FDOT
District Seven

US 301 (Gall Blvd.) Project Development & Environment Study

from S. of Proposed SR 56 to S. of SR 39 (Buchman Highway)

Pasco County, Florida

Work Program Item Segment Number: 416564-1

Final Natural Resources Evaluation

June 2017

Addendum to the Project File

US 301 (Gall Boulevard) from South of Proposed SR 56 to South of SR 39 (Buchman Highway)

The limits of the original Environmental Assessment with a Finding of No Significant Impact (EA/FONSI), approved 1/25/1993, included SR 54 (currently SR 56) from Cypress Creek Road to US 301 and extended northward along US 301 (Gall Boulevard) to Zephyrhills East By-pass/Chancey Road. During the Re-evaluation of this segment of the EA/FONSI (from SR 56 to Chancey Road), including the Chancey Road/US 301 (Gall Boulevard) intersection, the limit was extended to the north from Chancey Road to SR 39 (Buchman Highway), a total distance of 0.4 mile. Project documents refer to this 0.4 mile extension as the second segment associated with a new Type 2 Categorical Exclusion (CE).

During a meeting held on September 26, 2017, District 7 in coordination with the Office of Environmental Management, agreed to include the evaluation of the 0.4 mile extension with the Re-evaluation of the EA/FONSI. This reduces confusion to the public and sets logical project termini. All supporting environmental and engineering documents have evaluated the limits of the segment being advanced as part of the EA/FONSI Re-evaluation, as well as the 0.4 mile extension. It should be noted that the inclusion of the 0.4 mile extension does not change the outcome of the analysis conducted.

FINAL

NATURAL RESOURCES EVALUATION (NRE)
PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY
US 301 (GALL BOULEVARD) FROM S. OF PROPOSED SR 56 TO S. OF SR 39 (PAUL BUCHMAN HIGHWAY)
PASCO COUNTY, FLORIDA

Work Program Item Segment Number: 416564-1

Prepared for:

Florida Department of Transportation
District Seven
11201 North McKinley Drive
Tampa, Florida 33612-6456

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. §327 and a Memorandum of Understanding dated December 14, 2016 and executed by the Federal Highway Administration and FDOT.

June 2017

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ACRONYMS AND ABBREVIATIONS

AADT	Annual Average Daily Traffic
CCC	Chairs Coordinating Committee
CE	Categorical Exclusion
CFA	Core Foraging Area
CFR	Code of Federal Regulations
EA/FONSI	Environmental Assessment/Finding of No Significant Impact
ERP	Environmental Resource Permits
F.A.C	Florida Administrative Code
F.S.	Florida Statutes
FDACS	Florida Department of Agriculture & Consumer Services
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
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
GIS	Geographic Information System
HCM	Highway Capacity Manual
HRDB	Hillsborough River Drainage Basin
HRMB	Hillsborough River Mitigation Bank
LOS	Level of Service
MP	Mile Post
mph	Miles Per Hour
MPO	Metropolitan Planning Organization
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRE	Natural Resources Evaluation
NTMB	North Tampa Mitigation Bank
PCPT	Pasco County Public Transportation
PD&E	Project Development and Environment
ROW	Right-Of-Way
SE	Socioeconomic
SLOPES	Standard Local Operating Procedures for Endangered Species
SR	State Road
SWFWMD	Southwest Florida Water Management District

SWPPP	Stormwater Pollution Prevention Plan
TAZ	Traffic Analysis Zones
TBRPM-ML	Tampa Bay Regional Planning Model for Managed Lanes
TSP	Transit Signal Priority
U.S.C.	United States Code
UMAM	Uniform Mitigation Assessment Methodology
USACE	United States Army Corps of Engineers
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USGS	United States Geologic Survey
vpd	Vehicles Per Day

Section 1.0
PROJECT DESCRIPTION

The Florida Department of Transportation (FDOT) has proposed improvements to approximately 2 miles of US 301 (Gall Boulevard) in Pasco County to accommodate present and future traffic demands. These improvements include widening the existing two-lane road to four lanes with a median. The overall project limits begin south of the proposed connection of State Road (SR) 56 on the south (approximately mile post 1.395) to south of the proposed future realigned SR 39 (Buchman Highway) on the north (mile post 3.505).

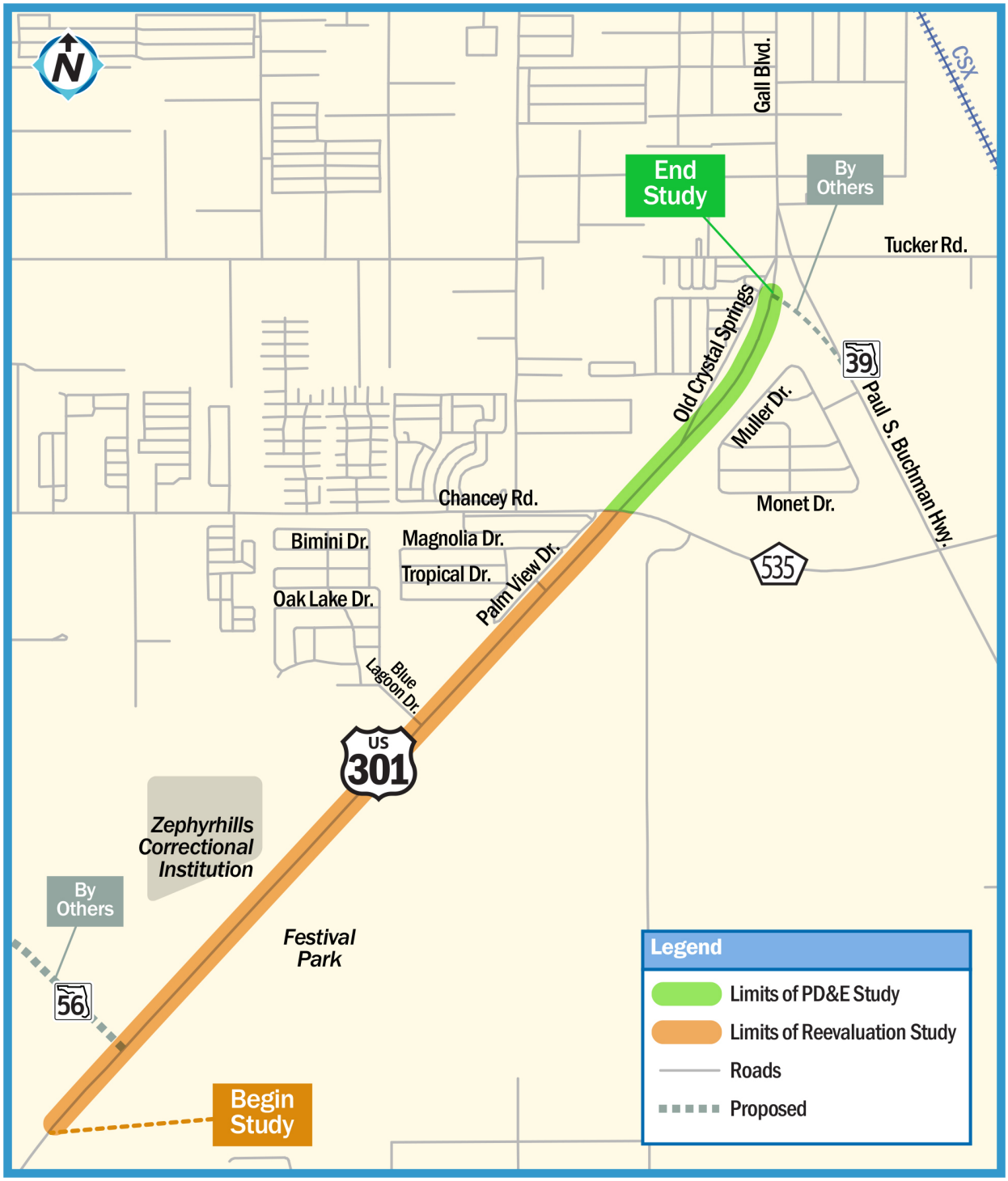
The project consists of two segments. The first segment begins south of the planned US 301/SR 56 intersection and ends at Chancey Road; an approximate length of this segment is 1.7 miles. This segment is part of a PD&E Design Change Reevaluation of the original SR 54 Environmental Assessment/Finding of No Significant Impact (EA/FONSI). The second segment begins at Chancey Road and ends south of SR 39 (Buchman Highway) and includes the US 301/Chancey Road intersection; an approximate length of this segment is 0.4 miles. It terminates south of where the proposed SR 39 realignment will tie into existing US 301 (Gall Boulevard), south of the existing SR 39/US 301 (Gall Boulevard intersection. The second segment of the project is associated with a new Type 2 Categorical Exclusion (CE). The project location map is included as **Figure 1-1**.

1.1 EXISTING CONDITIONS

US 301 (Gall Boulevard) is functionally classified as a *Rural Principal Arterial - Other* from MP 1.395 (project southern termini) to MP 2.452 (just north of Shamrock Place), for a distance of 1.057 mile. From MP 2.452 (just north of Shamrock Place) to MP 3.505 (project northern termini), the corridor is functionally classified as an *Urban Principal Arterial – Other*, for a distance of 1.053 mile. US 301 (Gall Boulevard) is designated as Access Class 3 within the study limits.

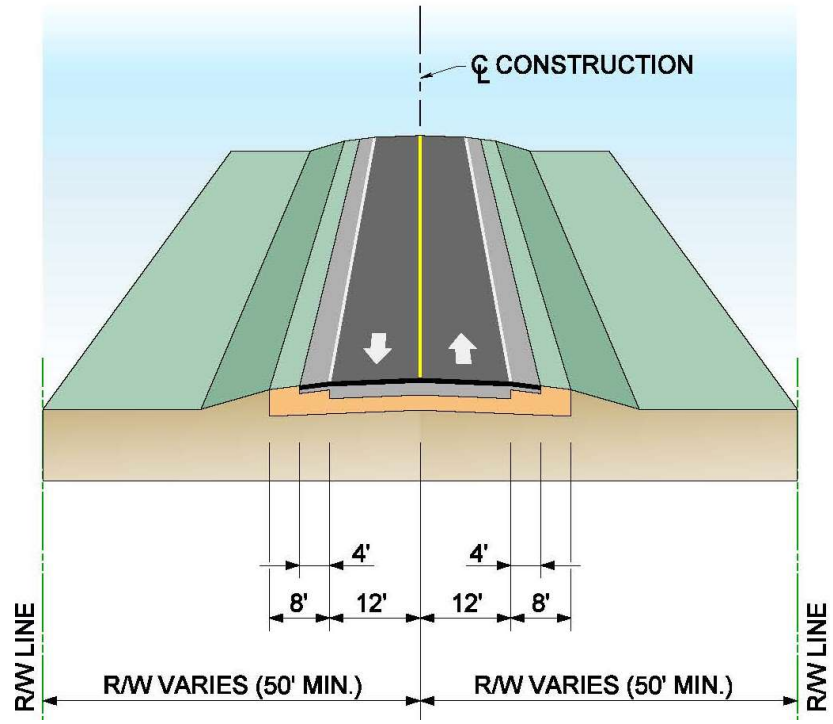
The existing US 301 (Gall Boulevard) corridor within the study area is currently a two-lane undivided facility with 12-foot travel lanes and 8-foot outside shoulders (four feet paved). From the south, the existing posted speed limit is 60 miles per hour (mph) up to MP 2.240, 55 mph from MP 2.240 to MP 3.067 (Chancey Road), and 45 mph north of MP 3.067 (Chancey Road). The existing right-of-way (ROW) width is approximately 100 feet. **Figure 1-2** depicts the existing roadway typical section.

FIGURE 1-1
PROJECT LOCATION MAP



Source: URS, 2015.

FIGURE 1-2
EXISTING TYPICAL SECTION



Source: URS, 2015.

1.2 RECOMMENDED IMPROVEMENTS

The Recommended Build Alternative is comprised of two typical sections. The first typical section, a suburban section, begins south of the future SR 56 intersection and ends at Chancey Road. The second typical section, an urban section, begins at Chancey Road and ends just south of the proposed realigned SR 39 (Buchman Highway) and US 301 (Gall Boulevard) intersection.

The suburban typical section, beginning south of the future SR 56 intersection and ending at Chancey Road will have four 12-foot lanes, a 54-foot median, two 7-foot bike lanes/paved shoulders, and Type E curb and gutter; as well as a 5-foot sidewalk along the eastern ROW line and a 10-foot shared use path along the western ROW line, as shown in **Figure 1-3**. This typical section is expandable to six lanes by adding two lanes to the inside reducing the overall median width to 30 feet. The design speed is 50 mph.

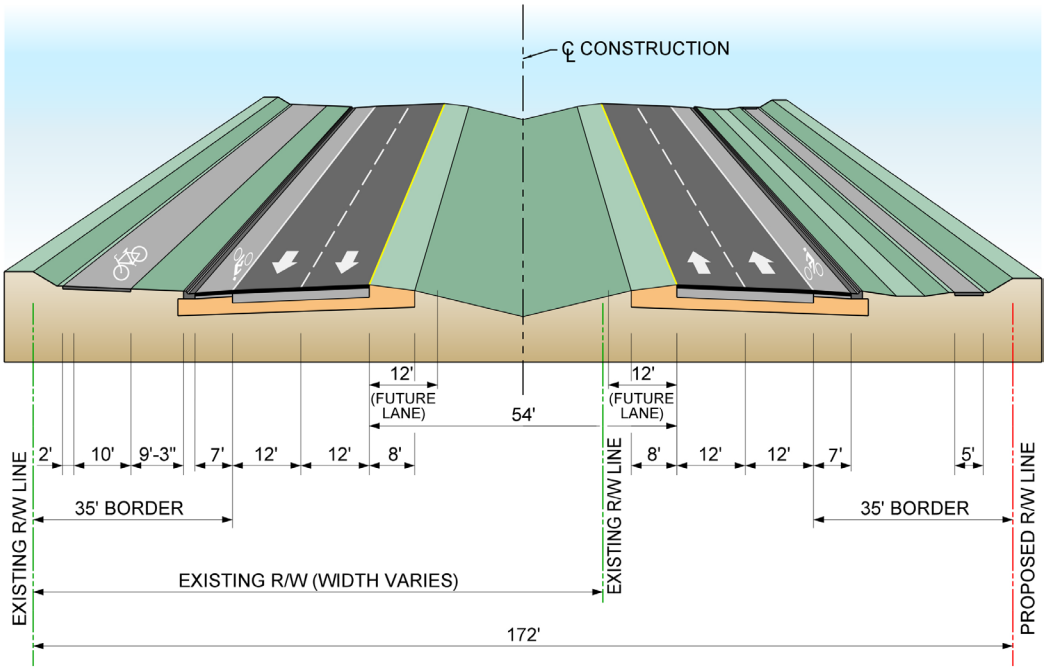
The urban typical section, beginning at Chancey Road and ending just south of the proposed realigned SR 39 (Buchman Highway) and US 301 (Gall Boulevard) intersection, is shown in **Figure 1-4**. The typical section consists of four 11-foot lanes, a variable width median, 7-foot bike lanes/paved shoulders, and Type E curb and gutter; as well as 5-foot sidewalks. The design speed is 45 mph.

Both typical sections will hold the existing western ROW line and expand the project corridor to the east. In addition to widening US 301 (Gall Boulevard) to four lanes, the Recommended Build Alternative includes intersection improvements at the following intersections:

- US 301 (Gall Boulevard) and proposed SR 56
- US 301 (Gall Boulevard) and Chancey Road

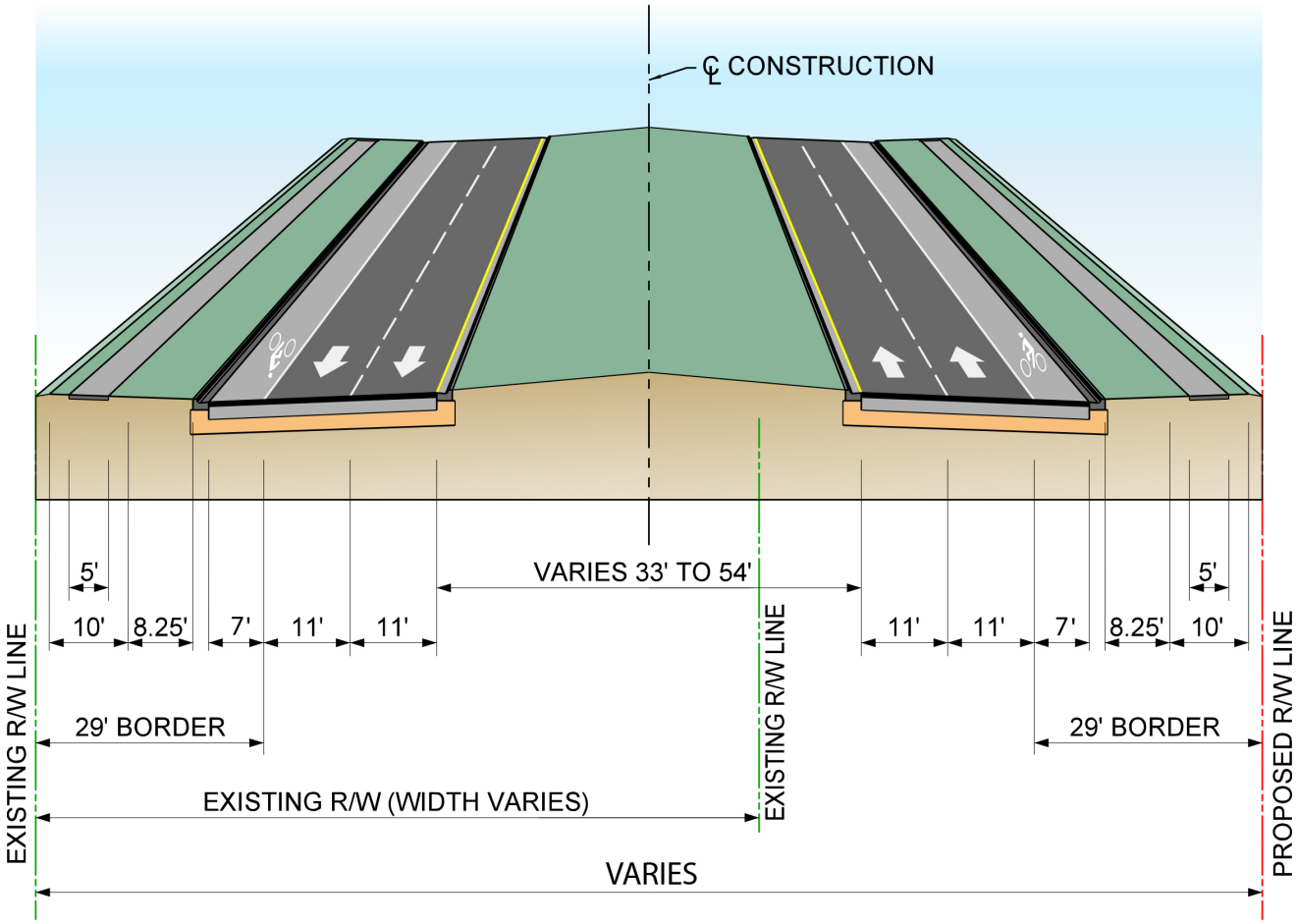
The Recommended Build Alternative also includes stormwater management facilities and floodplain compensation sites.

FIGURE 1-3
RECOMMENDED BUILD ALTERNATIVE SUBURBAN TYPICAL SECTION
CHANCEY ROAD TO S. OF SR 39 (BUCHMAN HIGHWAY)



Source: URS, 2015.

FIGURE 1-4
RECOMMENDED BUILD ALTERNATIVE URBAN TYPICAL SECTION
CHANCEY ROAD TO S. OF SR 39 (BUCHMAN HIGHWAY



Source: URS, 2015.

Section 2.0
PROJECT PURPOSE AND NEED

2.1 REGIONAL CONNECTIVITY

US 301 (Gall Boulevard) is a major north-south arterial located in East Pasco County. It is a regional truck route and provides north-south access to distribution centers. US 301 (Gall Boulevard) is an important connection to the regional and statewide transportation network that links the Tampa Bay region to the remainder of the state and the nation. US 301 (Gall Boulevard) was identified as a regional roadway by the West Central Florida Metropolitan Planning Organization (MPO) Chairs Coordinating Committee (CCC) and is included in the Regional Roadway Network. As shown in Section 2.5, the Design Year (2040) expected Annual Average Daily Traffic (AADT) is 39,500 vehicles per day (vpd). The measured percentage of daily truck traffic is 15.10 percent. Therefore, the projected truck traffic on US 301 (Gall Boulevard) is approximately 6,000 trucks per day in the Design Year (2040).

2.2 PLAN CONSISTENCY

The widening of US 301 (Gall Boulevard) from proposed SR 56 to the proposed realignment of SR 39 (Buchman Highway) is identified as a 'Cost-Affordable Capital Improvement' (construction 2031 – 2040) in the *Pasco County MPO Mobility 2040*. The project has also been identified on the latest *Pasco County Transportation Capital Improvement Projects (2014-2028)* map. It should additionally be noted that $2.5 million is programmed for the design phase in FY 2018 within the FDOT Five Year Work Program. Further, the project is reflected on *Map 7-22: Future Number of Lanes (2035)* in the Transportation Element of the adopted *Pasco County Comprehensive Plan*.

2.3 EMERGENCY EVACUATION

US 301 (Gall Boulevard) is designated as a parallel evacuation route to I-75 for the length of Pasco County.

2.4 FUTURE POPULATION AND EMPLOYMENT GROWTH

Socioeconomic (SE) data from the Tampa Bay Regional Planning Model for Managed Lanes (TBRPM-ML) "Starter Projects" Traffic Analysis Zones (TAZs) located within one quarter-mile of the US 301 (Gall Boulevard) project corridor indicates that the study area's population is

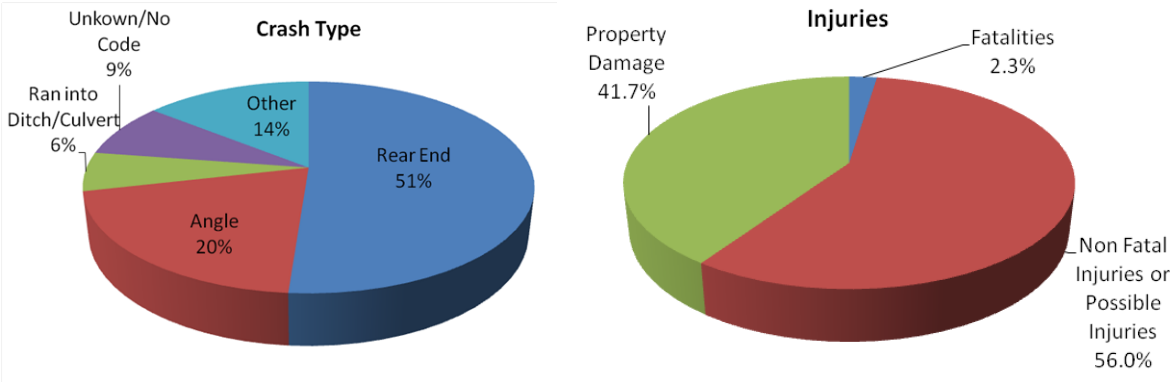
projected to grow from 4,973 in year 2006 to 13,638 in year 2035 (an increase of 8,665). Employment is also expected to increase during the same period from 1,337 to 5,392 (an increase of 4,055).

