	Date	Description	EO Comments
APHOAEGR*10	<i>Aphodius aegrotus</i>	Small Pocket Gopher Aphodius Beetle	G3G4	S3?	N	N	1997-12-03 -- 1997-12-23: No information given 1997-12-23 (U06SKE01FLUS).	1997-12-23: One specimen was collected from 1997-12-03 to 1997-12-23, most likely at light or in a malt and dung-baited pitfall trap in a pocket gopher burrow (U06SKE01FLUS, A01SKE02FLUS).
APHOLAEV*10	<i>Aphodius laevigatus</i>	Large Pocket Gopher Aphodius Beetle	G3G4	S3?	N	N	1997-12-03 -- 1997-12-23: No information given 1997-12-23 (U06SKE01FLUS).	1997-12-23: A total of 21 specimens were collected from 1997-12-02 to 1997-12-23, most likely at light or in malt and dung-baited pitfall traps set in pocket gopher burrows (U06SKE01FLUS, A01SKE02FLUS).
ARDEALBA*489	<i>Ardea alba</i>	Great Egret	G5	S4	N	N	1989-04-24	1989-04-24: D.E. Runde, GFC; 120=WOST nest count Total = C (also includes GREG, GBHE, ANHI?) (U97GFC02FLUS).
ATHEFLOR*110	<i>Athene cucicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC	1999-SP-SU	1999: 3 adults and no young observed (U99BOW01FLUS).
ATHEFLOR*28	<i>Athene cucicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC	1999	1999: Four territories - 6 adults and 0 young (too early?) observed (U99BOW01FLUS), 1990: OBSERVATION OF SEVERAL OWLS AND THEIR NESTS.
BIRDROOK*355	Bird Rookery		GNR	SNR	N	N	1989-06-12	Multi-species rookery, Little Blue Heron plus unidentified small white waders. >1,000 birds 1989-06-12.
DS*24527	Data Sensitive Element	Data Sensitive	G5	S1	N	LE	1979-03-04	Data Sensitive
EGRECAER*145	<i>Egretta caerulea</i>	Little Blue Heron	G5	S4	N	SSC	1989-06-12	Species present 1989-06-12.
GYMNCHAP*2	<i>Gymnopus chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N	1979-10-14	2004-10-05: Plant not found (PNDTAN01FLUS). 1979-10-14: Specimen fruiting (S79SAUSFFLUS).
HALILEUC*1518	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003	Nest status: Active, 2003, 2002, 2001, 2000, 1999; (U03FWC01FLUS)
MUSTPENI*48	<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N	1969-01-20	1969-01-20: L. N. Brown, ISU, observation. Animals found run over together at edge of southbound lane. Specimens in private collection of L.N. Brown (numbers unknown).



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Florida Natural Areas Inventory

DOCUMENTED ELEMENT OCCURRENCES ON OR NEAR Overpass Road Site



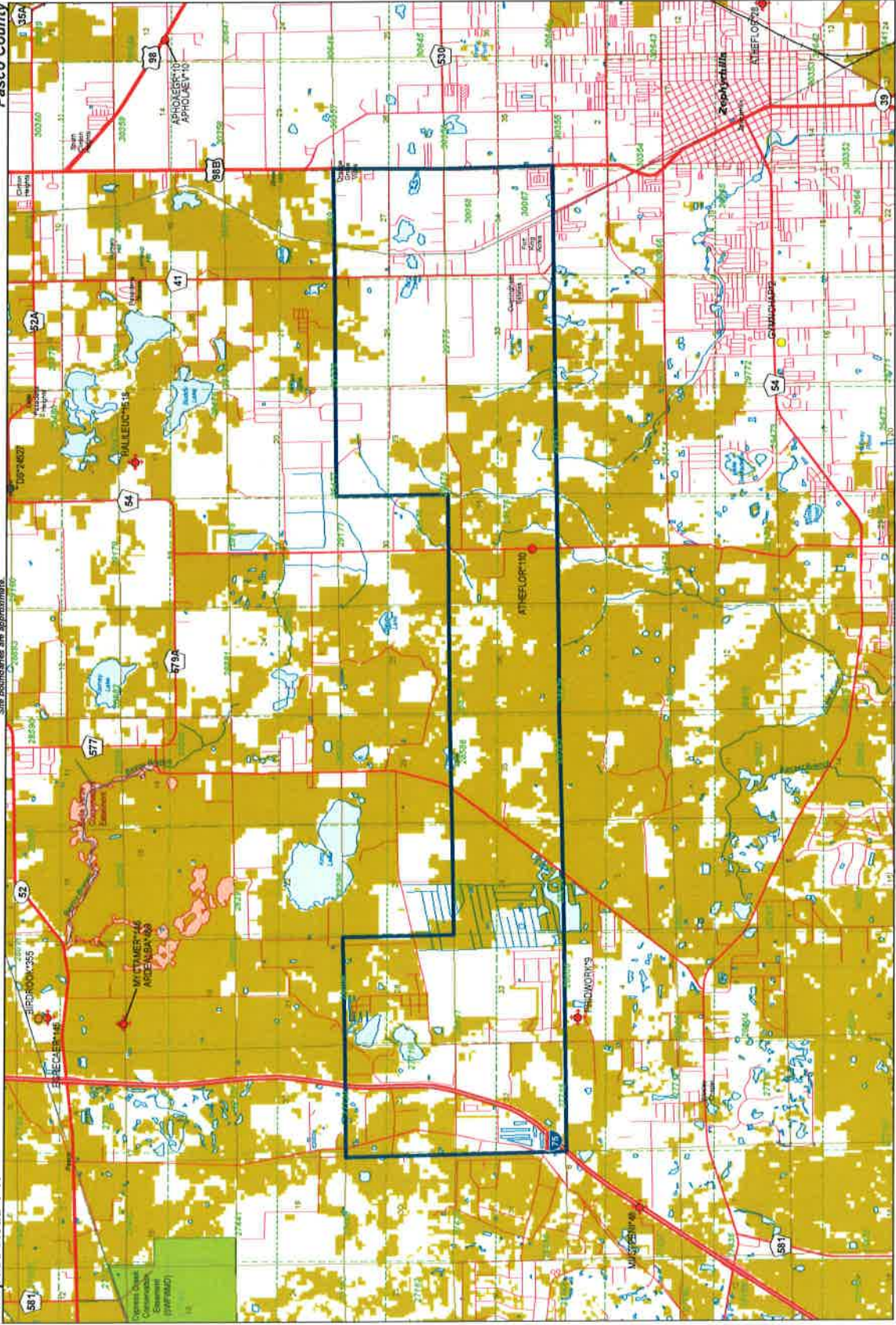
Map Label	Scientific Name	Common Name	Global Rank	Federal Rank	State Listing	Observation Date	Description	EO Comments
MYCTAMER*146	<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE	1989-04-24	No general description given
PHIDWORK*9	<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N	1963-09-25	1963-09-25: No description given (U08ALM01FLUS). 1963-09-25: One specimen was collected by S.A. Bustillo (U08ALM01FLUS).

1989/04/24: D.E. Runde, GFC.
 habitat=cypress head next to wet pasture;
 120=WOST nest count "Total" = C (also
 includes GREG, GBHE, ANHI?).

1963-09-25: One specimen was collected
 by S.A. Bustillo (U08ALM01FLUS).

Overpass Road Site

Pasco County



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- Element Occurrences**
- Animals
 - Plants
 - Communities
 - Other
 - Data Sensitive
- Point Indicates General Vicinity of Element**

U.S. Fish & Wildlife Service
Scrub Jay Survey 1992-96

- Conservation Lands**
- Federal
 - State
 - Local
 - Private
 - State Aquatic Preserves
 - Land Acquisition Projects
 - Florida Forester
 - Board of Trustees Projects

- FNAI Rare Species Habitat
- FNAI Biodiversity Matrix Square Mile Units
- County Boundary
- Interstate
- Turnpike
- Major Highway
- Local Road
- Railroad (Inactive railroads shown in Gray)
- Water

NOTE
Map should not be interpreted without accompanying documents.



Map produced by MCO
Map Date: 22 Feb 2012

Site boundaries are approximations

15 Mile Buffer of Overpass Road Site

Site boundaries are approximate.

Mycteria americana

Map produced by MGO
Map Date: 22 Feb 2012

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Element Occurrences

- Wood Stork Occurrence (Rookery and/or Foraging)
- ⊕ Point Indicates General Vicinity of Element

Wood Stork, *Mycteria americana*, Potential Habitat (Core Foraging Areas)

Conservation Lands

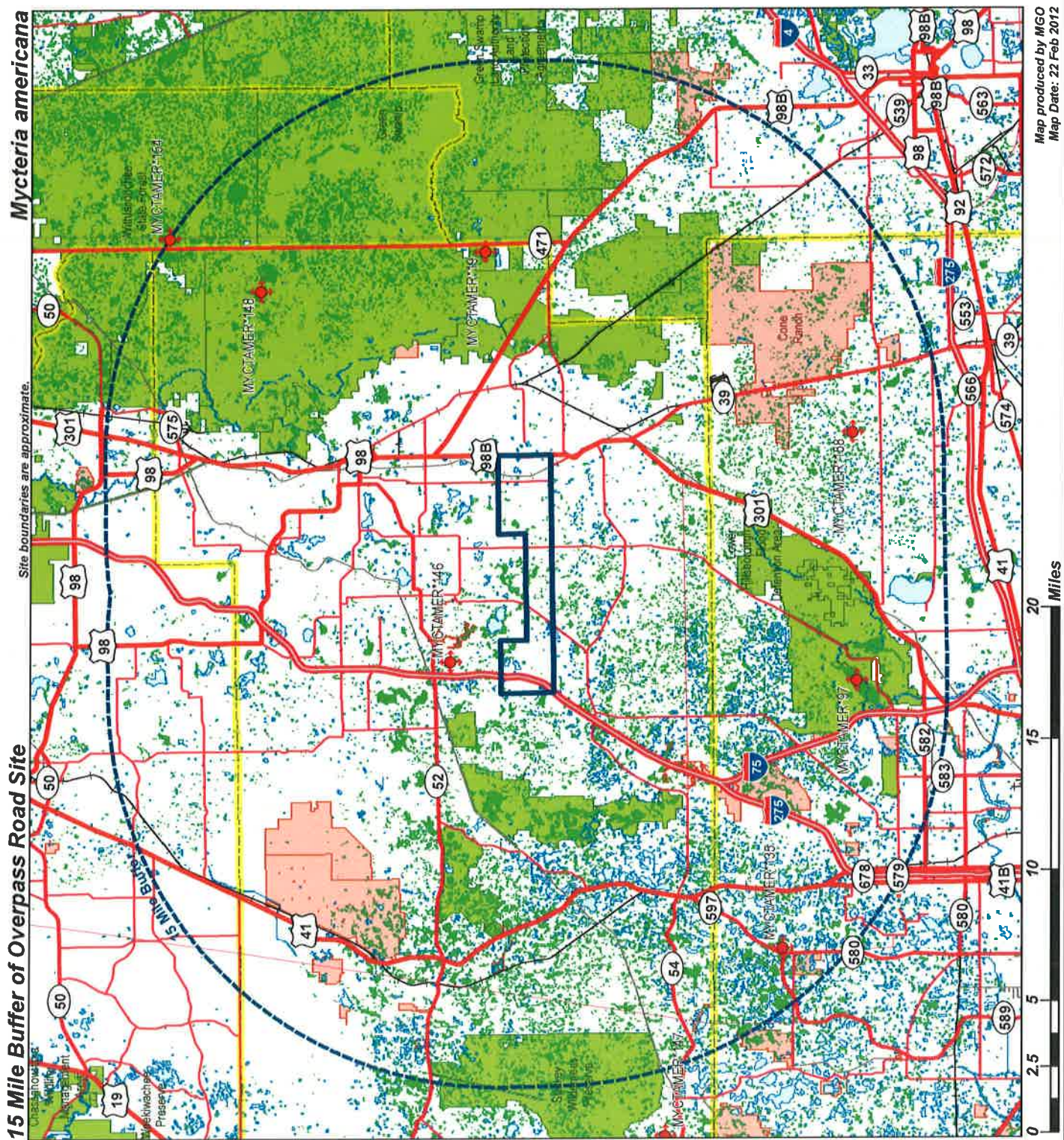
- Federal
- State
- Local
- Private
- State Aquatic Preserves

County Boundary

- Interstate
- Turnpike
- Major Highway
- Water



NOTE
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Florida Natural Areas Inventory