2.5 FUTURE TRAFFIC

In 2013, US 301 (Gall Boulevard) from Chancey Road to SR 39 (Buchman Highway) carried 12,500 vpd. By the Design Year (2040), segments within this section of US 301 (Gall Boulevard) are expected to reach a volume of 39,500 vpd. The roadway segment was analyzed using the FDOT's HIGHPLAN software which incorporates methodologies contained within the 2010 Highway Capacity Manual (HCM) 2010. Based on this analysis, the existing level of service (LOS) is C. Without the recommended improvement, the operating conditions will continue to deteriorate to a failing LOS of F. With the recommended improvement to widen this roadway to four lanes and other recommended improvements, the LOS for the Design Year (2040) is projected to be C, with one exception in the northbound PM peak hour where the LOS will be D.

2.6 SAFETY

For the five-year period (2009-2013), there were 84 crashes reported along the corridor with an average of 16.8 crashes per year. Rear-end collisions were the most common crash type recorded for the corridor with 43 or 51.2 percent of total crashes, followed by 17 angle collisions (including two left-turn collisions) or 20.2 percent of the total crashes. Out of the 84 total crashes, 47 or 56.0 percent were crashes with injuries and 35 or 41.7 percent were crashes with property damage only.



Source: FDOT Unified Base Map Repository, 2014.

There were two fatal crashes recorded along the US 301 (Gall Boulevard) corridor (2.3 percent). Further, four out of 84 total crashes (4.8 percent) were related to medium or heavy trucks. Among the truck-related incidents, three crashes involved injuries.

Safety within the US 301 (Gall Boulevard) corridor will be enhanced due to the additional capacity that will be provided. Roadway congestion will be reduced, thereby decreasing potential conflicts with other vehicles.

2.7 TRANSIT

The existing Pasco County Public Transportation (PCPT) bus Route 30 terminates at Tucker Road just north of the study area, and serves activity centers to the north including downtown Zephyrhills and Dade City from 4:45 am to 7:45 pm. In addition, this segment of US 301 (Gall Boulevard) to downtown Zephyrhills is part of the proposed SR 54 Cross County Express Route that is included in the *Pasco County MPO Mobility 2040 Cost Affordable Transit Plan* for implementation in 2031. Also planned is a Major Transit Station/Stop and Transit Signal Priority (TSP) along the corridor.

2.8 ACCESS TO INTERMODAL FACILITIES AND FREIGHT ACTIVITY CENTERS

Access to intermodal facilities and movement of goods and freight are important considerations in the development of the Pasco County transportation system. US 301 (Gall Boulevard) is a regional truck route. The Zephyrhills Airport Industrial Area, a designated freight activity center, is located just northeast of the northern terminus of the study area. This industrial area has five major manufacturing facilities with approximately 700,000 square feet of industrial space. These companies generate approximately 200 trucks per day. Improvements to US 301 (Gall Boulevard) will enhance access to activity centers in the area and the movement of goods and freight in eastern Pasco County.

2.9 RELIEF TO PARALLEL FACILITIES

The planned widening of US 301 (Gall Boulevard) between Chancey Road and the proposed realigned SR 39 (Buchman Highway) intersection is part of an overall plan to improve access and relieve traffic congestion on such parallel facilities as I-75, the Suncoast Parkway, and US 41. Safety, emergency access, and truck access will all be enhanced by this improvement.

2.10 BIKEWAYS AND SIDEWALKS

Integration of bicycle facilities and sidewalks are considered on all Pasco County and State road projects including new roads, widening of existing roads, and the resurfacing of State roads. The project segment from south of proposed SR 56 to Chancey Road includes 7-foot-wide paved shoulders/bike lanes to allow for bicycle safety, a 10-foot shared use path on the west side of US 301 (Gall Boulevard), and a 5-foot sidewalk on the east side of US 301 (Gall Boulevard). The project segment north of Chancey Road includes 7-foot-wide paved shoulders/bike lanes; 5-foot sidewalks are proposed on both sides of the project segment in lieu of the shared use path.

Section 3.0
ALTERNATIVES CONSIDERED

The US 301 (Gall Boulevard) PD&E study considered two alternatives, as described further below.

3.1 NO BUILD ALTERNATIVE

The No-Build Alternative assumes that traffic volumes will continue to increase with no changes to US 301 within the study area. The No-Build Alternative requires no additional expenditure of funds and has no environmental impacts. Although the No-Build Alternative does not meet the purpose and need and offers no future operational improvements, it will remain a viable alternative throughout the study process and serve as the basis of comparison for the build alternatives.

3.2 BUILD ALTERNATIVE

The Build Alternative consists of widening the existing two-lane road to four lanes with a median and is comprised of two typical sections. The first typical section, a suburban section, begins south of the future SR 56 intersection and ends at Chancey Road. The second typical section, an urban section, begins at Chancey Road and ends just south of the proposed realigned SR 39 (Buchman Highway) and US 301 (Gall Boulevard) intersection.

The suburban typical section, beginning south of the future SR 56 intersection and ending at Chancey Road will have four 12-foot lanes, a 54-foot median, two 7-foot bike lanes/paved shoulders, and Type E curb and gutter; as well as a 5-foot sidewalk along the eastern ROW line and a 10-foot shared use path along the western ROW line, as shown in Figure 1-3. This typical section is expandable to six lanes by adding two lanes to the inside reducing the overall median width to 30 feet. The design speed is 50 mph.

The urban typical section, beginning at Chancey Road and ending just south of the proposed realigned SR 39 (Buchman Highway) and US 301 (Gall Boulevard) intersection, is shown in Figure 1-4. The typical section consists of four 11-foot lanes, a variable width median, 7-foot bike lanes/paved shoulders, and Type E curb and gutter; as well as 5-foot sidewalks. This typical section will serve as a transition between the ultimate 6-lane section of US 301 (Gall Boulevard) and the ultimate 4-lane section of US 301 (Gall Boulevard). The design speed is 45 mph.

Both typical sections will hold the existing western ROW line and expand the project corridor to the east. In addition to widening US 301 (Gall Boulevard) to four lanes, the Build Alternative includes intersection improvements at the following intersections:

- US 301 (Gall Boulevard) and proposed SR 56
- US 301 (Gall Boulevard) and Chancey Road

The Build Alternative also includes stormwater management facilities and floodplain compensation sites.

Section 4.0
PROTECTED SPECIES AND HABITAT

4.1 OBJECTIVE

The potential effects of constructing the Recommended Build Alternative on state- and federally-listed species were assessed by determining the natural habitats that will be affected by the project and determining the potential use of these habitats by listed species.

4.2 METHODOLOGY

Prior to performing field reviews, a letter was sent to the Florida Natural Areas Inventory (FNAI) and Florida Fish and Wildlife Conservation Commission (FWC) requesting information on documented occurrences of listed species within one mile of the US 301 (Gall Boulevard) 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 and field research. All correspondence with federal and state agencies is included as **Appendix G.**

In addition to the literature and databases listed in **Section 4.2**, 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, 50 CFR 17.11 and 17.12
- FWS, 2012 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 August 2015), Website: (http://www.fnai.org/bioticssearch.cfm)
- FNAI Element Occurrence Data Report (January 8, 2015)

- 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://freshfromflorida.s3.amazonaws.com/fl-endangered-plants.pdf)
- Atlas of Florida Vascular Plants, Institute for Systemic Botany, Website: (http://www.florida.plantatlas.usf.edu/)

Environmental scientists familiar with Florida natural communities conducted a field review of the project study area on June 26, 2013 and January 7, 2015. 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.

4.3 RESULTS

For a species to be considered potentially present, the project study area must be within the species' range and must contain suitable foraging, nesting, denning, or roosting 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, 46 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 of these species have the potential to occur within the project study area. Of the 48 listed and protected species known to occur or that have historically been documented in Pasco County, 15 animal species and five 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.

4.3.1 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 project area during the design phase. As a result, it is anticipated that the Build Alternatives will have "no effect" on listed plant species.

4.3.2 FAUNA

4.3.2.1 Federally-Listed Species

Eastern indigo snake (*Drymarchon corais 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. However, no eastern indigo snakes or gopher tortoise burrows were observed during the June 2013 or January 2015 field reviews and none have been documented within one mile of the project study area, based on review of FNAI data. To minimize the potential for adverse impacts to the eastern indigo snake, FDOT will commit to implementing the latest FWS's standard protection measures for the eastern indigo snake (updated August 2013) (**Appendix I**), during construction of the project. Based on these commitments and the 2010 FWS Programmatic Concurrence Letter for the Eastern Indigo Snake, it has been determined the Build Alternative "may affect, but is not likely to adversely affect" the eastern indigo snake.

Florida scrub jay (*Aphelocoma coerulescens*): The Florida scrub jay is listed as threatened by the FWS and is found in fire-dominated, low-growing oak scrub habitat occurring on well-drained sandy soils. The entire project falls within the FWS Consultation Area for this species. However, there is no suitable habitat available within the project study area for this species, none were observed during the field reviews of the project study area, and none have been documented within one mile of the project study area, based on review of FNAI data. Therefore, it has been determined that the Build Alternative will have "no effect" on the Florida scrub jay.

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 unpaved right-of-way, but no individuals or burrows were observed within the project study area during the field reviews. 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). FDOT will commit to survey the proposed project area for gopher tortoise burrows prior to construction. If gopher tortoises or potentially occupied burrows are observed, FDOT will coordinate with the FWC to secure all permits needed and perform relocation activities. With this commitment, it has been determined that the Build Alternative "may affect, but is not likely to adversely affect" the gopher tortoise.

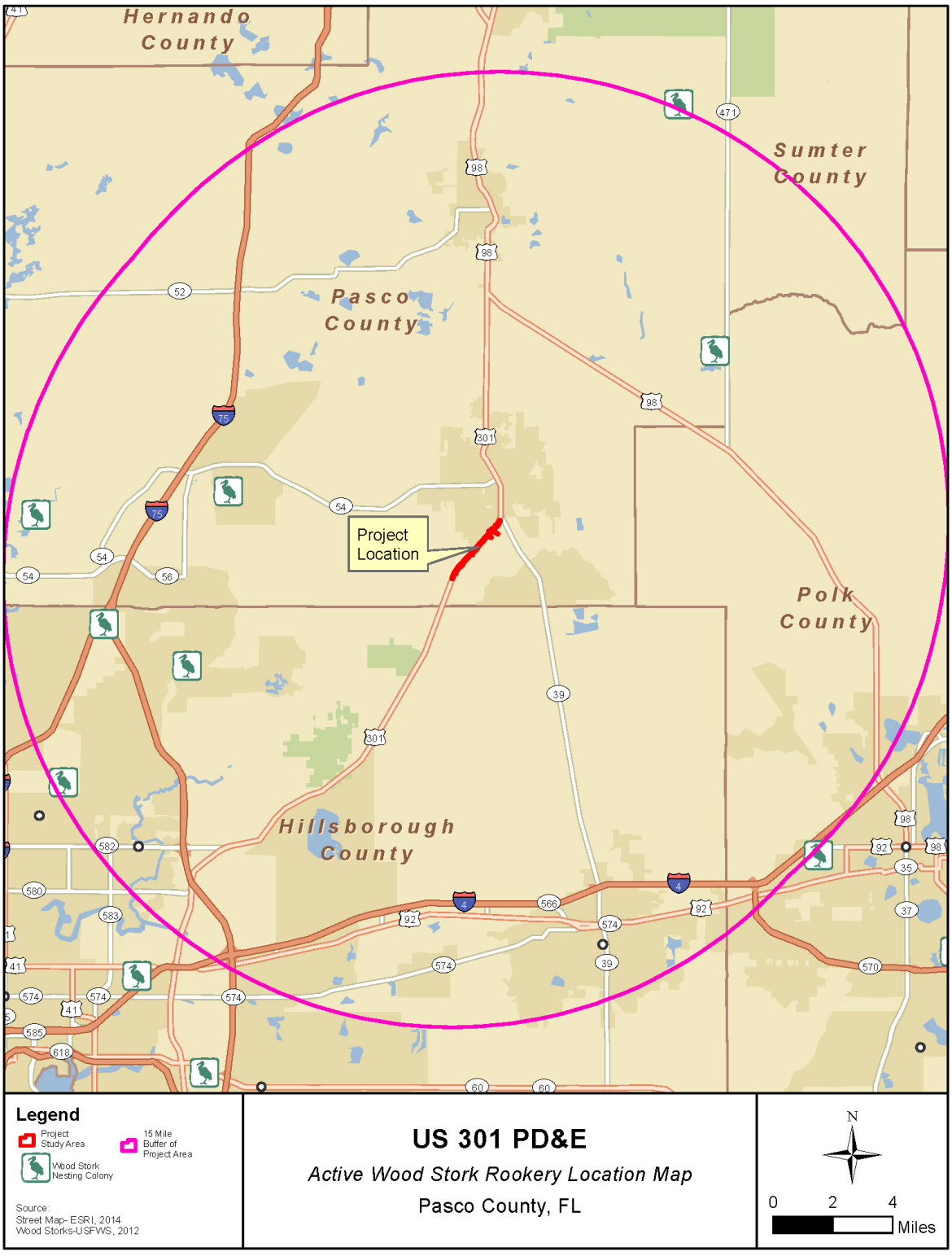
Wood stork (*Mycteria americana*): The wood stork is listed as threatened by the FWS. This wading bird species is opportunistic and uses various habitat types, including forested wetlands, freshwater marshes, swamps, lagoons, ponds, tidal creeks, flooded pastures, and ditches for feeding. However, a specialized feeding technique commonly referred to as groping, limits the wood stork to feeding in shallow water. Construction of the recommended project will result in 1.6 acres of impact to wetlands and other surface waters expected to be used by wood storks. 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, seven (7) active wood stork nesting colonies are located within the 15-mile radius core foraging area of the project study area (**Figure 4-1**). No wood storks were observed within the project study area during the field reviews.

Because suitable habitat exists for the wood stork within the project study area, FDOT is committed to re-initiating informal Section 7 consultation prior to construction. At that time, the FDOT will evaluate the current information and provide suitable foraging habitat compensation 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). Based on these commitments and the 2010 FWS Programmatic Concurrence Letter for the Wood Stork, it is anticipated that the Build Alternative “may affect, but is not likely to adversely affect” the wood stork.

4.3.2.2 State-Listed Species

Limpkin (*Aramus guarauna*), **little blue heron** (*Egretta caerula*), **snowy egret** (*Egretta thula*), **tricolored heron** (*Egretta tricolor*), **roseate spoonbill** (*Platalea ajaja)*, and **white ibis** (*Eudcimus albus*): Wading birds including the limpkin, little blue heron, snowy 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).

FIGURE 4-1
ACTIVE WOOD STORK ROOKERY LOCATION MAP



Source: Street Map ESRI, 2014; Wood Storks – USFWS, 2012.

Suitable foraging habitat for wading birds is available within the project study area in the wetlands and other surface waters. During the June 2013 and January 2015 field reviews, white ibises were observed foraging in Surface Waters 1 and 3 and a little blue heron was observed foraging in WL 1 and Surface Water 3. As part of implementing the recommended project, all wetland impacts will be mitigated to prevent a net loss of wetland habitat functions and values. Based on this information and FDOT's commitments to mitigate for wetland impacts, it has been determined that the Build Alternative "may affect, but is not likely to adversely affect" these species.

Florida burrowing owl *(Athene cunicularia floridana)***:** The Florida burrowing owl is listed as a species of special concern by the FWC. This species inhabits open native prairies and cleared areas that offer an expanse of short, herbaceous groundcover. Burrowing owls also make extensive use of rural areas such as pastures, airports, ball fields, parks, school grounds, road right-of-ways, and vacant spaces in residential areas. Suitable habitat for this species exists throughout the project study area; however, no burrowing owls have been documented within one mile of the project study area and none were observed within the project study area during the June 2013 or January 2015 field reviews. FDOT will commit to survey areas of suitable habitat and coordinate with the FWC and FWS (as required) to secure all necessary approvals regarding this species. Therefore, it has been determined that the Build Alternative "may affect, but is not likely to adversely affect" the Florida burrowing owl.

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. Suitable foraging habitat is available within the project study area for the southeastern American kestrel in the pastures; however, no individuals were observed within the project study area during the June 2013 or January 2015 field reviews, and none have been documented within one mile of the project study area, based on review of FNAI data. Due to its mobility and ability to use adjacent open areas for foraging, it has been determined that the Build Alternative will have "no effect" on the southeastern American kestrel.

Florida sandhill crane (*Grus canadensis pratensis*): The Florida sandhill crane is listed by the FWC as threatened and 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. Several sandhill cranes were observed foraging within the US 301 (Gall Boulevard) ROW, near the ponds at the correctional facility, and near WL 1 during the June 2013 and January 2015 field reviews. As part of the proposed project, all adverse wetland impacts will be mitigated to prevent a net loss of wetland functions and values. In addition, FDOT will commit to survey the project area for Florida sandhill crane nests prior to construction. If Florida sandhill crane nests are found within the proposed project area, FDOT will coordinate with the FWC to ensure construction will not adversely impact this species. With this commitment, it has been determined that the Build Alternative "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 and inhabits pine forests, which are dominated by longleaf or south Florida slash pines, and oak hammocks with open spaces for foraging. No individuals were observed during the field reviews. However, FDOT biologists have observed a Sherman's fox squirrel along SR 56 (proposed), within one mile of the project limits. Due to its mobility and ability to use adjacent upland habitats for foraging, it has been determined that the Build Alternative "may affect, but is not likely to adversely affect" the Sherman's fox squirrel.

4.3.2.3 Other Species of Concern

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 U.S.C. 668 and the FWS Migratory Treaty Act in accordance with 16 U.S.C. 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 locater 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 study area. No bald eagle nests were observed within the project study area during the field reviews. Because bald eagle nests within Florida are closely monitored by the FWC, if a nest is observed within 660 feet of the preferred alignment, an Eagle Disturbance Permit may be required. If a bald eagle nest is found within 660 feet of the project area prior to construction, FDOT will coordinate with FWC and FWS to secure any and all approvals regarding this species.

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 project study area in the upland forests. According to FWC, the project study 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 reviews.

4.3.3 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 Build Alternative will not affect any Critical Habitat.

4.4 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, the FDOT will commit to the following items:

1. Due to the presence of gopher tortoise habitat, a gopher tortoise survey within the construction limits (including the roadway footprint, construction staging areas, floodplain compensation, and stormwater management ponds) will be performed prior to construction per FWC guidelines. The FDOT will secure any relocation permits needed for this species during the project design and relocate gopher tortoises prior to the construction phases of the project.
2. Due to the presence of Florida burrowing owl habitat, a burrowing owl survey within the construction limits (including the roadway footprint, construction staging areas, floodplain compensation, and stormwater management ponds) will be performed prior to construction per FWC guidelines. It is not anticipated, however, the FDOT will secure any relocation permits, if needed, for this species during the project 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, construction staging areas, floodplain compensation, and stormwater management ponds) prior to construction per FWC guidelines. FDOT will coordinate with FWC during the project design and construction phases of the project.
4. To avoid potential adverse impacts to the wood stork, informal **Section 7** consultation will be re-initiated with the FWS during project permitting. FDOT 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 habitat rookeries to comply with the FWS's Standard Local Operating Procedures for Endangered Species (SLOPES) requirements.
5. The FWS' Standard Protection Measures for the eastern indigo snake (see **Appendix I**) will be adhered to during all construction phases of the project.
6. Although no bald eagle nests have been documented within one mile of the project study area according to the FWC online database, FDOT will commit to completing surveys prior to construction. 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. Although not anticipated, FDOT will commit to securing any permits, if needed, during the permitting phases.

4.5 SUMMARY

In summary, federally- and state-listed animal species were identified as having the potential to occur within the project study area. **Table 4-1** summarizes the impact determination for federally- and state-listed species, respectively. Based on the findings and commitments contained herein, a determination has been made that the proposed project will have no effect on any state- or federally-listed plant species nor will the proposed project affect any designated Critical Habitat.

TABLE 4-1
SUMMARY OF LISTED SPECIES IMPACT DETERMINATIONS

Federal Listed Species (FWS)	Status	Impact Determination
Eastern indigo snake (*Drymarchon couperi*) Wood stork (*Mycteria americana*)	Threatened	"May affect, but is not likely to adversely affect"
Florida scrub jay (*Aphelocoma coerulescens*)	Threatened	"No effect"
Gopher tortoise (*Gopherus polyphemus*)	Candidate (Federal), Threatened (State)	"May affect, but is not likely to adversely affect"
State Listed Species (FWC)		
Southeastern American kestrel *(Falco sparverius paulus)*	Threatened	"No effect"
Florida sandhill crane (*Grus canadensis pratensis*)	Threatened	"May affect, but is not likely to adversely affect"
Limpkin (*Aramus guarauna*) Little blue heron (*Egretta caerula*) Snowy egret (*Egretta thula*) Tricolored heron (*Egretta tricolor*) Rosette spoonbill (*Platalea ajaja)* White ibis (*Eudcimus albus*) Florida burrowing owl (*Athene cunicularia floridana*) Sherman's fox squirrel (*Sciurus niger shermani*)	Species of Special Concern	"May affect, but is not likely to adversely affect"

Source: URS, 2015.

Section 5.0
PERMITTING AND REVIEW AGENCIES

Both the USACE and SWFWMD regulate impacts to wetlands within the US 301 (Gall Boulevard) project study area. Other agencies, including the FWS, National Marine Fisheries Service (NMFS), USEPA, and the 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. It is anticipated that the following permits will be required for this project:

Permit	Issuing Agency
Section 404 Dredge and Fill Permit	USACE
Environmental Resource Permit (ERP)	SWFWMD
National Pollutant Discharge Elimination System (NPDES)	FDEP
Gopher Tortoise Relocation Permit (as necessary)	FWC

5.1 FEDERAL PERMITS

5.1.1 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. The 404(b)(1) guidelines state that only the least environmentally damaging practicable alternative can be authorized for construction.

5.2 STATE PERMITS

5.2.1 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.

5.2.2 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 one 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.

5.2.3 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), or

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 10 burrows occur on the development site. The 10 or fewer Burrows Permit is for projects that contain 10 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.

Depending on the types of permits needed from the regulatory agencies, the permitting process typically ranges from 90 to 360 days.

Section 6.0
WETLANDS EVALUATION

6.1 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-funded highway projects to protect wetlands to the fullest extent possible. In accordance with this policy, the project study area was evaluated to assess potential wetland impacts that may be associated with the proposed improvements.