DOCUMENTED WOOD STORK OCCURRENCES IN THE VICINITY OF Overpass Road Site



Map Label	Scientific Name	Common Name	Rank	Status	Listing	Date	Observation	Description	EO Comments
✓ MYCTAMER*135	<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE	1988-06-07	Cypress swamp	1988/06/07: K.J. McGowan, GFC. HI-R-05 One stork incubating. Several old nests. "Total" = A.
✓ MYCTAMER*146	<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE	1989-04-24	No general description given	1989/04/24: D.E. Runde, GFC. habitat=cypress head next to wet pasture; 120=WOST nest count "Total" = C (also includes GREG, GBHE, ANHI?).
MYCTAMER*147	<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE	1989-04-24	No general description given	1989/04/24: D.E. Runde, GFC. habitat=cypress pond in pasture; copter flight; GREG large young, WOST low "Total" = B (includes GREG, GRHE, WOST).
✓ MYCTAMER*148	<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE	1989-04-24	Lowland forest or swamp	1989/04/24: D.E. Runde, GFC. copter flight; habitat= lone oak snag in swamp "Total" = C (includes GREG, WOST, SMMWHITE).
✓ MYCTAMER*154	<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE	1987-04-28	Lowland forest or swamp	1987/04/28: D.E. Runde, GFC. "Total" = 180 (includes GREG, WOST).
✓ MYCTAMER*158	<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE	2004-10-05	2004-10-05: Edge of Taxodium ascends dome swamp in improved pasture of bahia grass (PNDTAN01FLUS).	2004-10-05: Two adults foraging on edge of wetland (PNDTAN01FLUS).
✓ MYCTAMER*19	<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE	1989-04-24	1989-04-24: colony site is an open area in cypress swamp over a creek; habitat surrounding area is cypress and swamp hardwoods; nesting substrate of cypress, swamp hardwoods and understory shrubs over water (U82NES01FLUS).	Species present 1976-04 (150 nesting pairs), 1976-06 (15-20 nesting pairs), 1977-04 (150-200 nesting pairs), 1977-07 (25 nesting pairs), 1978-04 (350+ nesting pairs), 1978-07 (50-75 nesting pairs), 1987-04-28, 1988-06-17, 1989-01-14, and 1989-04-24. (U91
✓ MYCTAMER*97	<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE	1988-06-07	No general description given	Species present 1987-06-30 (101-250 birds), 1988-05-27 (1-10 birds), and 1988-06-07 (1-10 birds).



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Florida Natural Areas Inventory

Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Matrix Unit ID: 27438					
Likely					
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE
Potential					
<i>Andropogon arctatus</i>	Pine-woods Bluestem	G3	S3	N	LT
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Carex chapmanii</i>	Chapman's Sedge	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Chionanthus pygmaeus</i>	Pygmy Fringe Tree	G3	S3	LE	LE
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Liatris ohlingerae</i>	Florida Blazing Star	G3	S3	LE	LE
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina atopocarpa</i>	Florida Beargrass	G3	S3	N	LT
<i>Nolina brittoniana</i>	Britton's Beargrass	G3	S3	LE	LE
<i>Panicum abscissum</i>	Cutthroat Grass	G3	S3	N	LE
<i>Paronychia chartacea</i> ssp. <i>chartacea</i>	Paper-like Nailwort	G3T3	S3	LT	LE
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Polygala lewtonii</i>	Lewton's Polygala	G3	S3	LE	LE
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	G4G5T2	S2	LE	FE
<i>Salix floridana</i>	Florida Willow	G2	S2	N	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE
<i>Warea carteri</i>	Carter's Warea	G3	S3	LE	LE

Matrix Unit ID: 27439

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N

Definitions: Documented - Rare species and natural communities documented on or near this site.
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 Potential - This site lies within the known or predicted range of the species listed.



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Florida Natural Areas Inventory

Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE
Potential					
<i>Andropogon arctatus</i>	Pine-woods Bluestem	G3	S3	N	LT
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Carex chapmanii</i>	Chapman's Sedge	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium var. gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Liatris ohlingerae</i>	Florida Blazing Star	G3	S3	LE	LE
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropsis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulae</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina atopocarpa</i>	Florida Beargrass	G3	S3	N	LT
<i>Nolina brittoniana</i>	Britton's Beargrass	G3	S3	LE	LE
<i>Panicum abscissum</i>	Cutthroat Grass	G3	S3	N	LE
<i>Paronychia chartacea ssp. chartacea</i>	Paper-like Nailwort	G3T3	S3	LT	LE
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Polygala lewtonii</i>	Lewton's Polygala	G3	S3	LE	LE
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	G4G5T2	S2	LE	FE
<i>Salix floridana</i>	Florida Willow	G2	S2	N	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE
<i>Warea carteri</i>	Carter's Warea	G3	S3	LE	LE

in
field

Matrix Unit ID: 27440

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE

Potential

<i>Andropogon arctatus</i>	Pine-woods Bluestem	G3	S3	N	LT
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE

10700

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Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Carex chapmanii</i>	Chapman's Sedge	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina atopocarpa</i>	Florida Beargrass	G3	S3	N	LT
<i>Nolina brittoniana</i>	Britton's Beargrass	G3	S3	LE	LE
<i>Panicum abscissum</i>	Cutthroat Grass	G3	S3	N	LE
<i>Paronychia chartacea</i> ssp. <i>chartacea</i>	Paper-like Nailwort	G3T3	S3	LT	LE
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
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<i>Polygala lewtonii</i>	Lewton's Polygala	G3	S3	LE	LE
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	G4G5T2	S2	LE	FE
<i>Salix floridana</i>	Florida Willow	G2	S2	N	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE
<i>Warea carteri</i>	Carter's Warea	G3	S3	LE	LE

Matrix Unit ID: 27718

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE

Potential

<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Carex chapmanii</i>	Chapman's Sedge	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE

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Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropsis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina brittoniana</i>	Britton's Beargrass	G3	S3	LE	LE
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Polygala lewtonii</i>	Lewton's Polygala	G3	S3	LE	LE
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	G4G5T2	S2	LE	FE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE

Matrix Unit ID: 27719

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE

Potential

<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium var. gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropsis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Polygala lewtonii</i>	Lewton's Polygala	G3	S3	LE	LE
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE

Matrix Unit ID: 27720

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Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Likely					
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE
Potential					
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Digitaria floridana</i>	Florida Fingergrass	G1	S1	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium var. gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropsis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Polygala lewtonii</i>	Lewton's Polygala	G3	S3	LE	LE
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	G4G5T2	S2	LE	FE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE

Matrix Unit ID: 28006

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE

Potential

<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium var. gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropsis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE

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<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina brittoniana</i>	Britton's Beargrass	G3	S3	LE	LE
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Polygala lewtonii</i>	Lewton's Polygala	G3	S3	LE	LE
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	G4G5T2	S2	LE	FE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	ST*

Matrix Unit ID: 28007

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE

Potential

<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium var. gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropsis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Polygala lewtonii</i>	Lewton's Polygala	G3	S3	LE	LE
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	G4G5T2	S2	LE	FE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	ST*

Matrix Unit ID: 28008

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Likely					
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE
Potential					
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Digitaria floridana</i>	Florida Fingergrass	G1	S1	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium var. gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Polygala lewtonii</i>	Lewton's Polygala	G3	S3	LE	LE
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	G4G5T2	S2	LE	FE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	ST*

Matrix Unit ID: 28294

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE

Potential

<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium var. gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE

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<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Polygala lewtonii</i>	Lewton's Polygala	G3	S3	LE	LE
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	G4G5T2	S2	LE	FE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	ST*

Matrix Unit ID: 28295

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE

Potential

<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Polygala lewtonii</i>	Lewton's Polygala	G3	S3	LE	LE
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	G4G5T2	S2	LE	FE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	ST*

Matrix Unit ID: 28585

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
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Mesic flatwoods		G4	S4	N	N
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE
Potential					
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina brittoniana</i>	Britton's Beargrass	G3	S3	LE	LE
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Pituophis melanoleucus mugitus</i>	Florida Pine Snake	G4T3	S3	N	SSC
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Polygala lewtonii</i>	Lewton's Polygala	G3	S3	LE	LE
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	G4G5T2	S2	LE	FE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	ST*

Matrix Unit ID: 28586

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE

Potential

<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE

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<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropsis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulae</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Polygala lewtonii</i>	Lewton's Polygala	G3	S3	LE	LE
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	G4G5T2	S2	LE	FE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	ST*

Matrix Unit ID: 28878

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE

Potential

<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium var. gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropsis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulae</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina brittoniana</i>	Britton's Beargrass	G3	S3	LE	LE
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Pituophis melanoleucus mugitus</i>	Florida Pine Snake	G4T3	S3	N	SSC
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Polygala lewtonii</i>	Lewton's Polygala	G3	S3	LE	LE
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	G4G5T2	S2	LE	FE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE

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<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	ST*
Matrix Unit ID: 28879					
Likely					
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE
Potential					
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina brittoniana</i>	Britton's Beargrass	G3	S3	LE	LE
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Pituophis melanoleucus mugitus</i>	Florida Pine Snake	G4T3	S3	N	SSC
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Polygala lewtonii</i>	Lewton's Polygala	G3	S3	LE	LE
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	G4G5T2	S2	LE	FE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE
Matrix Unit ID: 29175					
Documented					
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
Likely					
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE
Potential					
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT

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<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropsis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina brittoniana</i>	Britton's Beargrass	G3	S3	LE	LE
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Pituophis melanoleucus mugitus</i>	Florida Pine Snake	G4T3	S3	N	SSC
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Polygala lewtonii</i>	Lewton's Polygala	G3	S3	LE	LE
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	G4G5T2	S2	LE	FE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC

Matrix Unit ID: 29176

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE

Potential

<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Carex chapmanii</i>	Chapman's Sedge	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropsis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina brittoniana</i>	Britton's Beargrass	G3	S3	LE	LE
<i>Notophthalmus perstriatus</i>	Striped Newt	G2G3	S2S3	C	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE

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<i>Pituophis melanoleucus mugitus</i>	Florida Pine Snake	G4T3	S3	N	SSC
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE
<i>Warea carteri</i>	Carter's Warea	G3	S3	LE	LE

Matrix Unit ID: 29475

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE

Potential

<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Carex chapmanii</i>	Chapman's Sedge	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina brittoniana</i>	Britton's Beargrass	G3	S3	LE	LE
<i>Notophthalmus perstriatus</i>	Striped Newt	G2G3	S2S3	C	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Polygala lewtonii</i>	Lewton's Polygala	G3	S3	LE	LE
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	G4G5T2	S2	LE	FE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC

Matrix Unit ID: 29476

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE

Potential

<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
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<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Carex chapmanii</i>	Chapman's Sedge	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina brittoniana</i>	Britton's Beargrass	G3	S3	LE	LE
<i>Notophthalmus perstriatus</i>	Striped Newt	G2G3	S2S3	C	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Platanthera integra</i>	Yellow Fringeless Orchid	G3G4	S3	N	LE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE
<i>Warea carteri</i>	Carter's Warea	G3	S3	LE	LE

Matrix Unit ID: 29477

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE
Sandhill upland lake		G3	S2	N	N

Potential

<i>Asplenium heteroresiliens</i>	Wagner's Spleenwort	GNA	S1	N	N
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Carex chapmanii</i>	Chapman's Sedge	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE

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Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina brittoniana</i>	Britton's Beargrass	G3	S3	LE	LE
<i>Notophthalmus perstriatus</i>	Striped Newt	G2G3	S2S3	C	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Platanthera integra</i>	Yellow Fringeless Orchid	G3G4	S3	N	LE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE
<i>Warea carteri</i>	Carter's Warea	G3	S3	LE	LE

Matrix Unit ID: 29774

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE

Potential

<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Carex chapmanii</i>	Chapman's Sedge	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina brittoniana</i>	Britton's Beargrass	G3	S3	LE	LE
<i>Notophthalmus perstriatus</i>	Striped Newt	G2G3	S2S3	C	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Polygala lewtonii</i>	Lewton's Polygala	G3	S3	LE	LE
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	G4G5T2	S2	LE	FE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC

Matrix Unit ID: 29775

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE
Upland hardwood forest		G5	S3	N	N