6.2 METHODOLOGY

The project study area is encompassed by a 200-foot buffer extending from the centerline of the existing ROW and a 25-foot buffer from Chancey Road. In order to assess the approximate locations and boundaries of existing wetland and upland communities within the project study area, available site-specific data were collected and reviewed prior to field reviews. The following information was collected and reviewed:

- True color aerials of the project study area, (1 inch = 200 feet) (FDOT 2014)
- U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS), *Soil Survey of Pasco County, Florida* (NRCS 1982)
- Florida Association of Professional Soil Scientists, *Hydric Soils of Florida Handbook* (Hurt 2007)
- U.S. Geological Survey 7.5 minute Zephyrhills quadrangle map (USGS 1990)
- U.S. Fish and Wildlife Service (FWS), Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et. al. 1979)
- Florida Department of Transportation (FDOT), *Florida Land Use, Cover and Forms Classification System* (FLUCFCS), 3rd Edition, (FDOT 1999)
- Southwest Florida Water Management District Geographic Information System (GIS) FLUCFCS Database (SWFWMD 2011)

Environmental scientists familiar with Florida natural communities conducted field reviews of the project study area on June 26, 2013 and January 7, 2015. 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 photo interpretation. Approximate wetland boundaries were identified in accordance with the *Florida Wetlands Delineation Manual* (Gilbert et al. 1995), Chapter 62-340, Florida Administrative Code (F.A.C.) and the guidelines found within U.S. Army Corps of Engineers (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. Attention was given to identifying plant species composition for each wetland and upland 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 upland, wetland, and other surface water habitats within the project study area were classified using FLUCFCS (FDOT 1999). Wetlands and other surface water habitats were also classified using the FWS *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, et al. 1979).

6.3 RESULTS

Based on the results of the in-house and field reviews, 11 soil types, 11 upland community types, four wetland types, and two other surface water types were identified within the project study area.

6.3.1 SOILS

Based on the *Soil Survey of Pasco County, Florida* (NRCS 1982), 11 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), two of the 11 soil types reported within the project study area are defined as hydric.

Of the nine non-hydric soils, four are reported as having up to 15 percent hydric soil inclusions. Additionally, mapped hydric soils comprise approximately 16.1 acres (11.2 percent) and non-hydric soils cover approximately 127.9 acres (88.8 percent) of the project study area. **Table 6-1** provides the approximate acreage and percentage of each soil type within the project study area.

6.3.2 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 types, as well as the acreage and percentage of each type identified within the project study area, is shown in **Table 6-2**. Developed areas and undeveloped upland habitats comprise 129.8 acres (90.2 percent) of the project study area and include residential, commercial, industrial, correctional, roads and highways, open land, pasture, shrub and brushland, and hardwood-conifer mixed forest. Wetland and other surface water habitats comprise approximately 14.2 acres (9.8 percent) of the project study area and include drainage ditches, reservoirs, mixed wetland hardwoods, freshwater marshes, wet prairies, and emergent aquatic habitat.

TABLE 6-1
EXISTING SOIL TYPES WITHIN THE PROJECT STUDY AREA

SOIL TYPE	HYDRIC Y/N	PERCENT HYDRIC SOIL INCLUSIONS	AMOUNT	
			AREA (ACRE)	PERCENT OF TOTAL
1 – Wauchula fine sand, 0-5 percent slopes	N	15	8.6	6.0%
2 – Pomona fine sand	N	15	35.2	24.5%
6 – Tavares sand, 0-5 percent slopes	N	0	15.0	10.4%
10 – Wabasso fine sand	N	10	7.2	5.0%
16 – Zephyr muck	Y	100	1.0	0.7%
17 – Immokalee fine sand	N	15	5.1	3.5%
18 – Electra variant fine sand, 0-5 percent slopes	N	0	41.8	29.1%
26 – Narcoossee fine sand	N	0	4.1	2.8%
48 – Lochloosa fine sand, 0-5 percent slopes	N	0	2.5	1.7%
60 – Palmetto-Zephyr-Sellers complex	Y	100	15.1	10.5%
64 – Nobleton fine sand, 0-5 percent slopes	N	0	4.2	2.9%
99 – Water	N/A	0	4.2	2.9%
		TOTAL	**144.0**	**100.0%**

Source: NRCS, 1982; Hurt, 2007

TABLE 6-2
EXISTING LAND USES AND VEGETATIVE COVER WITHIN THE PROJECT STUDY AREA

FLUCFCS CLASSIFICATION		FLUCFCS DESCRIPTION	FWS WETLAND CLASSIFICATION	ACRES WITHIN PROJECT STUDY AREA	PERCENT OF PROJECT STUDY AREA
Developed Areas	110	Residential, Low Density	NA	2.9	2.0%
	130	Residential, High Density	NA	7.0	4.9%
	140	Commercial and Services	NA	17.9	12.5%
	150	Industrial	NA	2.8	1.9%
	176	Correctional	NA	9.2	6.4%
	814	Roads and Highways	NA	40.2	27.9%
Undeveloped Upland Habitats	190	Open Land	NA	2.8	1.9%
	211	Improved Pasture	NA	37.5	26.0%
	320	Shrub and Brushland	NA	0.9	0.7%
	434	Hardwood-Conifer Mixed	NA	8.6	6.0%
			Sub-Total Uplands	**129.8**	**90.2%**
Wetland Habitats	617	Mixed Wetland Hardwoods	PFO1C	0.1	0.1%
	641	Freshwater Marsh	PEM1C	4.1	2.9%
	643	Wetland Prairie	PEM1J	0.7	0.4%
	644	Emergent Aquatic	PAB4H	1.8	1.3%
Other Surface Water Habitats	510	Streams and Waterways	PEM1Jx/ R2UB3J	2.6	1.7%
	534	Reservoirs less than 10 acres	POWHx	4.9	3.4%
			Sub-Total Wetlands/Other Surface Waters	**14.2**	**9.8%**
			TOTAL	**144.0**	**100.0%**

Notes: **FWS Descriptions:**
PFO1C: Palustrine, Forested, 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
PEM1Jx: Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated
POWHx: Palustrine, Open Water, Permanently Flooded, Excavated
R2UB3J: Riverine, Lower Perennial, Unconsolidated Bottom, Mud, Intermittently Flooded

Source: FDOT, 1999; Cowardin et al., 1979

6.3.3 Individual Wetlands and Other Surface Waters

Based on collected field data and in-house reviews, ten wetlands, six reservoir ponds, and four ditches occur within the project study area. **Appendix C** provides descriptions of the 20 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 6-3** below, several of the individual wetlands contain multiple FLUCFCS and FWS classifications, as they are comprised of various habitat types.

TABLE 6-3
INDIVIDUAL WETLANDS AND OTHER SURFACE WATERS
WITHIN THE PROJECT STUDY AREA

WETLAND/SW ID	FLUCFCS DESCRIPTION	FLUCFCS CODE	FWS WETLAND CLASSIFICATION*	ACRES WITHIN PSA
Wetlands				
WL 1	Freshwater Marsh	641	PEM1C	0.7
WL 2	Freshwater Marsh	641	PEM1C	2.4
WL 3	Wet Prairie	643	PEM1J	0.2
WL 4	Wet Prairie	643	PEM1J	0.5
WL 5	Streams and Waterways	510	R2UB3J	1.9
WL 6	Mixed Wetland Hardwoods	617	PFO1C	0.1
WL 7	Freshwater Marsh	641	PEM1C	0.7
WL 8	Emergent Aquatic	644	PAB4H	1.8
WL 9	Freshwater Marsh	641	PEM1C	0.3
WL 10	Freshwater Marsh	641	PEM1C	<0.1
			Subtotal for Wetlands	**8.6**
Other Surface Waters				
Ditch 1	Streams and Waterways	510	PEM1Jx	0.2
Ditch 2	Streams and Waterways	510	PEM1Jx	0.2
Ditch 3	Streams and Waterways	510	PEM1Jx	0.2
Ditch 4	Streams and Waterways	510	PEM1Jx	0.1
SW 1	Reservoirs less than 10 ac	534	POWHx	1.0
SW 2	Reservoirs less than 10 ac	534	POWHx	1.2
SW 3	Reservoirs less than 10 ac	534	POWHx	1.2
SW 4	Reservoirs less than 10 ac	534	POWHx	1.2
SW 5	Reservoirs less than 10 ac	534	POWHx	0.2
SW 6	Reservoirs less than 10 ac	534	POWHx	0.1
			Subtotal for Other Surface Waters	**5.6**
			TOTAL	**14.2**

Notes: **FWS Wetland Descriptions:**
PFO1C: Palustrine, Forested, 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
PEM1Jx: Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated
POWHx: Palustrine, Open Water, Permanently Flooded, Excavated
R2UB3J: Riverine, Lower Perennial, Unconsolidated Bottom, Mud, Intermittently Flooded

Source: Cowardin et al., 1979

6.4 WETLAND AND OTHER SURFACE WATER IMPACTS

The project study area was assessed for potential impacts to wetlands and other surface waters. For comparison purposes, it is assumed that all wetlands/other surface waters located within the proposed ROW will be impacted by the proposed US 301 (Gall Boulevard) improvements; therefore, all were included in the impact assessment. The impact area of each wetland/other surface water equals its total acreage within the project ROW.

Based on this evaluation, permanent impacts to the wetlands and other surface waters located within the project study area are anticipated as a result of construction of the proposed project.

Table 6-4 provides a summary of the proposed wetland and other surface water impacts resulting from the construction of the Build Alternative. Construction of the Build Alternative will result in a total of 1.6 acres of wetland and other surface water impacts. Figures showing the locations of the wetland and other surface water impacts are provided in **Appendix F**.

TABLE 6-4
PROPOSED WETLAND AND SURFACE WATER IMPACTS

WETLAND/SW ID	FLUCFCS DESCRIPTION	FLUCFCS CODE	FWS WETLAND CLASSIFICATION*	ACRES OF IMPACT
Wetlands				
WL 2	Freshwater marsh	641	PEM1C	0.5
WL 3	Wet prairie	643	PEM1J	0.0
WL 4	Wet prairie	643	PEM1J	0.2
WL 5	Streams and waterways	510	R2UB3J	0.1
WL 6	Mixed wetland hardwoods	617	PFO1C	0.1
WL 7	Freshwater marsh	641	PEM1C	<0.1
WL 8	Emergent aquatic	644	PAB4H	<0.1
			Subtotal for Wetlands	**0.9**
Other Surface Waters				
Ditch 1	Streams and Waterways	510	PEM1Jx	0.2
Ditch 2	Streams and Waterways	510	PEM1Jx	0.2
Ditch 3	Streams and Waterways	510	PEM1Jx	0.2
Ditch 4	Streams and Waterways	510	PEM1Jx	0.1
SW 1	Reservoirs less than 10 ac	534	POWHx	0.0
SW 2	Reservoirs less than 10 ac	534	POWHx	0.0
SW 3	Reservoirs less than 10 ac	534	POWHx	0.0
SW 4	Reservoirs less than 10 ac	534	POWHx	0.0
SW 5	Reservoirs less than 10 ac	534	POWHx	0.0
SW 6	Reservoirs less than 10 ac	534	POWHx	<0.1
			Subtotal for Other Surface Waters	**0.7**
			TOTAL	**1.6**

Source: Cowardin et al., 1979

Wet ditches 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*).

6.5 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.

The UMAM assessment includes a Qualitative Characterization (Part 1), as well as a Quantitative Assessment and Scoring (Part 2). The Qualitative Assessment 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

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 meters:

- Location and landscape support
- Water environment
- Vegetative community

6.6 UMAM RESULTS

For the US 301 (Gall Boulevard) PD&E Study, representative UMAM scores were developed for each wetland that will be affected by the proposed project (see **Table 6-5**). **Table 6-5** 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 Build Alternative (see **Table 6-6**). The estimated total numeric value of functions to fish and wildlife lost as a result of construction of the Build Alternative is 0.61. The completed UMAM data sheets are provided in **Appendix E**.

TABLE 6-5
REPRESENTATIVE UMAM SCORES FOR WETLANDS 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	641	PEM1C	4	0	5	0	5	0	0.47	0	0.47
WL 4	643	PEM1J	4	0	4	0	7	0	0.50	0	0.50
WL 5	510	R2UB3J	4	0	6	0	5	0	0.50	0	0.50
WL 6	617	PFO1C	4	0	3	0	5	0	0.40	0	0.40
WL 7	641	PEM1C	3	0	4	0	3	0	0.33	0	0.33
WL 8	644	PAB4H	5	0	6	0	6	0	0.57	0	0.57
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.
Source: Cowardin et al., 1979

TABLE 6-6
ESTIMATED UMAM FUNCTIONAL LOSS FROM WETLAND AND OTHER SURFACE WATER IMPACTS

WETLAND/ SURFACE WATER ID	FLUCFCS CODE	FWS CLASSIFICATION	DELTA	IMPACT ACRES	FUNCTIONAL LOSS
WL 2	641	PEM1C	0.47	0.5	0.24
WL 4	643	PEM1J	0.50	0.2	0.10
WL 5	510	R2UB3J	0.50	0.1	0.05
WL 6	617	PFO1C	0.40	0.1	0.04
WL 7	641	PEM1C	0.33	<0.1	0.01
WL 8	644	PAB4H	0.57	<0.1	0.01
Ditches	510	PEM1Jx	0.23	0.7	0.16
			TOTAL	**1.6**	**0.61**

Source: Cowardin et al., 1979

6.7 MITIGATION

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 Code of Federal Regulations (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 U.S. Environmental Protection Agency (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 proposed project will result in unavoidable wetland impacts to freshwater wetland habitats. Wetland impacts resulting from construction of the proposed US 301 (Gall Boulevard) 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 will 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. 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 will be reassessed as this project moves forward into design and permitting.

The FDOT Mitigation Program (i.e. Senate Bill 1986) (Chapter 373.4137 F.S.) will also be considered as an option for mitigation. The FDOT will evaluate the project to use credits from the FDOT Mitigation Program based on the availability of suitable and sufficient credits within the project's watershed basin, the ability to satisfy commitments to regulatory and resource agencies, the availability of mitigation sites with suitable and sufficient credits initiated with FDOT funds under the Program, and the ability to satisfy state and federal requirements, including long-term maintenance and liability.

If the use of a mitigation bank or in-lieu fee program is not available at the time of permitting, a conceptual mitigation plan may be created to offset the unavoidable impacts to wetlands that will result from construction of the 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 US 301 (Gall Boulevard) improvements will be coordinated with USACE and SWFWMD during the state and federal permitting phase of this project.

Section 7.0
REFERENCES

Cowardin, *et al.,* 1979. Cowardin, L.M., V. Carter, F.C. Golet, E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. 131 pp.

Florida Administrative Code, 1994. Chapter 62-340, F.A.C. *Delineation of the Landward Extent of Wetlands and Surface Waters*. Retrieved (January 2015) from https://www.flrules.org/gateway/chapterhome.asp?chapter=62-340.

Florida Administrative Code, 2007. Chapter 62-345, F.A.C. *Uniform Mitigation Assessment Method,* Retrieved (January 2015) from https://www.flrules.org/gateway/ChapterHome.asp?Chapter=62-345.

FDACS, 2010. *Notes on Florida's Endangered and Threatened Plants*. Botany Section Contribution No. 38, 5th edition. Florida Department of Agriculture and Consumer Services, Division of Plant Industry, 2010.

FDOT, 1999. *Florida Land Use, Cover and Forms Classification System Handbook*, 3rd Edition, Florida Department of Transportation, 1999.

FNAI, 2015a. Element Occurrence Data Report. Florida Natural Areas Inventory. January 8, 2015.

FNAI, 2015b. Database, Florida Natural Areas Inventory, updated August 2015 [Data File] Last Retrieved (August 2015) from http://www.fnai.org.

FWC, 2012a. *Florida Black Bear Management Plan*. Florida Fish and Wildlife Conservation Commission, Tallahassee, FL. 215 pp. June 27, 2012.

FWC, 2012b. Eagle Nest Locator website, Florida Fish and Wildlife Conservation Commission Database, [Data File] Last Retrieved (January 2015) from https://public.myfwc.com/FWRI/EagleNests/nestlocator.aspx.

FWC, 2013. Florida Fish and Wildlife Conservation Commission pursuant to Rules 68A-27.003 through 68A-27.005, F.A.C. (http://myfwc.com/wildlifehabitats/imperiled/), updated January 2013.

FWC, 2008. *Bald Eagle Management Plan, Haliaeetus leucocephalus*. Florida Fish and Wildlife Conservation Commission. Adopted April 9, 2008.

FWS, 2013. 50 Code of Federal Regulations (CFR) 17, U.S. Fish and Wildlife Service, from http://www.fws.gov/endangered/, updated March 2013.

FWS, 2012. GIS wood stork data for active colonies. U.S. Department of Interior, Fish and Wildlife Service.

Gilbert *et al.*, 1995. Gilbert, Katherine M., Tobe, John D., Cantrell, Richard W., Sweeley, Maynard E., Cooper, James R. *Florida Wetlands Delineation Manual.* Florida Department of Environmental Protection. 198 pp.

Hurt, 2007. *Hydric Soils of Florida Handbook*, 4th Edition, Florida Association of Soil Scientists, March 2007.

NatureServe, 2015. Nature*Serve* Explorer maps and database, Updated January 2015. http://www.natureserve.org/explorer/. Last retrieved July 2015.

NRCS, 1982. *Soil Survey of Pasco County, Florida.* United States Department of Agriculture and Soil Conservation Service, Washington, DC, June 1982.

SWFWMD, 2011. Florida Land Use Cover and Forms GIS Database. Southwest Florida Water Management District.

USACE, 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0)*, ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-10-20. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

USGS, 1990. U.S. Geological Survey 7.5 minute Topographical Quadrangle Map, Zephyrhills.

Wunderlin, R. P., and B. F. Hansen. 2008. *Atlas of Florida Vascular Plants* (http://www.plantatlas.usf.edu/). [S. M. Landry and K. N. Campbell (application development), Florida Center for Community Design and Research.] Institute for Systematic Botany, University of South Florida, Tampa.

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 6.0 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 24.5 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 10.4 percent of the project study area.

10 – Wabasso Fine Sand

Wabasso fine sand is a nearly level poorly drained soil found in broad areas of flatwoods. The water table is at a depth of 10 to 40 inches for more than six months in its natural state. It is at a depth of less than 10 inches for one to four months during the wet season. Wabasso fine sand is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007), but may contain up to 10 percent hydric soil inclusions. Wabasso fine sand comprises 5.0 percent of the project study area.

16 – Zephyr Muck

Zephyr muck is a nearly level, very poorly drained soil occurring in 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 0.7 percent of the project study area.

17 – Immokalee Fine Sand

Immokalee fine sand is a nearly level, poorly drained soil occurring in broad flatwood areas. Slopes are smooth to convex and range from 0 to 2 percent. In most years the water table is at a depth of 10 inches for two months and is at a depth of 10 to 40 inches for eight months or more. Immokalee 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. Immokalee fine sand comprises 3.5 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 29.1 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 2.8 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 1.7 percent of the project study area.

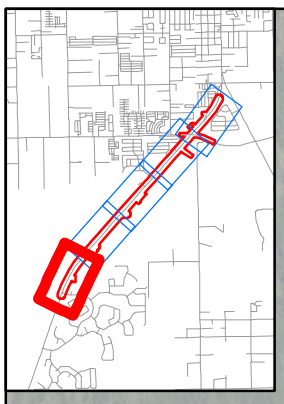
60 – Palmetto-Zephyr-Sellers Complex

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 10.5 percent of the project study area.

64 – Nobleton Fine Sand, 0 to 5 percent slopes

Nobleton fine sand consists of areas of gently sloping poorly drained soils on uplands. Slopes are smooth to concave. The water table is at a depth of 20 to 40 inches for one to four months during the summer rainy season. Nobleton fine sand, 0 to 5 percent slopes is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). Nobleton fine sand, 0 to 5 percent slopes comprises 2.9 percent of the project study area.



SYMBOL	DESCRIPTION
1	WAUCHULA FINE SAND, 0 TO 5 PERCENT SLOPES
2	POMONA FINE SAND
6	TAVARES SAND, 0 TO 5 PERCENT SLOPES
10	WABASSO FINE SAND
16	ZEPHYR MUCK
17	IMMOKALEE FINE SAND
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES
26	NARCOOSSEE FINE SAND
48	LOCHLOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
60	PALMETTO-ZEPHYR-SELLERS COMPLEX
64	NOBLETON FINE SAND, 0 TO 5 PERCENT SLOPES
99	WATER

Legend

Project Study Area

Soils

Source:
Aerials- FDOT, 2014
Soils- NRCS, 2012

US 301 PD&E

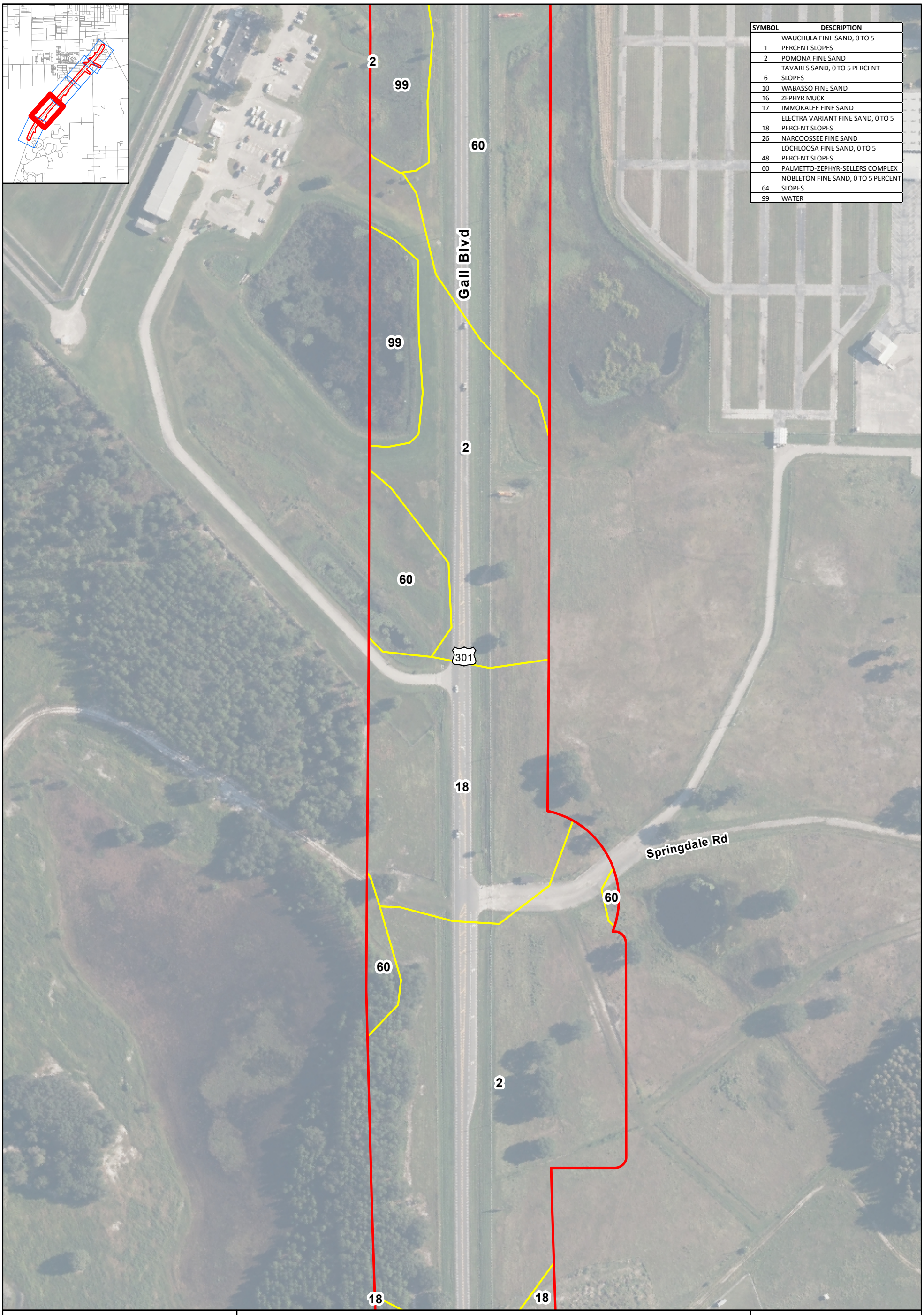
NRCS Soils within the Project Study Area