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Potential					
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropsis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Notophthalmus perstriatus</i>	Striped Newt	G2G3	S2S3	C	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE
Matrix Unit ID: 29776					
Likely					
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE
Sandhill upland lake		G3	S2	N	N
Upland hardwood forest		G5	S3	N	N
Potential					
<i>Asplenium heteroresiliens</i>	Wagner's Spleenwort	GNA	S1	N	N
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropsis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Notophthalmus perstriatus</i>	Striped Newt	G2G3	S2S3	C	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Platanthera integra</i>	Yellow Fringeless Orchid	G3G4	S3	N	LE

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<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE
<i>Warea carteri</i>	Carter's Warea	G3	S3	LE	LE

Matrix Unit ID: 30067

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE
Upland hardwood forest		G5	S3	N	N

Potential

<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Carex chapmanii</i>	Chapman's Sedge	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium var. gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropsis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina brittoniana</i>	Britton's Beargrass	G3	S3	LE	LE
<i>Notophthalmus perstriatus</i>	Striped Newt	G2G3	S2S3	C	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	G4G5T2	S2	LE	FE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC

Matrix Unit ID: 30068

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE
Upland hardwood forest		G5	S3	N	N

Potential

<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Carex chapmanii</i>	Chapman's Sedge	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT

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<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropsis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Notophthalmus perstriatus</i>	Striped Newt	G2G3	S2S3	C	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	ST*

Matrix Unit ID: 30069

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE
Sandhill		G3	S2	N	N
Upland hardwood forest		G5	S3	N	N

Potential

<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropsis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	ST*

Matrix Unit ID: 30355

Likely

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<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE
Sandhill		G3	S2	N	N
Upland hardwood forest		G5	S3	N	N
Potential					
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Carex chapmanii</i>	Chapman's Sedge	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropsis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulae</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina brittoniana</i>	Britton's Beargrass	G3	S3	LE	LE
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Polygala lewtonii</i>	Lewton's Polygala	G3	S3	LE	LE
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	G4G5T2	S2	LE	FE
<i>Sceloporus woodi</i>	Florida Scrub Lizard	G3	S3	N	N
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	ST*

Matrix Unit ID: 30356

Likely

<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE
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Potential

<i>Asplenium heteroresiliens</i>	Wagner's Spleenwort	GNA	S1	N	N
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Carex chapmanii</i>	Chapman's Sedge	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Lupinus aridorum</i>	Scrub Lupine	G1	S1	LE	LE

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FLORIDA
Natural Areas
INVENTORY

Florida Natural Areas Inventory

Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina brittoniana</i>	Britton's Beargrass	G3	S3	LE	LE
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Polygala lewtonii</i>	Lewton's Polygala	G3	S3	LE	LE
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Sceloporus woodi</i>	Florida Scrub Lizard	G3	S3	N	N
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	ST*
<i>Warea carteri</i>	Carter's Warea	G3	S3	LE	LE

Matrix Unit ID: 30357

Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE
Upland hardwood forest		G5	S3	N	N

Potential

<i>Asplenium heteroresiliens</i>	Wagner's Spleenwort	GNA	S1	N	N
<i>Athene cucularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamintha ashei</i>	Ashe's Savory	G3	S3	N	LT
<i>Carex chapmanii</i>	Chapman's Sedge	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eriogonum longifolium var. gnaphalifolium</i>	Scrub Buckwheat	G4T3	S3	LT	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass	G3	S3	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Litsea aestivalis</i>	Pondspice	G3	S2	N	LE
<i>Lupinus aridorum</i>	Scrub Lupine	G1	S1	LE	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Monotropsis reynoldsiae</i>	Pygmy Pipes	G1Q	S1	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina brittoniana</i>	Britton's Beargrass	G3	S3	LE	LE
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<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Sceloporus woodi</i>	Florida Scrub Lizard	G3	S3	N	N
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Triphora craigheadii</i>	Craighead's Nodding-caps	G1	S1	N	LE
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	ST*
<i>Warea carteri</i>	Carter's Warea	G3	S3	LE	LE

Definitions: Documented - Rare species and natural communities documented on or near this site.
 Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.
 Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.
 Potential - This site lies within the known or predicted range of the species listed.



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Definitions: *Documented - Rare species and natural communities documented on or near this site.*
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Elements and Element Occurrences

An **element** is any exemplary or rare component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature.

An **element occurrence (EO)** is an area of land and/or water in which a species or natural community is, or was, present. An EO should have practical conservation value for the Element as evidenced by potential continued (or historical) presence and/or regular recurrence at a given location.

Element Ranking and Legal Status

Using a ranking system developed by NatureServe and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks for each element. The global rank is based on an element's worldwide status; the state rank is based on the status of the element in Florida. Element ranks are based on many factors, the most important ones being estimated number of Element Occurrences (EOs), estimated abundance (number of individuals for species; area for natural communities), geographic range, estimated number of adequately protected EOs, relative threat of destruction, and ecological fragility.

FNAI GLOBAL ELEMENT RANK

- G1** = Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- G2** = Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- G3** = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- G4** = Apparently secure globally (may be rare in parts of range).
- G5** = Demonstrably secure globally.
- GH** = Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker).
- GX** = Believed to be extinct throughout range.
- GXC** = Extirpated from the wild but still known from captivity or cultivation.
- G#?** = Tentative rank (e.g., G2?).
- G#G#** = Range of rank; insufficient data to assign specific global rank (e.g., G2G3).
- G#T#** = Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1).
- G#Q** = Rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q).
- G#T#Q** = Same as above, but validity as subspecies or variety is questioned.
- GU** = Unrankable; due to a lack of information no rank or range can be assigned (e.g., GUT2).
- GNA** = Ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- GNR** = Element not yet ranked (temporary).
- GNRTNR** = Neither the element nor the taxonomic subgroup has yet been ranked.

FNAI STATE ELEMENT RANK

- S1** = Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- S2** = Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- S3** = Either very rare and local in Florida (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- S4** = Apparently secure in Florida (may be rare in parts of range).
- S5** = Demonstrably secure in Florida.
- SH** = Of historical occurrence in Florida, possibly extirpated, but may be rediscovered (e.g., ivory-billed woodpecker).
- SX** = Believed to be extirpated throughout Florida.
- SU** = Unrankable; due to a lack of information no rank or range can be assigned.
- SNA** = State ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- SNR** = Element not yet ranked (temporary).