Pasco County, FL

N

0 100 200

Feet



SYMBOL	DESCRIPTION
1	WAUCHULA FINE SAND, 0 TO 5 PERCENT SLOPES
2	POMONA FINE SAND
6	TAVARES SAND, 0 TO 5 PERCENT SLOPES
10	WABASSO FINE SAND
16	ZEPHYR MUCK
17	IMMOKALEE FINE SAND
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES
26	NARCOOSSEE FINE SAND
48	LOCHLOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
60	PALMETTO-ZEPHYR-SELLERS COMPLEX
64	NOBLETON FINE SAND, 0 TO 5 PERCENT SLOPES
99	WATER

Legend

Project Study Area

Soils

Source:
Aerials- FDOT, 2014
Soils- NRCS, 2012

US 301 PD&E

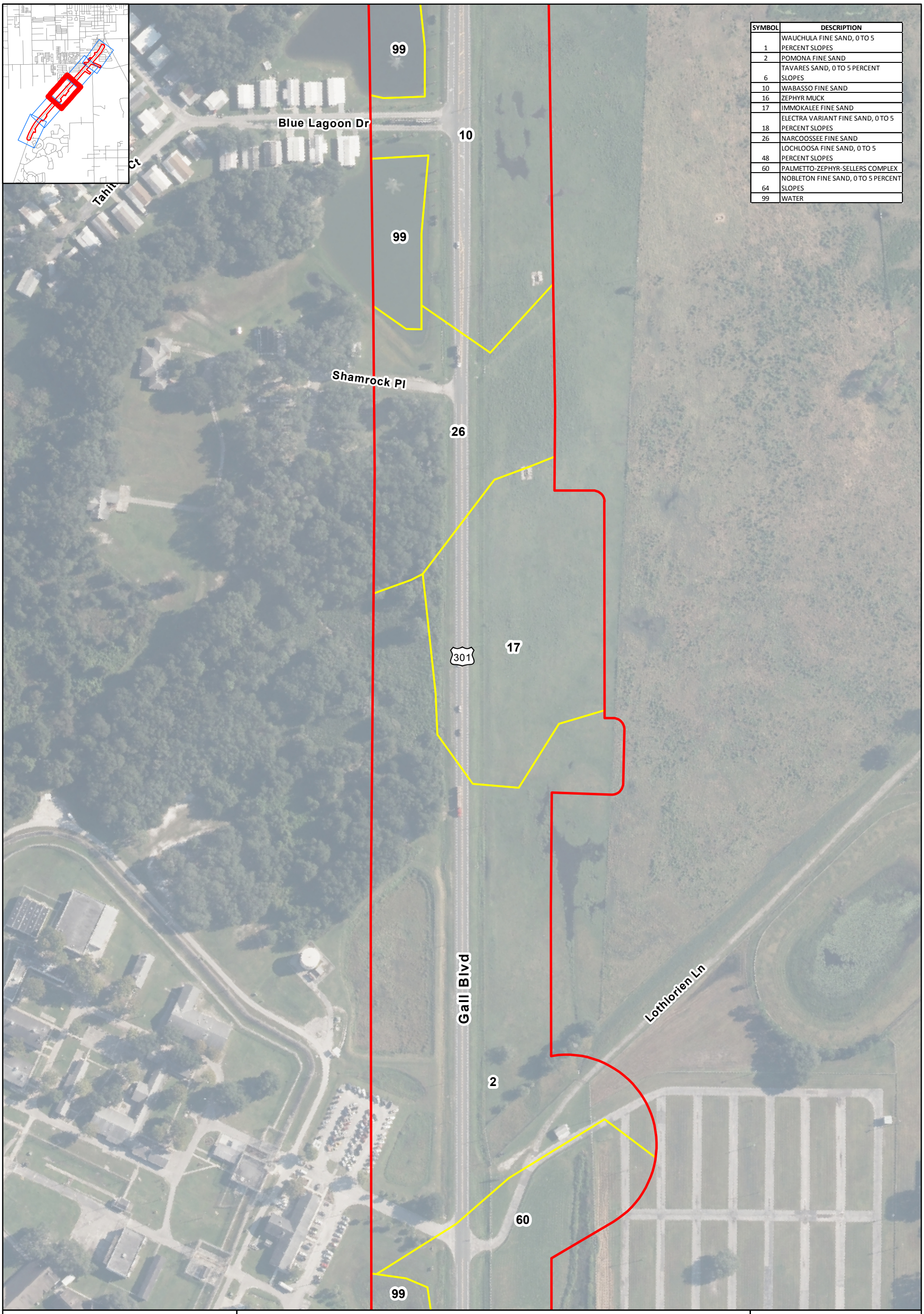
NRCS Soils within the Project Study Area

Pasco County, FL

N

0 100 200

Feet



SYMBOL	DESCRIPTION
1	WAUCHULA FINE SAND, 0 TO 5 PERCENT SLOPES
2	POMONA FINE SAND
6	TAVARES SAND, 0 TO 5 PERCENT SLOPES
10	WABASSO FINE SAND
16	ZEPHYR MUCK
17	IMMOKALEE FINE SAND
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES
26	NARCOOSSEE FINE SAND
48	LOCHLOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
60	PALMETTO-ZEPHYR-SELLERS COMPLEX
64	NOBLETON FINE SAND, 0 TO 5 PERCENT SLOPES
99	WATER

Legend

Project Study Area

Soils

Source:
Aerials- FDOT, 2014
Soils- NRCS, 2012

US 301 PD&E

NRCS Soils within the Project Study Area

Pasco County, FL

N

0 100 200

Feet

SYMBOL	DESCRIPTION
1	WAUCHULA FINE SAND, 0 TO 5 PERCENT SLOPES
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6	TAVARES SAND, 0 TO 5 PERCENT SLOPES
10	WABASSO FINE SAND
16	ZEPHYR MUCK
17	IMMOKALEE FINE SAND
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES
26	NARCOOSSEE FINE SAND
48	LOCHLOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
60	PALMETTO-ZEPHYR-SELLERS COMPLEX
64	NOBLETON FINE SAND, 0 TO 5 PERCENT SLOPES
99	WATER

Legend

Project Study Area

Soils

Source:
Aerials- FDOT, 2014
Soils- NRCS, 2012

US 301 PD&E

NRCS Soils within the Project Study Area

Pasco County, FL

N

0 100 200

Feet

SYMBOL	DESCRIPTION
1	WAUCHULA FINE SAND, 0 TO 5 PERCENT SLOPES
2	POMONA FINE SAND
6	TAVARES SAND, 0 TO 5 PERCENT SLOPES
10	WABASSO FINE SAND
16	ZEPHYR MUCK
17	IMMOKALEE FINE SAND
18	ELECTRA VARIANT FINE SAND, 0 TO 5 PERCENT SLOPES
26	NARCOOSSEE FINE SAND
48	LOCHLOOSA FINE SAND, 0 TO 5 PERCENT SLOPES
60	PALMETTO-ZEPHYR-SELLERS COMPLEX
64	NOBLETON FINE SAND, 0 TO 5 PERCENT SLOPES
99	WATER

Gall Blvd
Crystal Springs Rd
Spreading Oaks Blvd
Oakhurst Ln
Oakcrest Ln
Tall Oaks Ln
Brookside Ln
Overbrook Blvd
Collingwood Ln
New Hope Rd
Salem Ave
Chancey Rd
Muller Dr
Cone Dr
Willoughby Dr
Beniger Dr
Stafford Dr
Monet Dr
301
535
6
1
2
18
48

Legend

- Project Study Area
- Soils

Source:
Aerials- FDOT, 2014
Soils- NRCS, 2012

US 301 PD&E

NRCS Soils within the Project Study Area

Pasco County, FL

N

0 100 200
Feet

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 2.9 acres of the project study area and is comprised of single-family homes on large lots. This land use is located near the center of the project study area on the west side of US 301.

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 7.0 acres of the project study area and is comprised of single-family and mobile homes located along the west side of US 301 in Tropical Acre Estates, Palm View Gardens RV Resort, Clyde's Cottages, Sandollar RV Park, and Ramblewood Mobile Homes.

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 17.9 acres of the project study area and includes Festival Park (flea market) and Action Auctioneers located on the east side of US 301 near the north terminus of the project study area, the Moose Lodge and Portable Sheds located on the west side of US 301 near the center of the project study area, and Citgo gas station and Chancey Appliance Sales located on the west side of US 301 near the south terminus of the project study area.

Industrial
FLUCFCS: 150
Industrial land use includes areas where manufacturing, assembly, or processing of materials and products are accomplished. This land use comprises 2.8 acres of the project study area and includes 301 Service Garage and Towing facility and associated lots located on the west side of US 301 near the north terminus of the project study area.

Correctional
FLUCFCS: 176
This land use typically includes confined facilities enclosed within multiple fence structure along with all known associated structures and grounds. This land use comprises 9.2 acres of the project study area and includes the Zephyrhills Department of Corrections located on the west side of US 301 near the south terminus 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 40.2 acres of the project study area, and includes US 301, 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. Other minor roads (paved and unpaved) are located throughout 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 located on west side of US 301 near the north and south termini of the project study area. This land use type comprises 2.8 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 at the south terminus of the project study area on both the west and east sides of US 301 and comprises 37.5 acres. Improved pastures within the project study area are utilized by cattle and horses. Dominant vegetation within the improved pastures include bahia grass, bushy broomgrass (*Andropogon glomeratus*), scattered live oak (*Quercus virginiana*), and planted slash pine (*Pinus elliottii*).

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 on the west side of US 301 near the south terminus of the project study area. Within the project study area, this vegetative cover type is dominated by wax myrtle (*Myrica cerifera*), saltbush (*Baccharis halimifolia*) and associated herbaceous species. This vegetative cover type comprises 0.9 acre of the project study area.

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 7.9 acres of the project study area and is located near the south terminus of the project area on the west side of US 301 and on the east side of US 301 near the north terminus of the project area. Within the project study area, dominant vegetation consists of live oak, cabbage palm, slash pine, and muscadine grape (*Vitis rotundifolia*). This vegetative cover type comprises 8.6 acres of the project study area.

Wetland and Other Surface Water Habitat Types

Streams and Waterways
FLUCFCS: 510
FWS: PEM1Jx/R2UB3J – Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated/Riverine, Lower Perennial, Unconsolidated Bottom, Mud, Intermittently Flooded
Streams and waterways include rivers, creeks, canals, and other linear water bodies. Linear bodies of water are located throughout the project study area. This surface water habitat type includes several linear drainage ditches located on the east and west side of US 301 throughout the project area. Also included in this surface water habitat type is Zephyr Creek, located in the north terminus of the project study area. The plant species found within the ditches and creek predominantly include maidencane (*Panicum hemitomon*), primrose willow (*Ludwigia peruviana*), smartweed, torpedo grass, and alligator weed. Streams and waterways comprise 2.6 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. Several reservoirs are located throughout the project study area and the banks are typically devoid of any vegetation. This surface water type comprises 4.9 acres of the project study area.

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. An isolated, wetland hardwood forest area is located in the north terminus of the project study area on the east side of US 301. Dominant canopy species found in this wetland habitat type include dahoon holly, water oak, and laurel oak with little to no ground cover. Mixed wetland hardwoods comprise 0.1 acre 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 on the west and east sides of US 301 near the south terminus and center of the project study area. Dominant vegetation within the freshwater marshes include Carolina willow, soft rush, bushy broomgrass, primrose willow, and maidencane. Freshwater marshes comprise 4.1 acres of the project study area.

Wet Prairie

FLUCFCS: 643

FWS: PEM1J – Palustrine, Emergent, Persistent, Intermittently7 Flooded

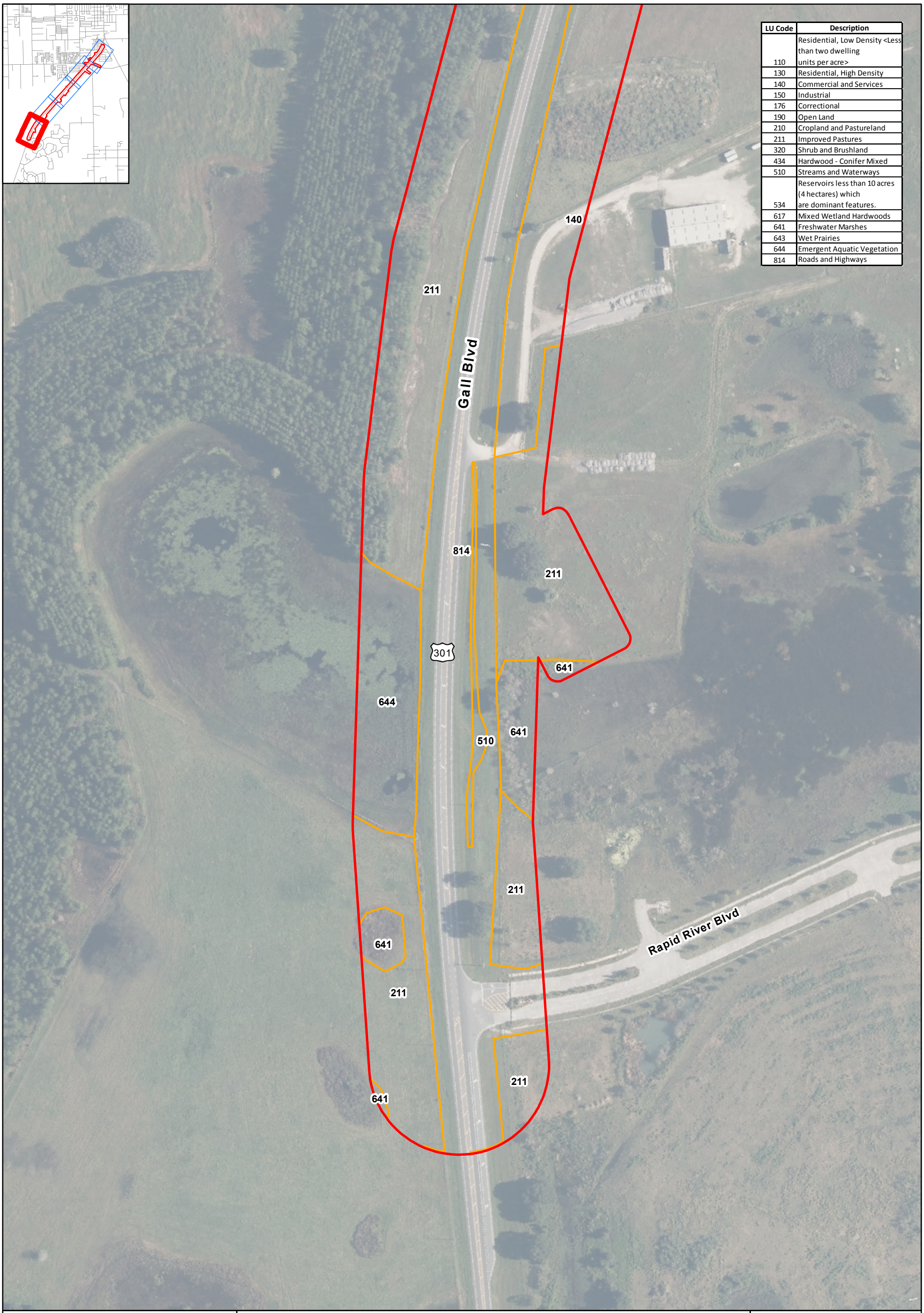
Wet prairies are composed of grassy vegetation and are distinguished from a marsh by a reduced hydroperiod and more transitional wetland species. Within the project study area, wet prairies are located within improved pasture on the east side of US 301 near the south terminus of the project study area. Dominant species found in the wet prairies include maidencane, flat sedge (*Cyperus* spp.), smartweed, and Bermuda grass. Wet prairies comprise 0.7 acre 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 east side of US 301 at the south terminus of the project study area. Dominant vegetation consists of spatterdock (*Nuphar* sp.), maidencane, arrowhead, and torpedo grass. Emergent aquatic vegetation comprises 1.8 acres of the project study area.



LU Code	Description
110	Residential, Low Density <Less than two dwelling units per acre>
130	Residential, High Density
140	Commercial and Services
150	Industrial
176	Correctional
190	Open Land
210	Cropland and Pastureland
211	Improved Pastures
320	Shrub and Brushland
434	Hardwood - Conifer Mixed
510	Streams and Waterways
534	Reservoirs less than 10 acres (4 hectares) which are dominant features.
617	Mixed Wetland Hardwoods
641	Freshwater Marshes
643	Wet Prairies
644	Emergent Aquatic Vegetation
814	Roads and Highways

Legend

Project Study Area

Land Use/ Vegetative Cover

Source:
Aerials- FDOT, 2014
Land Use- URS, 2013 & 2015

US 301 PD&E

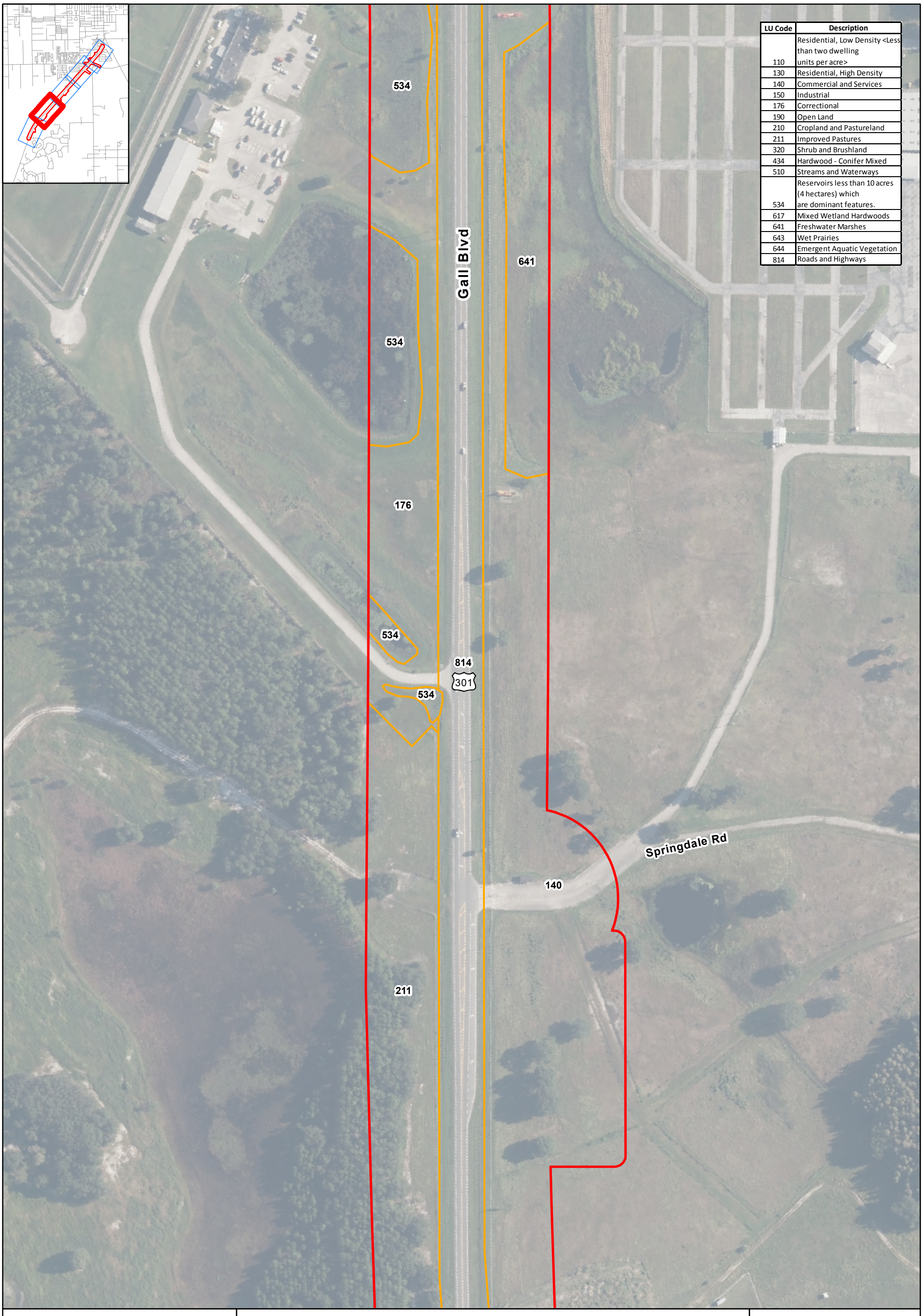
Land Use/ Vegetative Cover within the Project Study Area

Pasco County, FL

N

0 100 200

Feet



LU Code	Description
110	Residential, Low Density <Less than two dwelling units per acre>
130	Residential, High Density
140	Commercial and Services
150	Industrial
176	Correctional
190	Open Land
210	Cropland and Pastureland
211	Improved Pastures
320	Shrub and Brushland
434	Hardwood - Conifer Mixed
510	Streams and Waterways
534	Reservoirs less than 10 acres (4 hectares) which are dominant features.
617	Mixed Wetland Hardwoods
641	Freshwater Marshes
643	Wet Prairies
644	Emergent Aquatic Vegetation
814	Roads and Highways