FEDERAL LEGAL STATUS

Legal status information provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant federal agency.

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

C = Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.

LE = Endangered: species in danger of extinction throughout all or a significant portion of its range.

LE, LT = Species currently listed endangered in a portion of its range but only listed as threatened in other areas

LE, PDL = Species currently listed endangered but has been proposed for delisting.

LE, PT = Species currently listed endangered but has been proposed for listing as threatened.

LE, XN = Species currently listed endangered but tracked population is a non-essential experimental population.

LT = Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.

SAT = Treated as threatened due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.

SC = Not currently listed, but considered a "species of concern" to USFWS.

STATE LEGAL STATUS

Provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant state agency.

Animals: Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

FE = Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service

FT = Listed as Threatened Species at the Federal level by the U. S. Fish and Wildlife Service

F(XN) = Federal listed as an experimental population in Florida

FT(S/A) = Federal Threatened due to similarity of appearance

ST = State population listed as Threatened by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future. (ST* for *Ursus americanus floridanus* (Florida black bear) indicates that this status does not apply in Baker and Columbia counties and in the Apalachicola National Forest. ST* for *Neovison vison* pop.1 (Southern mink, South Florida population) indicates that this status applies to the Everglades population only.)

SSC = Listed as Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. (SSC* indicates that a species has SSC status only in selected portions of its range in Florida. SSC* for *Pandion haliaetus* (Osprey) indicates that this status applies in Monroe county only.)

N = Not currently listed, nor currently being considered for listing.

Plants: Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 5B-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505 or see: <http://www.doacs.state.fl.us/pi/>.

LE = Endangered: species of plants native to Florida that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue; includes all species determined to be endangered or threatened pursuant to the U.S. Endangered Species Act.

LT = Threatened: species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in number as to cause them to be Endangered.

N = Not currently listed, nor currently being considered for listing.

Element Occurrence Ranking

FNAI ranks of quality of the element occurrence in terms of its viability (EORANK). Viability is estimated using a combination of factors that contribute to continued survival of the element at the location. Among these are the size of the EO, general condition of the EO at the site, and the conditions of the landscape surrounding the EO (e.g. an immediate threat to an EO by local development pressure could lower an EO rank).

- A** = Excellent estimated viability
- A?** = Possibly excellent estimated viability
- AB** = Excellent or good estimated viability
- AC** = Excellent, good, or fair estimated viability
- B** = Good estimated viability
- B?** = Possibly good estimated viability
- BC** = Good or fair estimated viability
- BD** = Good, fair, or poor estimated viability
- C** = Fair estimated viability
- C?** = Possibly fair estimated viability
- CD** = Fair or poor estimated viability
- D** = Poor estimated viability
- D?** = Possibly poor estimated viability
- E** = Verified extant (viability not assessed)
- F** = Failed to find
- H** = Historical
- NR** = Not ranked, a placeholder when an EO is not (yet) ranked.
- U** = Unrankable
- X** = Extirpated

*For additional detail on the above ranks see: <http://www.natureserve.org/explorer/eorankguide.htm>

FNAI also uses the following EO ranks:

- H?** = Possibly historical
- F?** = Possibly failed to find
- X?** = Possibly extirpated

The following offers further explanation of the H and X ranks as they are used by FNAI:

The rank of H is used when there is a lack of recent field information verifying the continued existence of an EO, such as (a) when an EO is based only on historical collections data; or (b) when an EO was ranked A, B, C, D, or E at one time and is later, without field survey work, considered to be possibly extirpated due to general habitat loss or degradation of the environment in the area. This definition of the H rank is dependent on an interpretation of what constitutes "recent" field information. Generally, if there is no known survey of an EO within the last 20 to 40 years, it should be assigned an H rank. While these time frames represent suggested maximum limits, the actual time period for historical EOs may vary according to the biology of the element and the specific landscape context of each occurrence (including anthropogenic alteration of the environment). Thus, an H rank may be assigned to an EO before the maximum time frames have lapsed. Occurrences that have not been surveyed for periods exceeding these time frames should not be ranked A, B, C, or D. The higher maximum limit for plants and communities (i.e., ranging from 20 to 40 years) is based upon the assumption that occurrences of these elements generally have the potential to persist at a given location for longer periods of time. This greater potential is a reflection of plant biology and community dynamics. However, landscape factors must also be considered. Thus, areas with more anthropogenic impacts on the environment (e.g., development) will be at the lower end of the range, and less-impacted areas will be at the higher end.

The rank of X is assigned to EOs for which there is documented destruction of habitat or environment, or persuasive evidence of eradication based on adequate survey (i.e., thorough or repeated survey efforts by one or more experienced observers at times and under conditions appropriate for the Element at that location).



Atlas of Florida's Natural Heritage

Biodiversity, Landscapes, Stewardship, and Opportunities

The Florida Natural Areas Inventory is pleased to announce the publication of the ***Atlas of Florida's Natural Heritage: Biodiversity, Landscapes, Stewardship, and Opportunities***. This high-quality, full-color *Atlas* is sure to become a standard reference for anyone involved in the conservation, management, study, or enjoyment of Florida's rich natural resources. We hope the *Atlas* will inspire, educate, and raise awareness of and interest in biodiversity and conservation issues.



*Institute of Science
and Public Affairs*



AUDIENCE:

The ***Atlas of Florida's Natural Heritage: Biodiversity, Landscapes, Stewardship, and Opportunities*** was envisioned as a resource that would appeal to a wide-ranging audience. Through its use of colorful maps, graphics, and photography, Florida's Natural Heritage and appeal is dramatically highlighted. It is intended to appeal to a wide audience. Hopefully, it will increase awareness of the resources we take for granted, and the challenges we face in preserving them.

It is for those who are informed, interested, and/or influential in environmental issues, but may lack specific information and expertise. These may include planners, policymakers, and environmental/conservation advocates from the local to state level. It is also for environmental/conservation/natural resource managers. While the atlas may not provide "new information" to this audience, it will serve as a useful reference that brings many of the elements of biodiversity together in one publication. The final audience are the citizens of Florida and those who may visit our state.

We want the atlas to inspire, educate, and raise awareness of and the interest in biodiversity and conservation issues. Florida's biodiversity is not only important to maintain our quality of life, but it is a primary reason why so many people visit our state.