Legend

- Project Study Area
- Land Use/ Vegetative Cover

Source:
Aerials- FDOT, 2014
Land Use- URS, 2013 & 2015

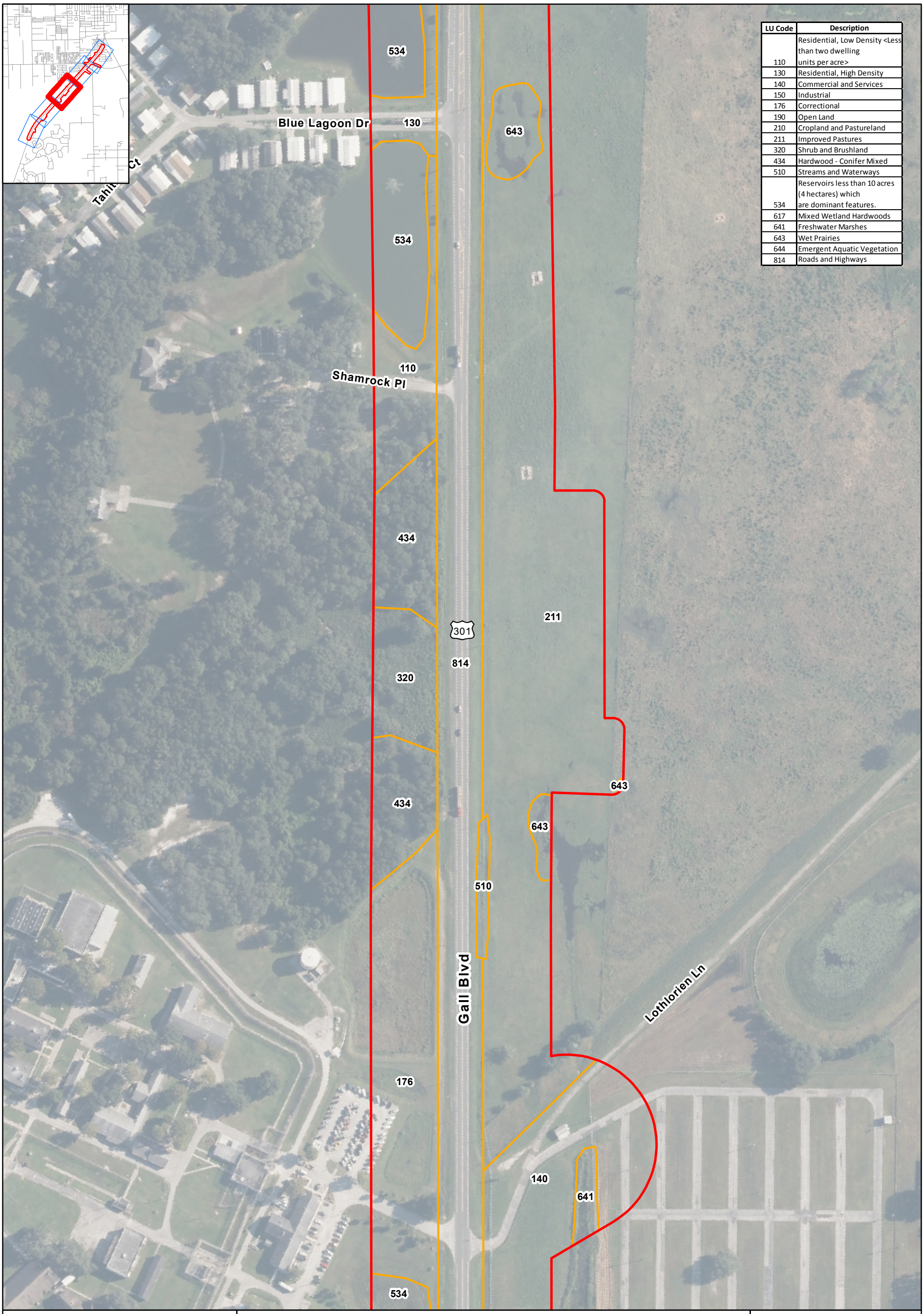
US 301 PD&E

Land Use/ Vegetative Cover within the Project Study Area

Pasco County, FL

N

0 100 200
Feet



LU Code	Description
110	Residential, Low Density <Less than two dwelling units per acre>
130	Residential, High Density
140	Commercial and Services
150	Industrial
176	Correctional
190	Open Land
210	Cropland and Pastureland
211	Improved Pastures
320	Shrub and Brushland
434	Hardwood - Conifer Mixed
510	Streams and Waterways
534	Reservoirs less than 10 acres (4 hectares) which are dominant features.
617	Mixed Wetland Hardwoods
641	Freshwater Marshes
643	Wet Prairies
644	Emergent Aquatic Vegetation
814	Roads and Highways

Legend

- Project Study Area
- Land Use/ Vegetative Cover

Source:
Aerials- FDOT, 2014
Land Use- URS, 2013 & 2015

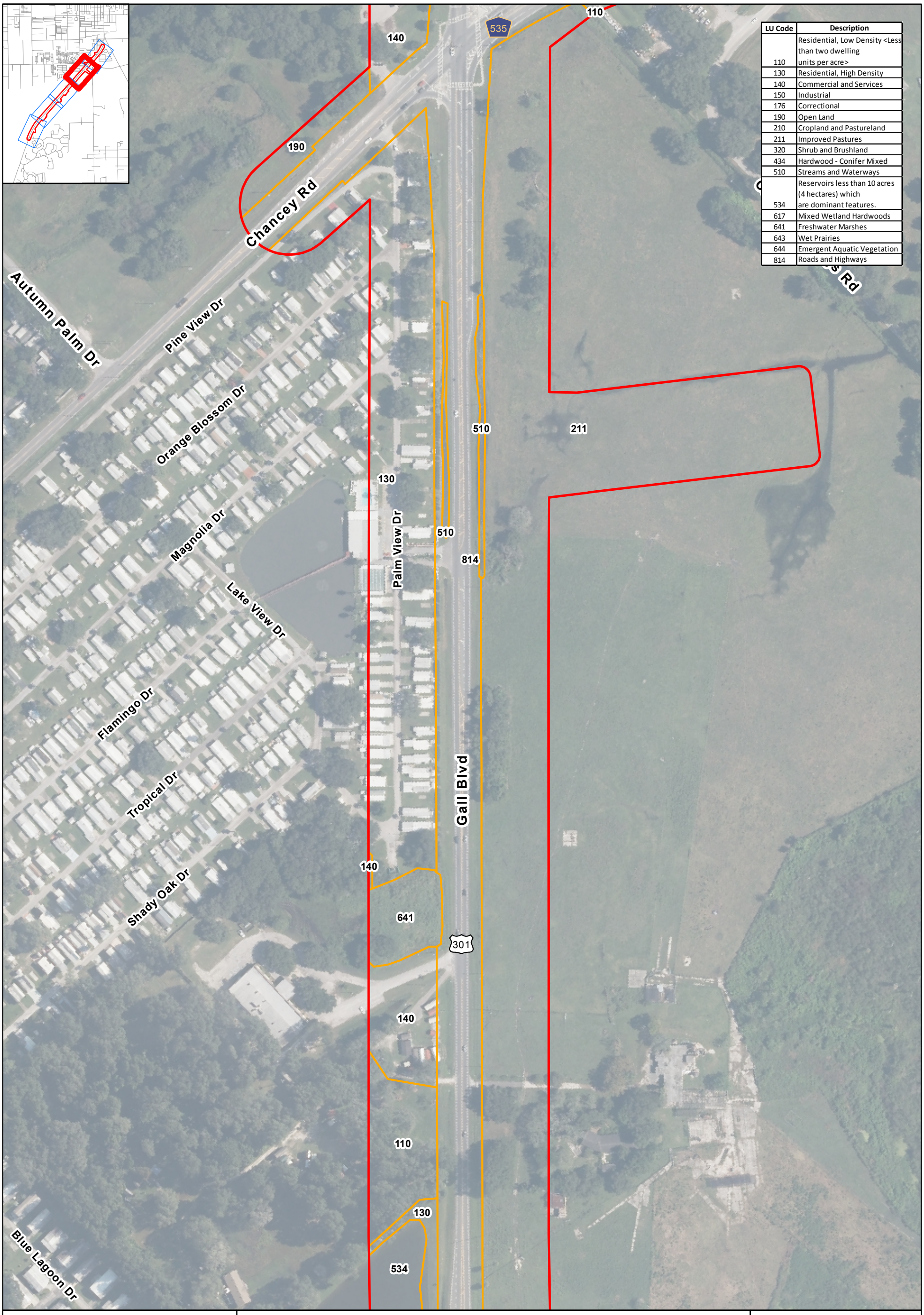
US 301 PD&E

Land Use/ Vegetative Cover within the Project Study Area

Pasco County, FL

N

0 100 200 Feet



LU Code	Description
110	Residential, Low Density <Less than two dwelling units per acre>
130	Residential, High Density
140	Commercial and Services
150	Industrial
176	Correctional
190	Open Land
210	Cropland and Pastureland
211	Improved Pastures
320	Shrub and Brushland
434	Hardwood - Conifer Mixed
510	Streams and Waterways
534	Reservoirs less than 10 acres (4 hectares) which are dominant features.
617	Mixed Wetland Hardwoods
641	Freshwater Marshes
643	Wet Prairies
644	Emergent Aquatic Vegetation
814	Roads and Highways

Legend

Project Study Area

Land Use/ Vegetative Cover

Source:
Aerials- FDOT, 2014
Land Use- URS, 2013 & 2015

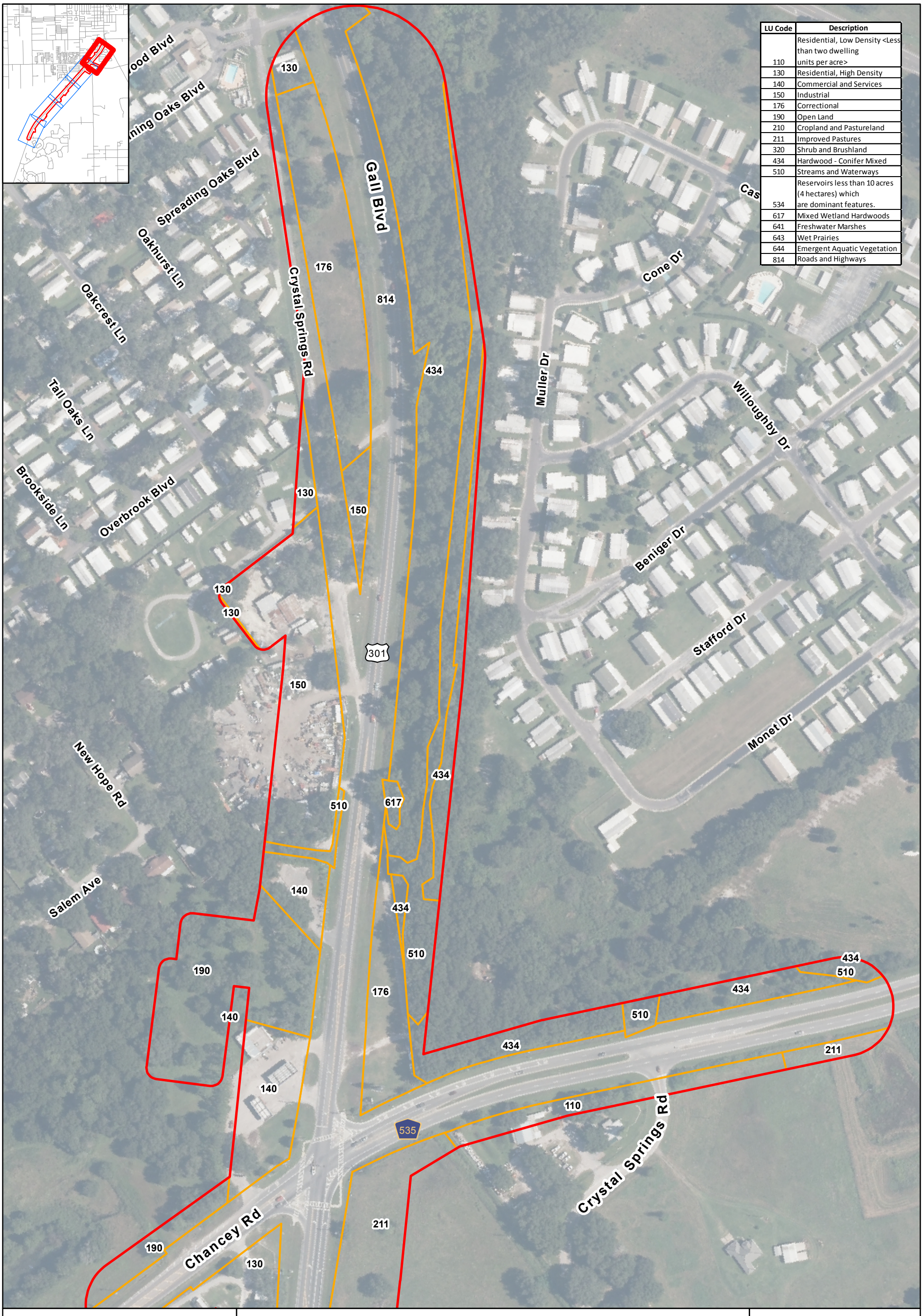
US 301 PD&E

Land Use/ Vegetative Cover within the Project Study Area

Pasco County, FL

N

0 100 200 Feet



LU Code	Description
110	Residential, Low Density <Less than two dwelling units per acre>
130	Residential, High Density
140	Commercial and Services
150	Industrial
176	Correctional
190	Open Land
210	Cropland and Pastureland
211	Improved Pastures
320	Shrub and Brushland
434	Hardwood - Conifer Mixed
510	Streams and Waterways
534	Reservoirs less than 10 acres (4 hectares) which are dominant features.
617	Mixed Wetland Hardwoods
641	Freshwater Marshes
643	Wet Prairies
644	Emergent Aquatic Vegetation
814	Roads and Highways

Legend

- Project Study Area
- Land Use/ Vegetative Cover

Source:
Aerials- FDOT, 2014
Land Use- URS, 2013 & 2015

US 301 PD&E

Land Use/ Vegetative Cover within the Project Study Area

Pasco County, FL

N

0 100 200 Feet

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 twenty (20) 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 system that extends east outside of the project area and is located on the east side of US 301 at the south terminus of the project study area. Within the project study area, WL 1 overlays mapped hydric soils and dominant vegetation consists of Carolina willow (*Salix caroliniana*), black gum (*Nyssa sylvatica*), arrowhead (*Sagittaria lancifolia*), soft rush (*Juncus effusus*), maidencane (*Panicum hemitomon*), and bushy broomgrass (*Andropogon glomeratus*). During the January 2015 field review, wildlife observed within WL 1 included a little blue heron (*Egretta caerulea*) and cardinals (*Cardinalis cardinalis*). WL 1 comprises 0.7 acre of the project study area.

Wetland 2
FLUCFCS: 641 – Freshwater Marsh
FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded
Wetland 2 is part of a freshwater marsh overlaying mapped hydric soils and is located on the east side of US 301 near the south terminus of the project study area. Within the project study area, dominant vegetation within this wetland consists of Carolina willow, arrowhead, cattail (*Typha* spp.), primrose willow (*Ludwigia peruviana*), wild taro (*Colocasia esculenta*), barnyard grass (*Echinochloa crus-galli*), water hyssop (*Bacopa* spp.), maidencane, smartweed (*Polygonom* spp.), and spatterdock (*Nuphar advena*). During the June 2013 field review, wildlife observed within WL 2 included red-winged blackbirds (*Agelaius phoeniceus*), great egret (*Ardea alba*), and a pig frog (*Rana grylio*). WL 2 comprises 2.4 acres of the project study area.

Wetlands 3 and Wetland 4
FLUCFCS: 643 – Wet Prairie
FWS: PEM1J – Palustrine, Emergent, Persistent, Intermittently Flooded
Wetlands 3 and 4 are comprised of wet prairies that do not overlay mapped hydric soils and are located on the east side of US 301 near the center of the project study area. Both of these wet prairies lie within an active pasture. Within the project study area, dominant vegetation within WLs 3 and 4 consists of bristle grass (*Setaria geniculata*), Bermuda grass (*Cynodon dactylon*), buttonweed (*Diodia virginiana*), smartweed, maidencane, nut sedge (*Cyperus* spp.), and pennywort (*Hydrocotyle* spp.). During the field reviews, standing water was present throughout both wetlands and ducks were observed within WL 4. WL 3 comprises 0.2 acre of the project study area. WL 4 comprises 0.5 acre of the project study area.

Wetland 5 (Zephyr Creek)

FLUCFCS: 510 – Streams and Waterways

FWS: R2UB3J – Riverine, Lower Perennial, Unconsolidated Bottom, Mud, Intermittently Flooded

Wetland 5 consists of Zephyr Creek. The creek flows underneath US 301 via a culvert and is located in the north terminus of the project area. On the east side of US 301, the banks of WL 5 consist of live oak (*Quercus virginiana*), saltbush (*Baccharis halimifolia*), sugar berry (*Celtis laevigata*), Virginia chain fern (*Woodwardia virginica*), air potato (*Dioscorea bulbifera*), and camphor tree (*Cinnamomum camphora*). Dominant vegetation within the creek on the east side of US 301 consists of primrose willow and paragrass (*Urochloa mutica*).

On the west side of US 301, WL 5 is bound by industrial land use. Dominant vegetation within the creek on the west side of US 301 consists of wild taro, paragrass, primrose willow, torpedo grass (*Panicum repens*), and smartweed. During the June 2013 field review, fish were observed within WL 5. WL 5 comprises 1.9 acres of the project study area.

Wetland 6

FLUCFCS: 617 – Mixed Wetland Hardwoods

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

Wetland 6 is an isolated, sparsely vegetated depressional area located within forested uplands adjacent to the Zephyr Creek floodplain. Dominant vegetation within this wetland consists of laurel oak (*Quercus laurifolia*), dahoon holly (*Illex cassine*), and water oak (*Quercus nigra*) with no ground cover. A large berm separates this wetland from WL 5. WL 6 comprises 0.1 acre of the project study area.

Wetland 7

FLUCFCS: 641 – Freshwater Marsh

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

Wetland 7 consists of a freshwater marsh that overlays mapped hydric soils and is located on the west side of US 301 near the center of the project study area. Within the project study area, dominant vegetation within WL 7 consists of primrose willow, alligator weed (*Alternanthera philoxeroides*), paragrass, saltbush, Carolina willow, barnyard grass, and soft rush. WL 7 comprises 0.7 acre of the project study area.

Wetland 8

FLUCFCS: 644 – Emergent Aquatic

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

Wetland 8 is located at the south terminus of the project study area on the west side of US 301 and consists of an emergent aquatic habitat that overlays mapped hydric soils. Within the project study area, dominant vegetation within WL 8 consists of spatterdock, maidencane, torpedo grass, and arrowhead. Within the existing ROW of US 301, additional vegetation within WL 8 consists of Carolina willow, primrose willow, cattail, and bushy broomgrass. WL 8 comprises 1.8 acres of the project study area.

Wetland 9 and 10
FLUCFCS: 641 – Freshwater Marsh
FWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded
Wetlands 9 and 10 are comprised of isolated freshwater marshes that do not overlay mapped hydric soils and are located at the south terminus of the project study area on the west side of US 301. Both of these freshwater marshes lie within an active pasture. Dominant vegetation within WLs 9 and 10 consists of sand cordgrass (*Spartina bakeri*) and soft rush. WL 9 comprises 0.3 acre of the project study area. WL 10 comprises less than 0.1 acre of the project study area.

Other Surface Waters

Ditches 1, 2, 3, and 4
FLUCFCS: 510 – Streams and Waterways
FWS: PEM1Jx – Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated
Ditches 1, 2, 3, and 4 are wet drainage features that run parallel to US 301 and are all upland-cut with the exception of Ditch 1. Ditch 1 is located on the east side of US 301 at the south terminus of the project study area and connects to WL 8 via a culvert. Dominant vegetation within Ditch 1 consists of spatterdock, arrowhead, torpedo grass, smartweed, maidencane, primrose willow, and water pennywort. Ditch 2 is located on the east side of US 301 near the center of the project study area. Ditches 3 and 4 are located on the west and east sides of US 301, respectively, near the north terminus of the project study area. Dominant vegetation within Ditches 2, 3, and 4 consists of alligator weed, smartweed, water pennywort, maidencane, torpedo grass, paragrass, and water hyssop. Ditch 1 comprises 0.2 acre of the project study area; Ditch 2 comprises 0.2 acre of the project study area; Ditch 3 comprises 0.2 acre of the project study area; Ditch 4 comprises 0.1 acre of the project study area.

During the June 2013 field review, a great egret was observed foraging within Ditch 3.

Surface Waters 1, 2, 3, 4, 5, and 6
FLUCFCS: 534 – Reservoirs Less than 10 Acres
FWS: POWHx – Palustrine, Open Water, Permanently Flooded, Excavated
Surface Waters 1-6 are comprised of reservoirs that serve as stormwater management ponds. SWs 1 and 2 serve the Tropical Acre Estates property located on the west side of US 301 near the north terminus of the project study area and are devoid of vegetation. SWs 3, 4, and 5 serve the Zephyrhills Correctional facility located on the west side of US 301 near the south terminus of the project study area and consist predominantly of bahia grass (*Paspalum notatum*), cattail, spatterdock, smartweed, and torpedo grass. SW 6 is located at the entrance road of the Zephyrhills Correctional facility and predominantly consists of alligator weed, frog fruit (*Phyla* spp.), water hyssop, and torpedo grass. SW 1 comprises 1.0 acre of the project study area; SW 2 comprises 1.2 acres of the project study area; SW 3 comprises 1.2 acres of the project study area; SW 4 comprises 1.2 acres of the project study area; SW 5 comprises 0.2 acre of the project study area; SW 6 comprises 0.1 acre of the project study area.

Wildlife observed within these ponds during the June 2013 and January 2015 field reviews includes Muscovy ducks (*Cairina moschata*), black-bellied whistler ducks (*Dendrocygna autumnalis*), white ibis (*Eudocimus albus*), and cormorants (*Phalacrocorax auritus*) in SW 1; and white ibis, little blue heron, and cattle egrets (*Bubulcus ibis*) in SW 3.

Legend

- Project Study Area
- Wetland / Other Surface Water

Source:
Aerials- FDOT, 2014
Wetlands/Other Surface Waters- URS, 2013 & 2015

US 301 PD&E

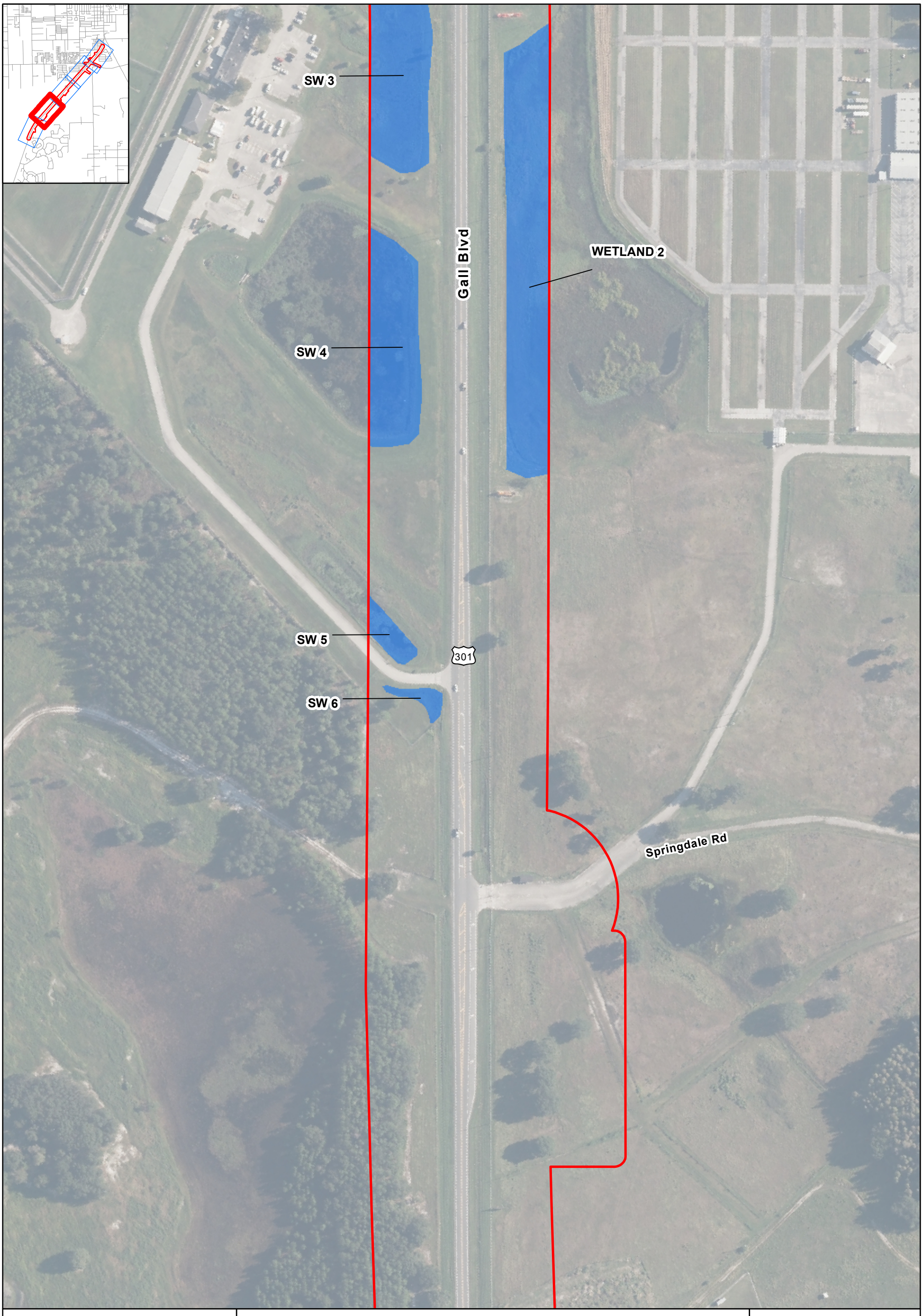
Wetlands / Other Surface Waters within the Project Study Area

Pasco County, FL

N

0 100 200

Feet



Legend

- Project Study Area
- Wetland / Other Surface Water

Source:
Aerials- FDOT, 2014
Wetlands/Other Surface Waters- URS, 2013 & 2015

US 301 PD&E

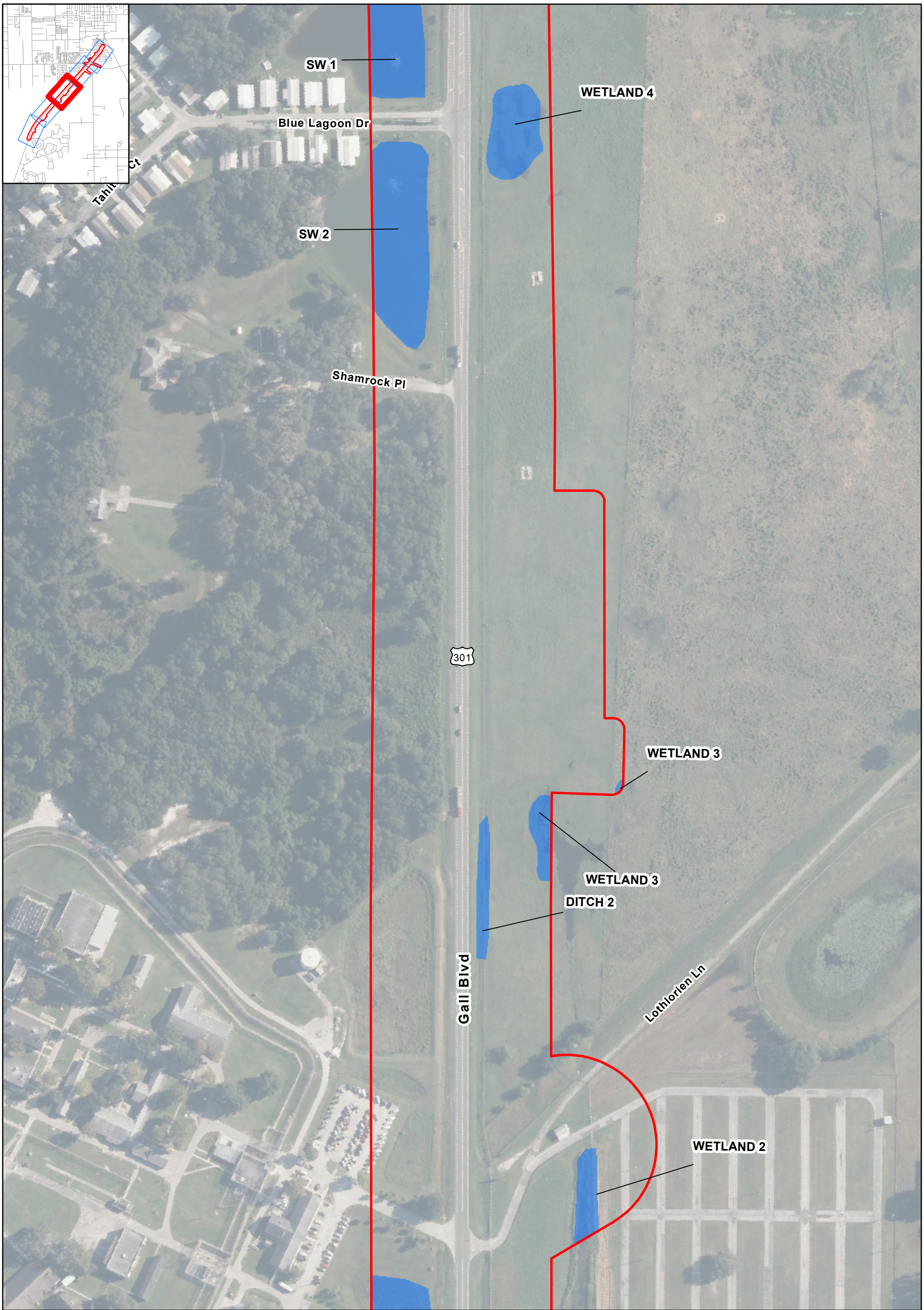
Wetlands / Other Surface Waters within the Project Study Area

Pasco County, FL

N

0 100 200

Feet



Legend

- Project Study Area
- Wetland / Other Surface Water

Source:
Aerials- FDOT, 2014
Wetlands/Other Surface Waters- URS, 2013 & 2015

US 301 PD&E

Wetlands / Other Surface Waters within the Project Study Area

Pasco County, FL

N

0 100 200 Feet

Legend

- Project Study Area
- Wetland / Other Surface Water

Source:
Aerials- FDOT, 2014
Wetlands/Other Surface Waters- URS, 2013 & 2015

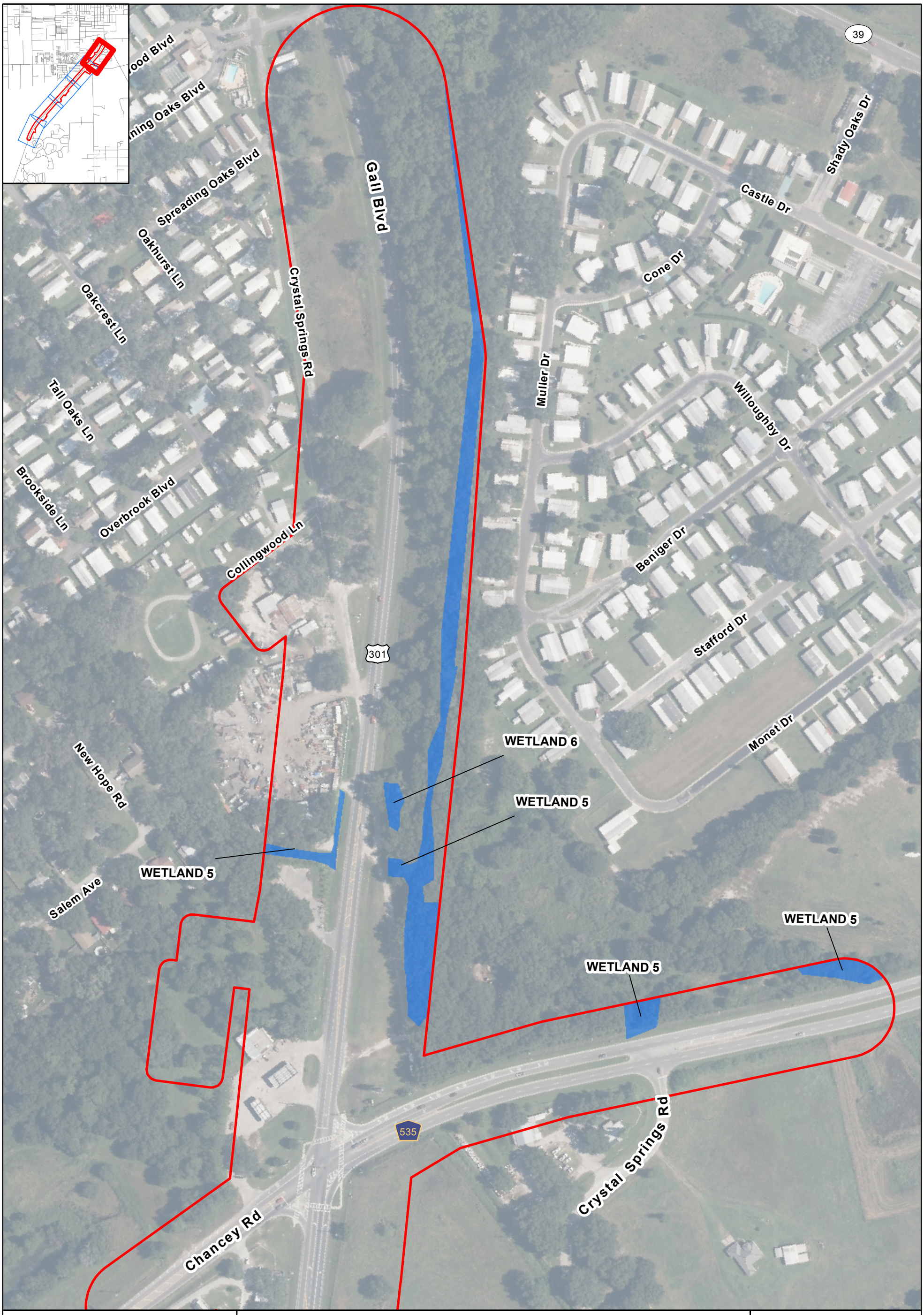
US 301 PD&E

Wetlands / Other Surface Waters within the Project Study Area

Pasco County, FL

N

0 100 200
Feet



Legend

- Project Study Area
- Wetland / Other Surface Water

Source:
Aerials- FDOT, 2014
Wetlands/Other Surface Waters- URS, 2013 & 2015

US 301 PD&E

Wetlands / Other Surface Waters within the Project Study Area

Pasco County, FL

N

0 100 200 Feet

APPENDIX D

Wetland and Other Surface Water Photographs

APPENDIX D
PHOTO SHEETS

Photo 1: Wetland 1 facing east.
FLUCFCS: 641 – Freshwater marsh

Photo 2: Wetland 2 facing east.
FLUCFCS: 641 – Freshwater marsh

Photo 3: Wetland 3 facing east.
FLUCFCS: 643 – Wet prairie

Photo 4: Wetland 4 facing southeast.
FLUCFCS: 643 – Wet prairie

Photo 5: Wetland 5 (Zephyr Creek) on the east side of US 301 facing northeast.
FLUCFCS: Streams and waterways

Photo 6: Wetland 5 on the west side of US 301 facing northwest.
FLUCFCS: 510 – Streams and waterways

Photo 7: Wetland 6 facing west.
FLUCFCS: 617 – Mixed wetland hardwoods

Photo 8: Wetland 7 facing northwest.
FLUCFCS: 641 – Freshwater marsh

Photo 9: Wetland 8 facing west.
FLUCFCS: 644 – Emergent aquatic

Photo 10: Wetland 9 facing west.
FLUCFCS: 641 – Freshwater marsh

Photo 11: Ditch 1 facing north.
FLUCFCS: 510 – Streams and waterways

Photo 12: Ditch 2 facing north.
FLUCFCS: 510 – Streams and waterways

Photo 13: Ditch 3 facing south.
FLUCFCS: 510 – Streams and waterways

Photo 14: Ditch 4 facing south.
FLUCFCS: 510 – Streams and waterways

Photo 15: Surface Water 1 facing southwest.
FLUCFCS: 534 – Reservoir less than 10 acres

Photo 16: Surface Water 2 facing west.
FLUCFCS: 534 – Reservoir less than 10 acres

Photo 17: Surface Water 3 facing west.
FLUCFCS: 534 – Reservoir less than 10 acres

Photo 18: Surface Water 4 facing west.
FLUCFCS: 534 – Reservoir less than 10 acres

Photo 19: Surface Water 5 facing northwest.
FLUCFCS: 534 – Reservoir less than 10 acres

Photo 20: Surface Water 6 facing south.
FLUCFCS: 534 – Reservoir less than 10 acres

APPENDIX E

UMAM Data Sheets

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 301 (Gall Blvd.) from SR 56 (Proposed) to SR 39 (Buchman Hwy.) PD&E Study		Wetland 2

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.5 ac

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

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

Wetland 2 is part of an isolated freshwater marsh that overlays mapped hydric soils.

Assessment area description

Within the project study area, dominant vegetation within this wetland consists of Carolina willow, arrowhead, cattail, primrose willow, wild taro, barnyard grass, water hyssop, maidencane, smartweed, and spatterdock.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 2 is located on the east side of US 301 near the south terminus of the project study area.	This wetland area is not unique to the regional landscape.

Functions	Mitigation for previous permit/other historic use
Wildlife foraging and breeding habitat, food chain support, flood attenuation, and water quality improvement	No

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Various amphibians, small mammals, wading birds, song birds, snakes, bobcat, fish	limpkin (SSC, feeding), little blue heron (SSC, feeding), snowy egret (SSC, feeding), tricolored heron (SSC, feeding), white ibis (SSC, feeding), wood stork (T, feeding), eastern indigo snake (T, feeding/cover)

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

During the June 2013 field review, wildlife observations within WL 2 included red-winged blackbirds, great egret, and a pig frog.

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
T. Norman	June 2013 and January 2015

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 301 (Gall Blvd.) from SR 56 (Proposed) to SR 39 (Buchman Hwy.) PD&E Study		Wetland 2
Impact or Mitigation	Assessment conducted by:	Assessment date:
Impact	T. Norman	June 2013 and January 2015

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	WL 2 is bounded by a commercial land use and US 301 with little off-site habitat support. Wildlife access to and from habitats outside of the assessment area is limited.	4	0
.500(6)(b)Water Environment (n/a for uplands)	Water quality is adversely affected by runoff received from commercial lot and roadway. Water levels appear appropriate considering seasonal variation. WL 2 is an isolated wetland system.	5	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Dominant vegetation within WL 2 consists of nuisance and exotic species including cattail, barnyard grass, wild taro, torpedo grass, and primrose willow.	5	0

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.47	0.00

Delta = [with-current]
-0.47

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

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

For impact assessment areas
FL = delta x acres = 0.5 ac x 0.47 = 0.24

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 301 (Gall Blvd.) from SR 56 (Proposed) to SR 39 (Buchman Hwy.) PD&E Study		Wetland 4

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
643 - Wet Prairie	PEM1J - Palustrine, Emergent, Persistent, Intermittently Flooded	Impact	0.2 ac

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

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

Wetland 4 consists of a wet prairie that lies within an active pasture and does not overlay mapped hydric soils.

Assessment area description

Within the project study area, dominant vegetation within WL 4 consists of bristle grass, Bermuda grass, buttonweed, smartweed, maidencane, nut sedge, and pennywort.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 4 islocated on the east side of US 301 near the center of the project study area.	This wetland area is not unique to the regional landscape.

Functions	Mitigation for previous permit/other historic use
Wildlife foraging and breeding habitat, food chain support, flood attenuation, and water quality improvement	No

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Various amphibians, small mammals, wading birds, song birds, snakes, bobcat	limpkin (SSC, feeding), little blue heron (SSC, feeding), snowy egret (SSC, feeding), tricolored heron (SSC, feeding), white ibis (SSC, feeding), wood stork (T, feeding), eastern indigo snake (T, feeding/cover)

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

During the June 2013 field review, wildlife observations within WL 4 included ducks.

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
T. Norman	June 2013 and January 2015

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 301 (Gall Blvd.) from SR 56 (Proposed) to SR 39 (Buchman Hwy.) PD&E Study		Wetland 4
Impact or Mitigation	Assessment conducted by:	Assessment date:
Impact	T. Norman	June 2013 and January 2015

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	WL 4 is bounded by an active pasture and US 301 with little off-site habitat support. Wildlife access to and from habitats outside of the assessment area is limited.	4	0
.500(6)(b)Water Environment (n/a for uplands)	Water quality is adversely affected by runoff received from the pasture and roadway. Water levels appear appropriate considering seasonal variation.	4	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	WL 4 consists mostly of desirable wetland vegetative species such buttonweed, smartweed, and maidencane.	7	0

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

Delta = [with-current]
-0.50

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

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

For impact assessment areas
FL = delta x acres = 0.2 ac x 0.50 = 0.10

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 301 (Gall Blvd.) from SR 56 (Proposed) to SR 39 (Buchman Hwy.) PD&E Study		Wetland 5

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
510 - Streams and Waterways	R2UB3J - Riverine, Lower Perennial, Unconsolidated Bottom, Mud, Intermittently Flooded	Impact	0.1 ac

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

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

Wetland 5 consists of Zephyr Creek. The creek flows underneath US 301 via a culvert.

Assessment area description

On the east side of US 301, the banks of WL 5 consist of live oak, saltbush, sugar berry, Virginia chain fern, air potato, and camphor tree.Dominant vegetation within the creek on the east side of US 301 consists of primrose willow and paragrass. On the west side of US 301, WL 5 is bound by industrial land use. Dominant vegetation within the creek on the west side of US 301 consists of wild taro, paragrass, primrose willow, torpedo grass, and smartweed.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 5 is located on the east and west sides of US 301 near the north terminus of the project study area.	This wetland area is not unique to the regional landscape.

Functions	Mitigation for previous permit/other historic use
Wildlife foraging and breeding habitat, food chain support, flood attenuation, and water quality improvement	No

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Various amphibians, small mammals, wading birds, song birds, snakes, bobcat, fish	limpkin (SSC, feeding), little blue heron (SSC, feeding), snowy egret (SSC, feeding), tricolored heron (SSC, feeding), white ibis (SSC, feeding), wood stork (T, feeding), eastern indigo snake (T, feeding/cover)

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

During the June 2013 field review, wildlife observations within WL 5 included fish.

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
T. Norman	June 2013 and January 2015

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 301 (Gall Blvd.) from SR 56 (Proposed) to SR 39 (Buchman Hwy.) PD&E Study		Wetland 5
Impact or Mitigation	Assessment conducted by:	Assessment date:
Impact	T. Norman	June 2013 and January 2015

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	WL 5 is bounded by industrial land use and US 301 on the west side of US 301 and an upland forest and high-density residential area on the east side of US 301 with little off-site habitat support. Wildlife access to and from habitats outside of the assessment area is limited.	4	0
.500(6)(b)Water Environment (n/a for uplands)	Water quality is adversely affected by runoff received from industrial lot and roadway. Water levels appear appropriate considering seasonal variation.	6	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Dominant vegetation within WL 5 consists of nuisance and exotic species including paragrass, wild taro, torpedo grass, and primrose willow.	5	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 = 0.1 ac x 0.50 = 0.05

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	Application Number	Assessment Area Name or Number
US 301 (Gall Blvd.) from SR 56 (Proposed) to SR 39 (Buchman Hwy.) PD&E Study		Wetland 6

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
617 - Mixed Wetland Hardwoods	PFO1C - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded	Impact	0.1 ac

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

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

Wetland 6 is an isolated, sparsely vegetated depressional area located within forested uplands adjacent to the Zephyr Creek floodplain.

Assessment area description

Dominant vegetation within this wetland consists of laurel oak, dahoon holly, and water oak with no ground cover.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 6 is located on the east side of US 301 near the north terminus of the project study area.	This wetland area is not unique to the regional landscape.

Functions	Mitigation for previous permit/other historic use
Wildlife foraging and breeding habitat, food chain support, flood attenuation, and water quality improvement	No

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Various amphibians, small mammals, wading birds, song birds, snakes, bobcat	limpkin (SSC, feeding), little blue heron (SSC, feeding), snowy egret (SSC, feeding), tricolored heron (SSC, feeding), white ibis (SSC, feeding), wood stork (T, feeding), eastern indigo snake (T, feeding/cover)

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

None.

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
T. Norman	June 2013 and January 2015

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 301 (Gall Blvd.) from SR 56 (Proposed) to SR 39 (Buchman Hwy.) PD&E Study		Wetland 6
Impact or Mitigation	Assessment conducted by:	Assessment date:
Impact	T. Norman	June 2013 and January 2015

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	WL 6 is bounded by US 301 and an upland forest and Zephyr Creek. Wildlife access to and from habitats outside of the assessment area is limited.	4	0
.500(6)(b)Water Environment (n/a for uplands)	Water quality is adversely affected by runoff received from roadway. Hydrology affected by berm near Zephyr Creek and roadway. WL 6 is an isolated depression.	3	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Dominant vegetation within WL 6 consists of laurel oak, dahoon holly, and water oak with no groundcover.	5	0

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.40	0.00

Delta = [with-current]
-0.40

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

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

For impact assessment areas
FL = delta x acres = 0.1 ac x 0.40 = 0.04

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 301 (Gall Blvd.) from SR 56 (Proposed) to SR 39 (Buchman Hwy.) PD&E Study		Wetland 7

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.02 ac

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

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

Wetland 7 consists of a freshwater marsh that overlays mapped hydric soils.

Assessment area description

Within the project study area, dominant vegetation within WL 7 consists of primrose willow, alligatorweed, paragrass, saltbush, Carolina willow, barnyard grass, and soft rush.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 7 is located on the west side of US 301 near the center of the project study area.	This wetland area is not unique to the regional landscape.