FEATURES INCLUDE:

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- Visually striking presentation with hundreds of maps, photos, illustrations, and other information-rich graphics
- Wide-ranging overview of natural communities and over 400 species of plants, and animals
- Coverage of timely conservation and land management issues



Learn more about the *Atlas*, view sample pages and order your copy today at:

FloridasNaturalHeritage.org

APPENDIX H

Listed Species Documented within Pasco County

**LISTED PLANT AND ANIMAL SPECIES DOCUMENTED WITHIN
PASCO COUNTY**

Species	Designated Status			Habitat Preference	Habitat Present within the PSA?	Documented within One Mile of PSA?
	FWS ¹	FDA ²	FWC ³			
Plants						
Auricled spleenwort <i>Asplenium erosum</i>	NL	E		Wetland hammocks, cypress swamps.	Yes	No
Sinkhole fern <i>Blechnum occidentale</i>	NL	E		Pine flatwoods.	Yes	No
Sand butterfly pea <i>Centrosema arenicola</i>	NL	E		Sandhill, scrubby flatwoods, dry upland woods.	Yes	No
Tampa vervain <i>Glandularia tampensis</i>	NL	E		Live oak, pine flatwoods with palmetto understory.	Yes	No
Pond spice <i>Litsea aestivalis</i>	NL	E		Edges of baygalls, flatwoods ponds, cypress domes.	Yes	No
Pygmy pipes <i>Monotropis reynoldsiae</i>	NL	E		Upland mixed hardwood forest, mesic and xeric hammock, sand pine and oak scrub.	Yes	No
Narrowleaf naiad <i>Najas filifolia</i>	NL	T		Freshwater lakes and river reaches.	No	No
Celestial lily <i>Nemastylis floridana</i>	NL	E		Wet flatwoods, prairies, marshes, cabbage palm hammock edges.	Yes	No
Britton's beargrass <i>Nolina brittoniana</i>	E	E		Scrub, sandhill, scrubby flatwoods, and xeric hammock.	No	No
Hand fern <i>Ophioglossum palmatum</i>	NL	E		Maritime hammocks and wet hammocks.	Yes	No
Plume polypody <i>Pecluma plumula</i>	NL	E		Tree branches or limestone in hammocks, wet woods, and lime sinks.	Yes	No
Amphibians						
Striped newt <i>Notophthalmus perstriatus</i>	C		NL	Xeric uplands with ephemeral wetlands, needs frequent fire, undisturbed soils and vegetative groundcover.	No	No
Gopher frog <i>Rana capito</i>	NL		SSC	Dry sandy uplands, sandhill, scrub that includes isolated wetlands or large ponds.	Yes	No

**LISTED PLANT AND ANIMAL SPECIES DOCUMENTED WITHIN
PASCO COUNTY**

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	FWS ¹	FDA ²	FWC ³			
Reptiles						
Loggerhead <i>Caretta caretta</i>	T		FT	Marine coastal and oceanic waters.	No	No
Green turtle <i>Chelonia mydas</i>	E		FE	Marine coastal and oceanic waters.	No	No
Leatherback <i>Dermochelys coriacea</i>	E		FE	Marine coastal and oceanic waters.	No	No
Eastern indigo snake <i>Drymarchon corais couperi</i>	T		FT	Scrub and sandhill to wet prairies and mangrove swamps.	Yes	No
Gopher tortoise <i>Gopherus polyphemus</i>	C		T	Dry uplands, sandhills, scrub, xeric oak hammock, pastures, and roadsides.	Yes	Yes
Short-tailed snake <i>Lampropeltis extenuata</i>	NL		T	Dry sandy uplands, especially longleaf pine-turkey oak and sometimes adjacent xeric oak hammocks and rosemary-sand pine scrub.	Yes	No
Kemp's ridley <i>Lepidochelys kempii</i>	E		FE	Marine coastal and oceanic waters.	No	No
Florida pine snake <i>Pituophis melanoleucus mugitus</i>	NL		SSC	Open canopies and dry sandy soil.	Yes	No
Suwannee cooter <i>Pseudemys concinna suwanniensis</i>	NL		SSC	Rivers and large streams, including alluvial, blackwater, and spring-run streams, often with dense aquatic vegetation upon which species feeds.	No	No
Birds						
Scott's seaside sparrow <i>Ammodramus maritimus peninsulae</i>	NL		SSC	Extensive stands of black needle rush, with smooth cord grass and scattered areas of salt grass.	No	No
Florida scrub jay <i>Aphelocoma coerulescens</i>	T		FT	Fire-dominated, low-growing, oak scrub habitat found on well-drained sandy soils.	Yes	No
Limpkin <i>Aramus guarauna</i>	NL		SSC	Mangroves, freshwater marshes, swamps, springs and spring runs, and pond and river margins.	Yes	No

**LISTED PLANT AND ANIMAL SPECIES DOCUMENTED WITHIN
PASCO COUNTY**

Species	Designated Status			Habitat Preference	Habitat Present within the PSA?	Documented within One Mile of PSA?
	FWS ¹	FDA ²	FWC ³			
Florida burrowing owl <i>Athene cunicularia floridana</i>	NL		SSC	High, sparsely vegetated, sandy ground. Natural habitats include dry prairie and sandhill.	Yes	Yes
Piping plover <i>Charadrius melodus</i>	T		FT	Found on open, sandy beaches and on tidal mudflats and sandflats along both coasts.	No	No
Marian's marsh wren <i>Cistothorus palustris marianae</i>	NL		SSC	Black needle rush and taller vegetation found along tidal creeks.	No	No
Little blue heron <i>Egretta caerulea</i>	NL		SSC	Permanently and seasonally flooded wetlands, streams, lakes, and swamps, and in manmade impoundments and ditches.	Yes	Yes
Snowy egret <i>Egretta thula</i>	NL		SSC	Permanently and seasonally flooded wetlands, streams, lakes, and swamps, and in manmade impoundments and ditches.	Yes	No
Tricolored heron <i>Egretta tricolor</i>	NL		SSC	Permanently and seasonally flooded wetlands, streams, lakes, and swamps, and in manmade impoundments and ditches.	Yes	No
White ibis <i>Eudocimus albus</i>	NL		SSC	Permanently and seasonally flooded wetlands, streams, lakes, and swamps, and in manmade impoundments and ditches.	Yes	Yes
Southeastern American kestrel <i>Falco sparverius paulus</i>	NL		T	Open pine habitats, woodland edges, prairies and pastures.	Yes	No
Florida sandhill crane <i>Grus canadensis pratensis</i>	NL		T	Prairies, freshwater marshes, and pastures.	Yes	Yes
American oystercatcher <i>Haematopus palliatus</i>	NL		SSC	Beach, sandbar, mud flat, and shellfish beds.	No	No
Wood stork <i>Mycteria americana</i>	T		TE	Nests in inundated forested wetlands. Forages in freshwater marshes, swamps, flooded pastures.	Yes	Yes
Brown pelican <i>Pelecanus occidentalis</i>	NL		SSC	Shallow estuarine waters and (less often) far offshore.	No	No