Functions	Mitigation for previous permit/other historic use
Wildlife foraging and breeding habitat, food chain support, flood attenuation, and water quality improvement	No

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Various amphibians, small mammals, wading birds, song birds, snakes, bobcat, fish	limpkin (SSC, feeding), little blue heron (SSC, feeding), snowy egret (SSC, feeding), tricolored heron (SSC, feeding), white ibis (SSC, feeding), wood stork (T, feeding), eastern indigo snake (T, feeding/cover)

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

None

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
T. Norman	June 2013 and January 2015

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 301 (Gall Blvd.) from SR 56 (Proposed) to SR 39 (Buchman Hwy.) PD&E Study		Wetland 7
Impact or Mitigation	Assessment conducted by:	Assessment date:
Impact	T. Norman	June 2013 and January 2015

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	WL 7 is bounded by residential, commercial, and US 301 with little to no off-site habitat support. Wildlife access to and from habitats outside of the assessment area is limited.	3	0
.500(6)(b)Water Environment (n/a for uplands)	Water quality is adversely affected by runoff received from the commercial/residential land use and roadway. Water levels appear appropriate considering seasonal variation.	4	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of the vegetation present within WL 7 consists of nuisance/exotic species such as primrose willow, alligatorweed, paragrass, and barnyard grass.	3	0

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.33	0.00

Delta = [with-current]
-0.33

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

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

For impact assessment areas
FL = delta x acres = 0.02 ac x 0.33 = 0.01

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 301 (Gall Blvd.) from SR 56 (Proposed) to SR 39 (Buchman Hwy.) PD&E Study		Wetland 8

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
644 - Emergent Aquatic	PAB4H - Palustrine, Aquatic Bed, Floating Vascular, Permanently Flooded	Impact	0.01 ac

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

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

Wetland 8 consists of an emergent aquatic habitat that overlays mapped hydric soils.

Assessment area description

Within the project study area, dominant vegetation within WL 8 consists of spatterdock, maidencane, torpedo grass, and arrowhead. Within the existing ROW of US 301, additional vegetation within WL 8 consists of Carolina willow, primrose willow, cattail, and bushy broomgrass.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 8 is located on the west side of US 301 at the south terminus of the project study area.	This wetland area is not unique to the regional landscape.

Functions	Mitigation for previous permit/other historic use
Wildlife foraging and breeding habitat, food chain support, flood attenuation, and water quality improvement	No

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Various amphibians, small mammals, wading birds, song birds, snakes, bobcat, fish	limpkin (SSC, feeding), little blue heron (SSC, feeding), snowy egret (SSC, feeding), tricolored heron (SSC, feeding), white ibis (SSC, feeding), wood stork (T, feeding), eastern indigo snake (T, feeding/cover)

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

None.

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
T. Norman	June 2013 and January 2015

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 301 (Gall Blvd.) from SR 56 (Proposed) to SR 39 (Buchman Hwy.) PD&E Study		Wetland 8
Impact or Mitigation	Assessment conducted by:	Assessment date:
Impact	T. Norman	June 2013 and January 2015

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	WL 8 is bounded by an active pasture with planted pine and US 301 with some off-site habitat support. Wildlife access to and from habitats outside of the assessment area is limited.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water quality is adversely affected by runoff received from the active pasture and roadway. Water levels appear appropriate considering seasonal variation.	6	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Dominant vegetation within WL 8 consists of desirable wetland species including spatterdock, maidencane, and arrowhead. Nuisance and exotic vegetation present within the existing ROW of US 301 consists of cattail and primrose willow.	6	0

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

Delta = [with-current]
-0.57

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

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

For impact assessment areas
FL = delta x acres = 0.01 ac x 0.57 = 0.01

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 301 (Gall Blvd.) from SR 56 (Proposed) to SR 39 (Buchman Hwy.) PD&E Study		Ditches 1, 2, 3, and 4

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
510 - Streams and Waterways	PEM1Jx - Palustrine, Emergent, Persistent, Intermittently Flooded, Excavated	Impact	0.7 ac

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

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

Ditches 1, 2, 3, and 4 are wet drainage features that run parallel to US 301 and are all upland-cut with the exception of Ditch 1. Ditch 1 connects to WL 8 via a culvert.

Assessment area description

Dominant vegetation within Ditch 1 consists of spatterdock, arrowhead, torpedo grass, smartweed, maidencane, primrose willow, and water pennywort. Dominant vegetation within Ditches 2, 3, and 4 consists of alligatorweed, smartweed, water pennywort, maidencane, torpedo grass, paragrass, and water hyssop.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Ditch 1 is located on the east side of US 301 at the south terminus of the project study area. Ditch 2 is located on the east side of US 301 near the center of the project study area. Ditches 3 and 4 are located on the west and east sides of US 301, respectively, near the north terminus of the project study area.	This wetland area is not unique to the regional landscape.

Functions	Mitigation for previous permit/other historic use
Wildlife foraging and breeding habitat, food chain support, flood attenuation, and water quality improvement	No

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Various amphibians, wading birds, song birds, snakes	limpkin (SSC, feeding), little blue heron (SSC, feeding), snowy egret (SSC, feeding), tricolored heron (SSC, feeding), white ibis (SSC, feeding), wood stork (T, feeding)

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

During the June 2013 field review, a great egret was observed foraging within Ditch 3.

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
T. Norman	June 2013 and January 2015

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 301 (Gall Blvd.) from SR 56 (Proposed) to SR 39 (Buchman Hwy.) PD&E Study		Ditches
Impact or Mitigation	Assessment conducted by:	Assessment date:
Impact	T. Norman	June 2013 and January 2015

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The ditches are located within the US 301 Right-of-Way and provides little to no access to wildlife habitat outside of the project study area. Pastures, residential developments, and roadways border these ditches.	2	0
.500(6)(b)Water Environment (n/a for uplands)	All of the ditches within the project study area are upland-cut (except for Ditch 1) and are intermittently flooded. Standing water observed within the ditches during the field reviews provide little support for wood stork prey.	3	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	The plant species observed within the ditches predominantly consist of spatterdock, arrowhead, torpedo grass, smartweed, maidencane, primrose willow, and water pennywort. Little habitat is supported within the ditches for wood stork prey.	2	0

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

Delta = [with-current]
-0.23

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

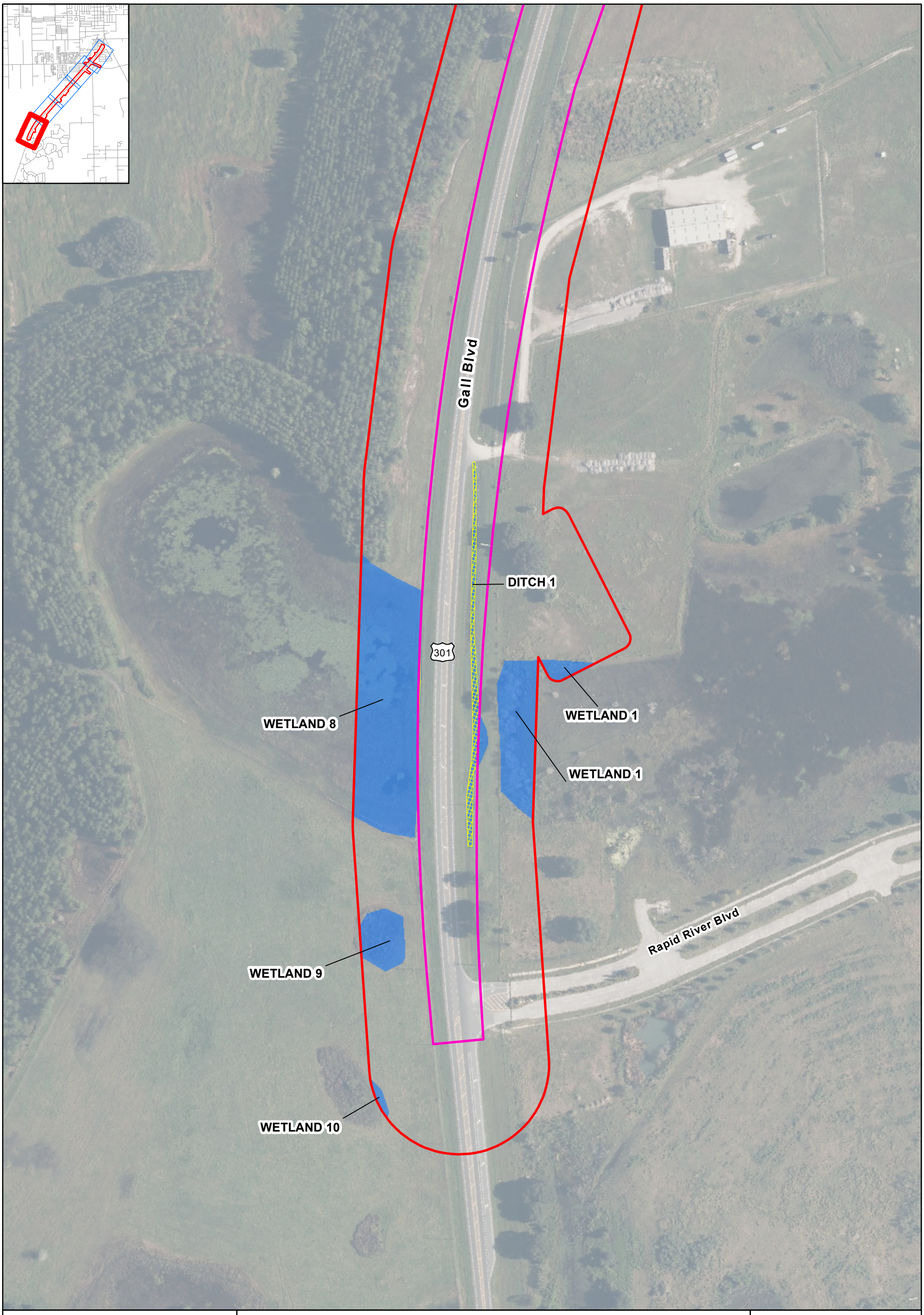
If mitigation
Time lag (t-factor) =
Risk factor =

For impact assessment areas
FL = delta x acres = 0.7 ac x 0.23 = 0.16

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

APPENDIX F

Wetland and Other Surface Water Impact Maps



Legend

- Project Study Area
- Build Alternative Impact Area
- Impacted Wetland / Other Surface Water
- Wetland / Other Surface Water

Source:
Aerials- FDOT, 2014
Wetlands/Other Surface Waters- URS, 2013 & 2015

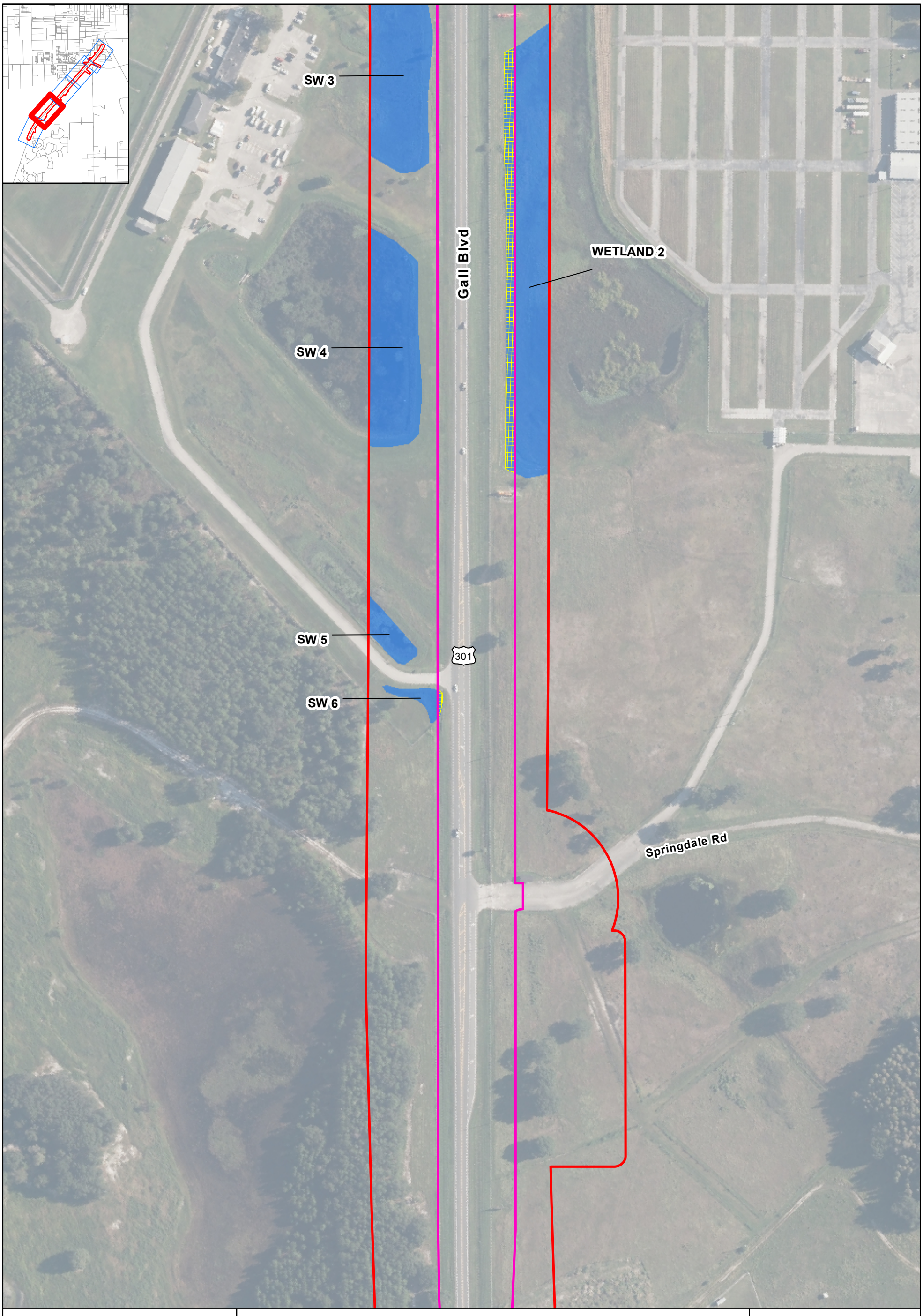
US 301 PD&E

Wetland / Other Surface Water Impacts within the Build Alternative

Pasco County, FL

N

0 100 200 Feet



Legend

- Project Study Area
- Build Alternative Impact Area
- Impacted Wetland / Other Surface Water
- Wetland / Other Surface Water

Source:
Aerials- FDOT, 2014
Wetlands/Other Surface Waters- URS, 2013 & 2015

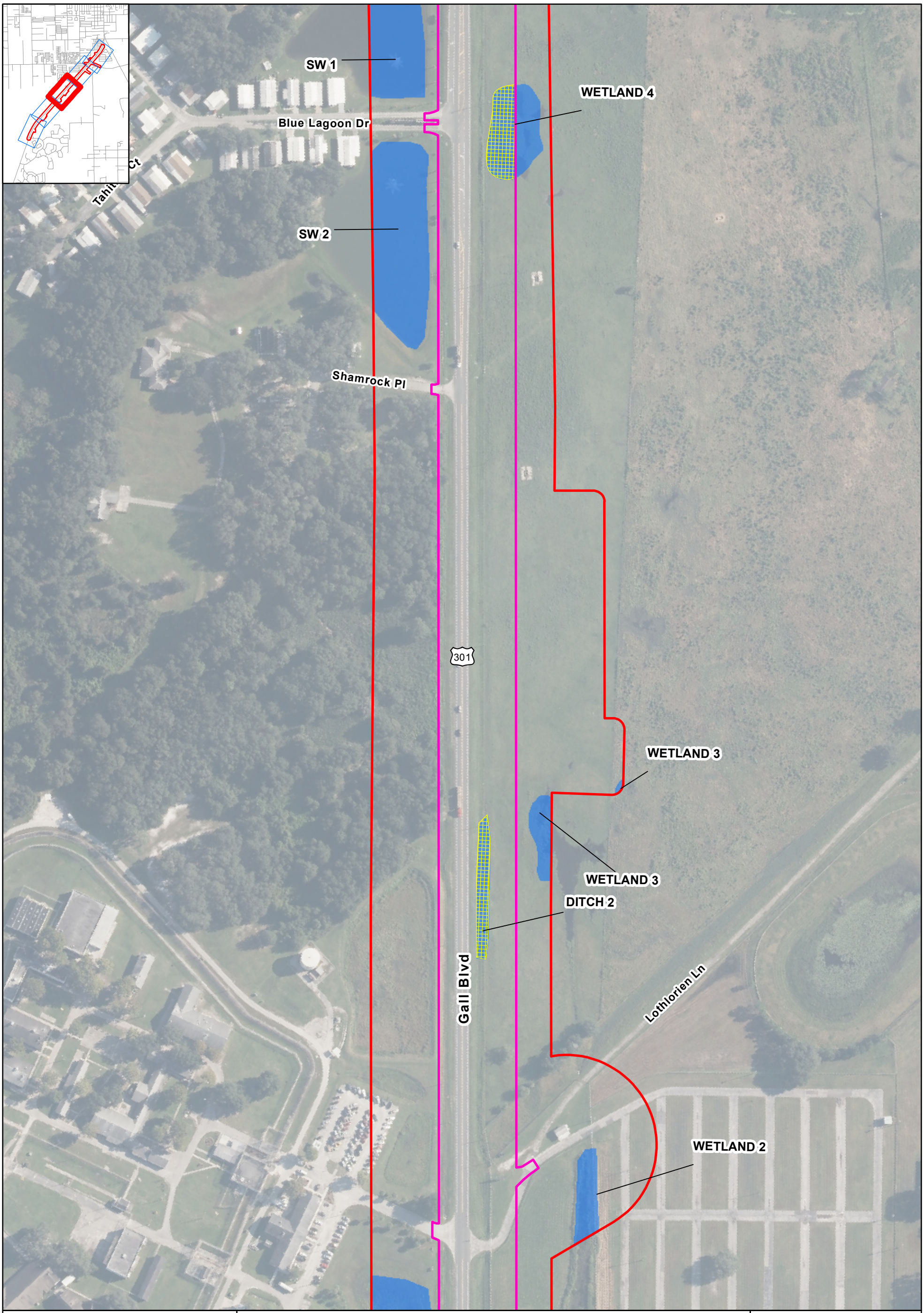
US 301 PD&E

Wetland / Other Surface Water Impacts within the Build Alternative

Pasco County, FL

N

0 100 200 Feet



Legend

- Project Study Area
- Build Alternative Impact Area
- Impacted Wetland / Other Surface Water
- Wetland / Other Surface Water

Source:
Aerials- FDOT, 2014
Wetlands/Other Surface Waters- URS, 2013 & 2015

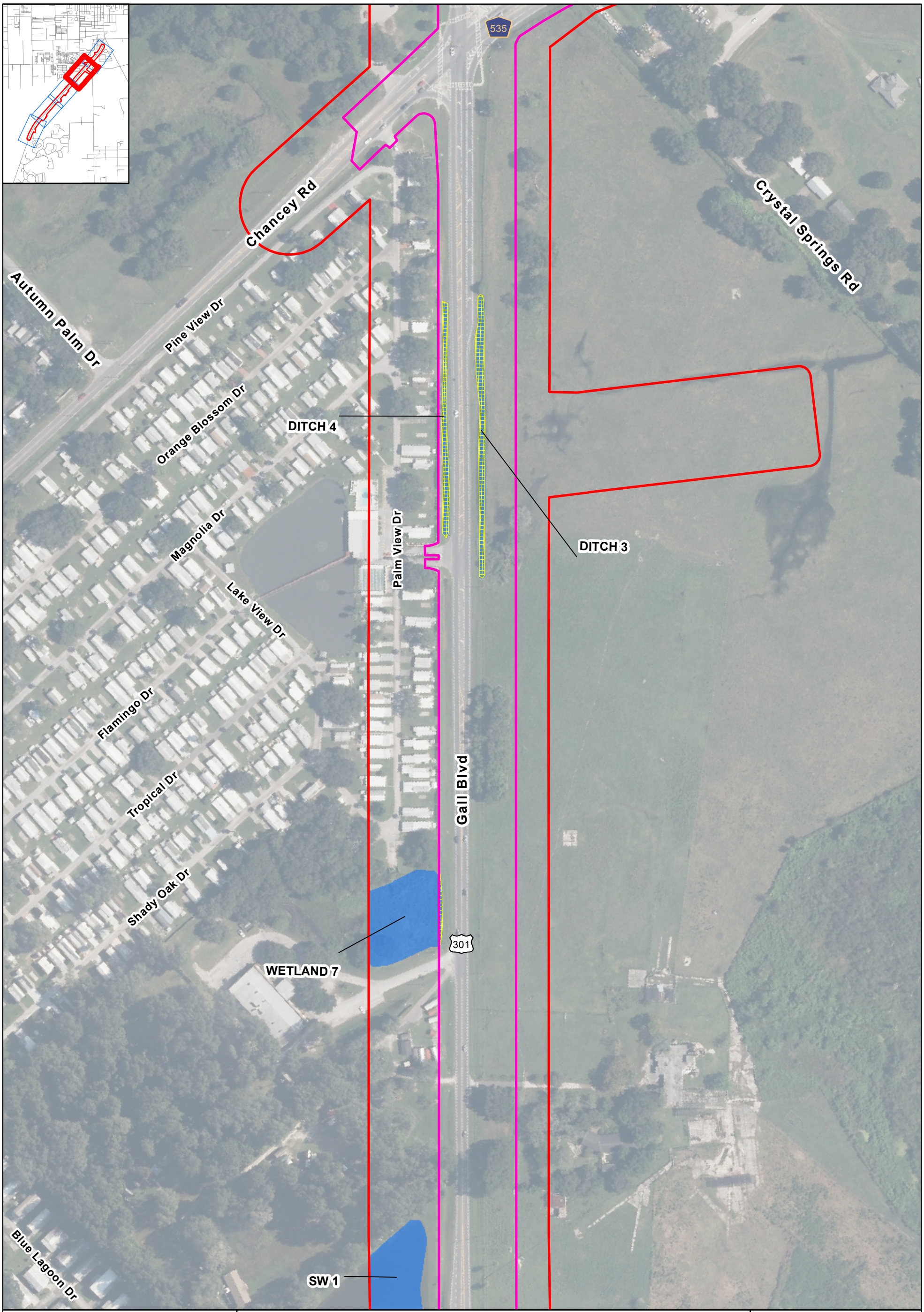
US 301 PD&E

Wetland / Other Surface Water Impacts within the Build Alternative

Pasco County, FL

N

0 100 200 Feet



Legend

- Project Study Area
- Build Alternative Impact Area
- Impacted Wetland / Other Surface Water
- Wetland / Other Surface Water