**LISTED PLANT AND ANIMAL SPECIES DOCUMENTED WITHIN
PASCO COUNTY**

Species	Designated Status			Habitat Preference	Habitat Present within the PSA?	Documented within One Mile of PSA?
	FWS ¹	FDA ²	FWC ³			
Roseate spoonbill <i>Platalea ajaja</i>	NL		SSC	Marine tidal flats and ponds, coastal marshes, mangrove-dominated inlets and pools, and freshwater sloughs and marshes.	Yes	No
Black skimmer <i>Rynchops niger</i>	NL		SSC	Coastal waters, including beaches, bays, estuaries, sandbars, tidal creeks.	No	No
Least tern <i>Sternula antillarum</i>	NL		T	Coastal shallow habitats and shorelines.	No	No
Mammals						
Florida mouse <i>Podomys floridanus</i>	NL		SSC	Xeric uplands with sandy soils.	Yes	No
Sherman's fox squirrel <i>Sciurus niger shermani</i>	NL		SSC	Sandhills, pine flatwoods, pastures.	Yes	No
West Indian manatee <i>Trichechus manatus</i>	E		FE	Coastal waters, bays, and rivers.	No	No
Other Species of Concern						
American alligator <i>Alligator mississippiensis</i>	T(S/A) ⁴		T(S/A) ⁴	Rivers, swamps, lake bayous, ponds, marshes.	Yes	No
Bald eagle <i>Haliaeetus leucocephalus</i>	NL ⁵		NL ⁵	Nests in tall trees. Forages near bodies of water.	Yes	No
Florida black bear <i>Ursus americanus floridanus</i>	NL		NL ⁶	Forested communities, including wetlands.	Yes	No

¹ As listed by the U.S. Fish and Wildlife Service in 50 CFR 17.

² Plant species listed by the Florida Department of Agriculture and Consumer Services pursuant to Chapter 5B-40, F.A.C.

³ Animal species listed by the Florida Fish and Wildlife Conservation Commission pursuant to Rule 68A-27 F.A.C.

⁴ The American alligator is federally-listed as threatened due to its similarity of appearance to the American crocodile, which occurs in the southern tip of Florida. The final rule (52 FR 21059) for the American alligator designation removes federal agency responsibilities for the alligator under Section 7 of the Endangered Species Act.

⁵ The bald eagle is neither state nor federally listed; however, this species is federally protected by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. The bald eagle is also managed in Florida by the FWC's bald eagle rule (FAC. 68A-16.002).

⁶ The Florida black bear is no longer state-listed; however, this species is managed in Florida by the FWC's Florida Black Bear Conservation rule (68A-4.009, F.A.C.).

NL – Not Listed; E – Endangered; T – Threatened; SSC – Species of Special Concern; C-Candidate; F = Federally

APPENDIX I

Standard Protection Measures for the Eastern Indigo Snake

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

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

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

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

POSTER INFORMATION

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

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

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

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

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

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

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

IF YOU SEE A LIVE EASTERN INDIGO SNAKE ON THE SITE:

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

IF YOU SEE A DEAD EASTERN INDIGO SNAKE ON THE SITE:

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

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

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

PRE-CONSTRUCTION ACTIVITIES

1. The applicant or designated agent will post educational posters in the construction office and throughout the construction site, including any access roads. The posters must be clearly visible to all construction staff. A sample poster is attached.
2. Prior to the onset of construction activities, the applicant/designated agent will conduct a meeting with all construction staff (annually for multi-year projects) to discuss identification of the snake, its protected status, what to do if a snake is observed within the project area, and applicable penalties that may be imposed if state and/or federal regulations are violated. An educational brochure including color photographs of the snake will be given to each staff member in attendance and additional copies will be provided to the construction superintendent to make available in the onsite construction office (a final brochure for Plan compliance, to be printed double-sided on 8.5" x 11" paper and then properly folded, is attached). Photos of eastern indigo snakes may be accessed on USFWS and/or FWC websites.
3. Construction staff will be informed that in the event that an eastern indigo snake (live or dead) is observed on the project site during construction activities, all such activities are to cease until the established procedures are implemented according to the Plan, which includes notification of the appropriate USFWS Field Office. The contact information for the USFWS is provided on the referenced posters and brochures.

DURING CONSTRUCTION ACTIVITIES

1. During initial site clearing activities, an onsite observer may be utilized to determine whether habitat conditions suggest a reasonable probability of an eastern indigo snake sighting (example: discovery of snake sheds, tracks, lots of refugia and cavities present in the area of clearing activities, and presence of gopher tortoises and burrows).
2. If an eastern indigo snake is discovered during gopher tortoise relocation activities (i.e. burrow excavation), the USFWS shall be contacted within one business day to obtain further guidance which may result in further project consultation.
3. Periodically during construction activities, the applicant's designated agent should visit the project area to observe the condition of the posters and Plan materials, and replace them as needed. Construction personnel should be reminded of the instructions (above) as to what is expected if any eastern indigo snakes are seen.

POST CONSTRUCTION ACTIVITIES

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

**IF YOU SEE A LIVE EASTERN
INDIGO SNAKE ON THE SITE:**

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- Personnel must NOT attempt to touch or handle snake due to protected status.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant's designated agent, **and** the appropriate U.S. Fish and Wildlife Service (USFWS) office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

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Killing, harming, or harassing indigo snakes is strictly prohibited and punishable under State and Federal Law.

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

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



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ATTENTION:
THREATENED EASTERN INDIGO
SNAKES MAY BE PRESENT ON
THIS SITE!!!



Please read the following information provided by the U.S. Fish and Wildlife Service to become familiar with standard protection measures for the eastern indigo snake.