Source:
Aerials- FDOT, 2014
Wetlands/Other Surface Waters- URS, 2013 & 2015

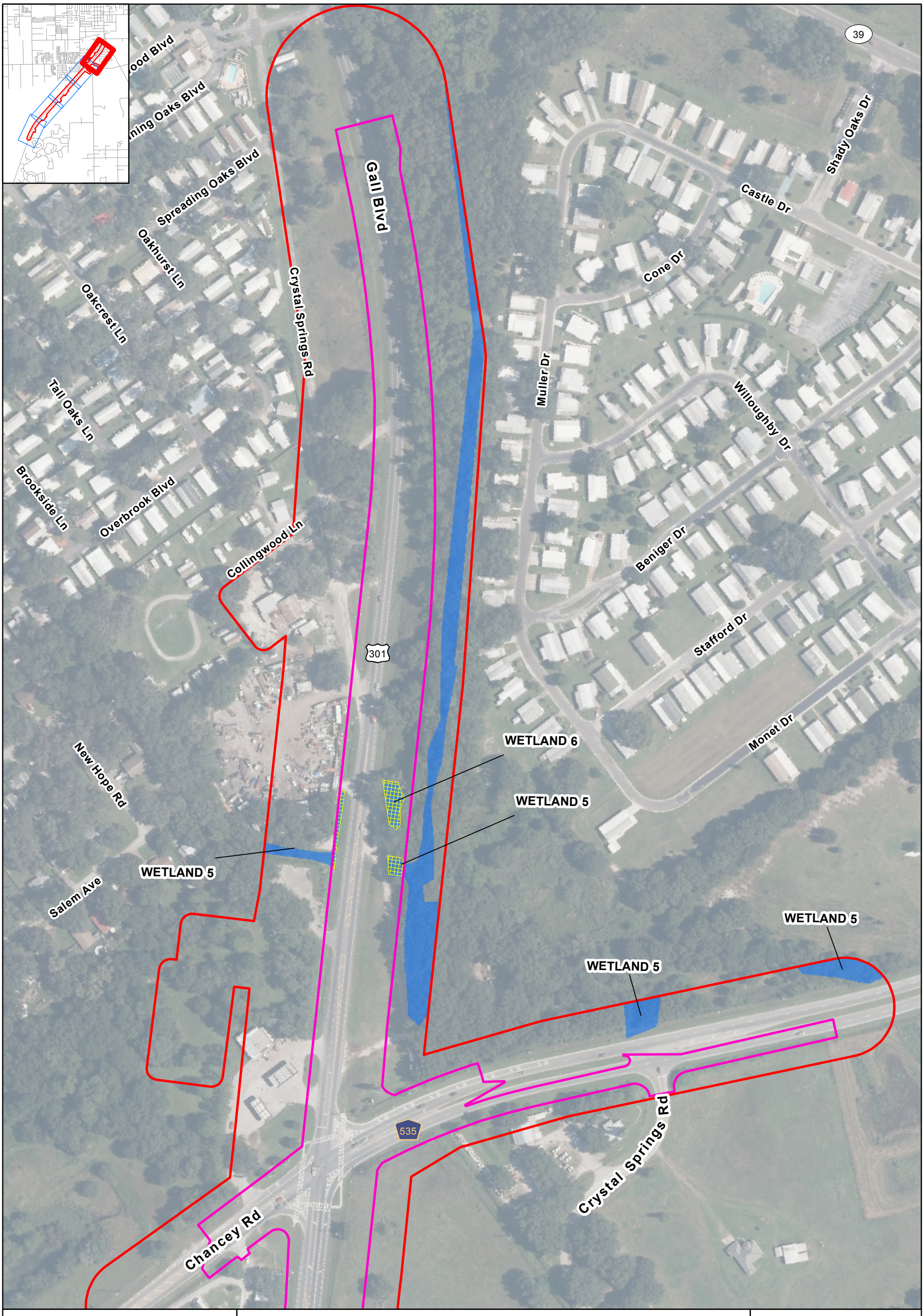
US 301 PD&E

Wetland / Other Surface Water Impacts within the Build Alternative

Pasco County, FL

N

0 100 200 Feet



Legend

- Project Study Area
- Build Alternative Impact Area
- Impacted Wetland / Other Surface Water
- Wetland / Other Surface Water

Source:
Aerials- FDOT, 2014
Wetlands/Other Surface Waters- URS, 2013 & 2015

US 301 PD&E

Wetland / Other Surface Water Impacts within the Build Alternative

Pasco County, FL

N

0 100 200 Feet

APPENDIX G

Agency Correspondence

Florida Fish and Wildlife Conservation Commission

Commissioners
Richard A. Corbett
Chairman
Tampa

Brian Yablonski
Vice Chairman
Tallahassee

Ronald M. Bergeron
Fort Lauderdale

Richard Hanas
Oviedo

Aliese P. "Liesa" Priddy
Immokalee

Bo Rivard
Panama City

Charles W. Roberts III
Tallahassee

Executive Staff
Nick Wiley
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Eric Sutton
Assistant Executive Director

Jennifer Fitzwater
Chief of Staff

Fish and Wildlife Research Institute
Gil McRae
Director

(727) 896-8626
(727) 823-0166 FAX

Managing fish and wildlife resources for their long-term well-being and the benefit of people.

Fish and Wildlife Research Institute
620 South Meridian Street
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32399-1600
Voice: (850) 410-0656

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(800) 955-8771 (T)
(800) 955-8770 (V)

MyFWC.com/Research

January 8, 2015

Tia Norman
URS Corporation
7650 W. Courtney Campbell Causeway
Tampa, FL 33607

Dear Ms. Norman:

This letter is in response to your request for listed species occurrence records and critical habitats for your project (US 301 Improvements) located in Pasco County, Florida. Records from The Florida Fish and Wildlife Conservation Commission's database indicate that listed species occurrence data and critical habitats are located within project area. Enclosed are 8.5 x 11 maps showing listed species locations, Strategic Habitat Conservation Areas (SHCA) for Florida burrowing owl, Cooper's hawk and swallow-tailed kite, prioritized SHCA's, species richness, priority wetlands for listed species, and land cover for the project site and surrounding area.

This letter and attachments should not be considered as a review or an assessment of the impact upon threatened or endangered species of the project site. It provides FWC's most current data regarding the location of listed species and their associated habitats.

Our SHCA recommendations are intended to be used as a guide. Land development and ownership in Florida is ever-changing and priority areas identified as SHCA might already have been significantly altered due to development or acquired into public ownership. Onsite surveys, literature reviews, and coordination with FWC biologists remain essential steps in documenting the presence or absence of rare and imperiled species and habitats within the project area.

Our fish and wildlife location data represents only those occurrences recorded by FWC staff and other affiliated researchers. It is important to understand that our database does not necessarily contain records of all listed species that may occur in a given area. Also, data on certain species, such as gopher tortoises, are not entered into our database on a site-specific basis. **Therefore, one should not assume that an absence of occurrences in our database indicates that species of significance do not occur in the area.**

The Florida Natural Areas Inventory (FNAI) maintains a separate database of listed plant and wildlife species, please contact FNAI directly for specific information on the location of element occurrences within the project area.

Because FNAI is funded to provide information to public agencies only, you

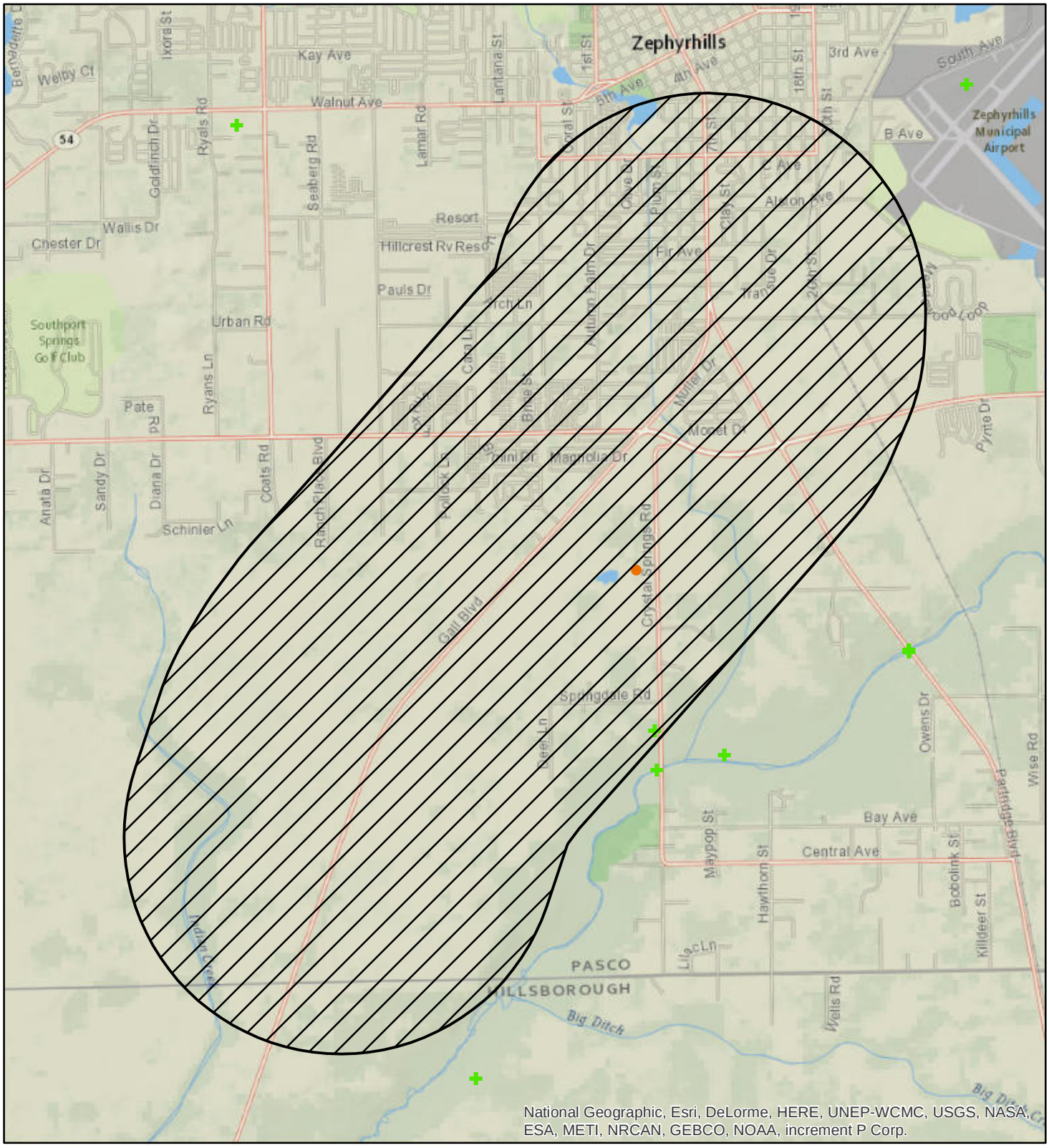
may be required to pay a fee for this information. County-wide listed species information can be located at their website (http://www.fnai.org).

Please credit the Florida Fish and Wildlife Conservation Commission in any publication or presentation of these data. If you have any questions or further requests, please contact me at (850) 488-0588 or gisrequests@myfwc.com.

Sincerely,

Jamie Pfadt
Research Assistant

jp
6015_6040
Enclosures



Species Locations

US 301 Improvements

- Wading Bird Rookeries 1999
- Florida Natural Inventory Areas
- Project Site

Florida Fish and Wildlife Conservation Commission
MyFWC.com

N

January 8, 2015
FWC ID: 2015_6040

Miles
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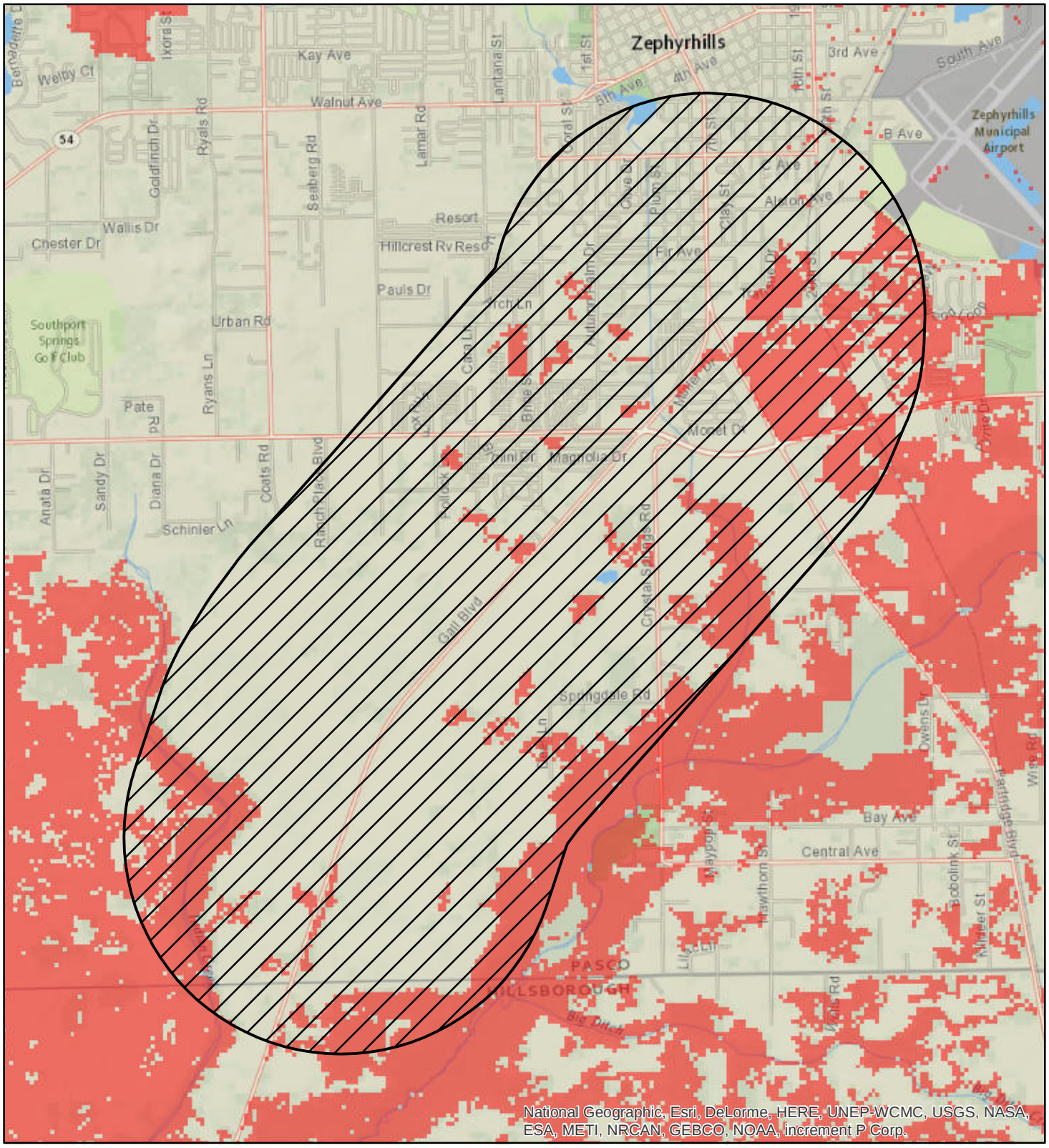

Strategic Habitat Conservation Areas

US 301 Improvements

Florida Fish and Wildlife Conservation Commission
MyFWC.com

N

Strategic Habitat Conservation Areas

Project Site

January 8, 2015

FWC ID: 2015_6040

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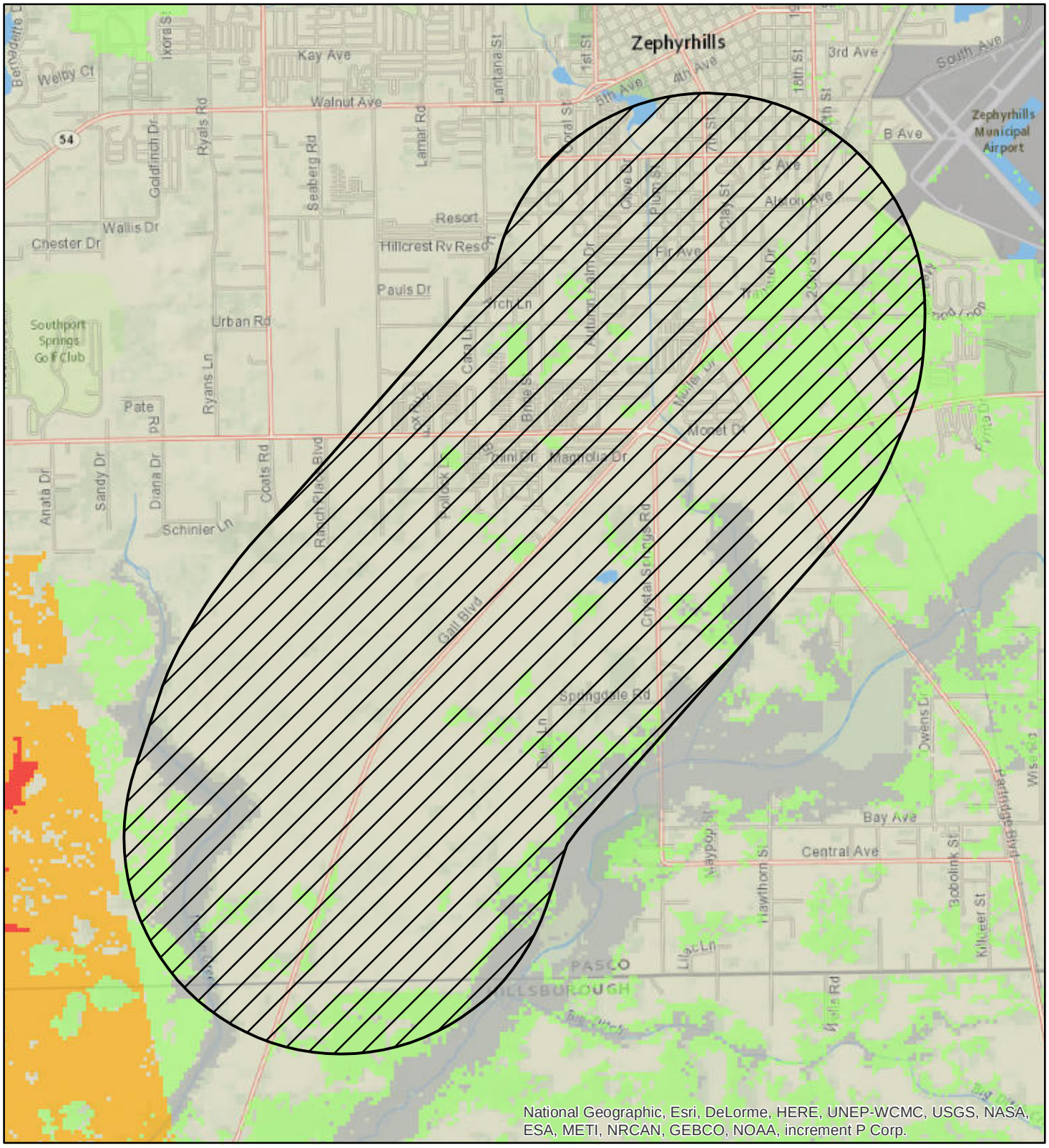

Strategic Habitat Conservation Areas

US 301 Improvements - *Prioritized*

Florida Fish and Wildlife Conservation Commission
MyFWC.com

Prioritized SHCA's

Priority 1 | Priority 2 | Priority 3 | Priority 4 | Priority 5

Project

The prioritized SHCA map identifies 5 classes of SHCA based upon Heritage ranking criteria developed by The Nature Conservancy, the Natural Heritage Program Network, and the Florida Natural Areas Inventory. There are 2 possible ranks used to prioritize a species' SHCA: 1) the global rank based on a species worldwide status, and 2) the state rank based upon the species status in Florida. The state and global ranks are based upon many factors such as known occurrence locations, estimated abundance, range, amount of habitat currently protected, perceived levels of threats towards the species, and ecological fragility.

N

January 8, 2015

FWC ID: 2015_6040

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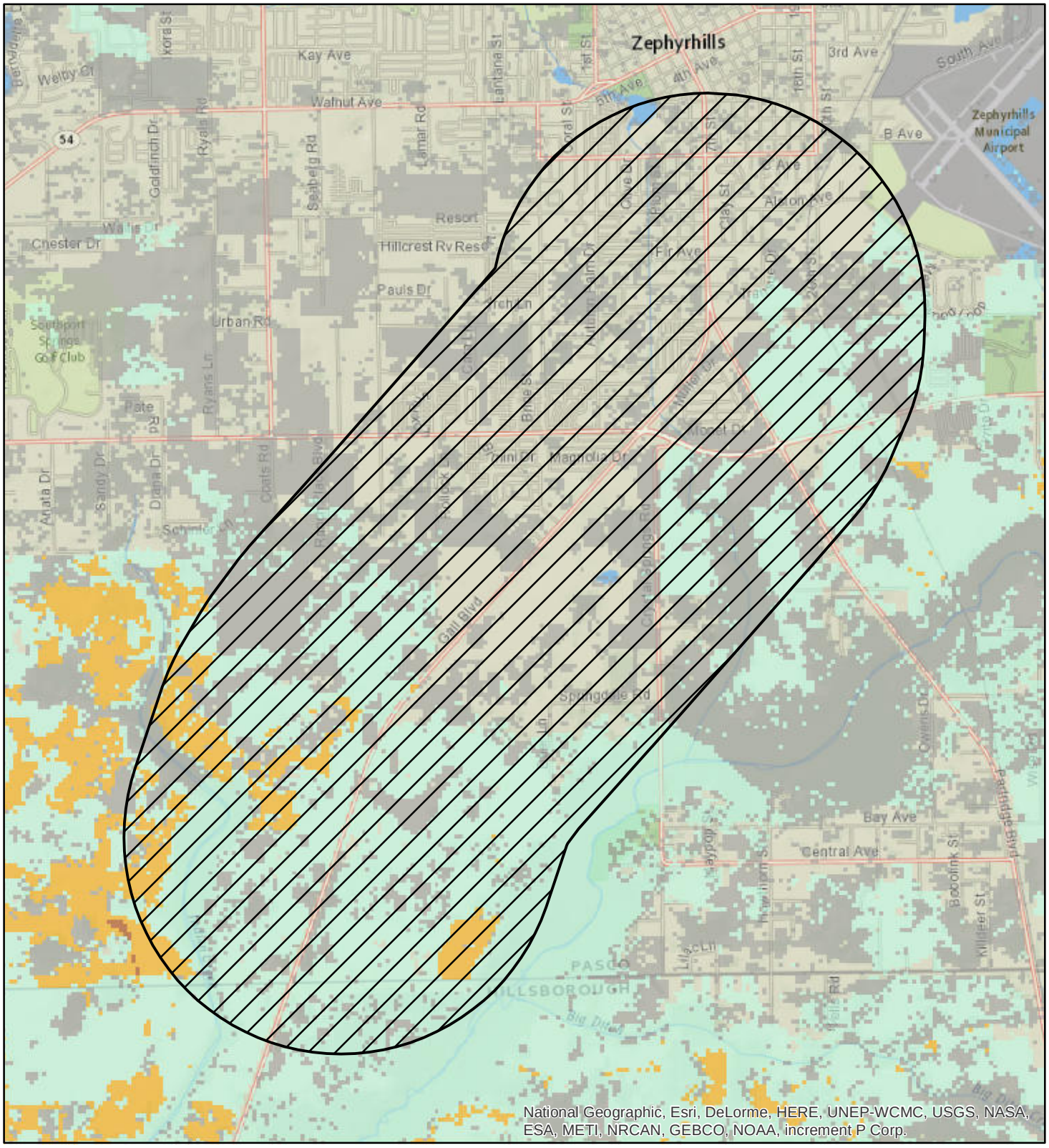

Species Richness

US 301 Improvements

Florida Fish and Wildlife Conservation Commission
MyFWC.com

N

Species Richness

1 - 3 | 4 - 6 | 7 - 9 | 10 - 13

Project Site

January 8, 2015

FWC ID: 2015_6040

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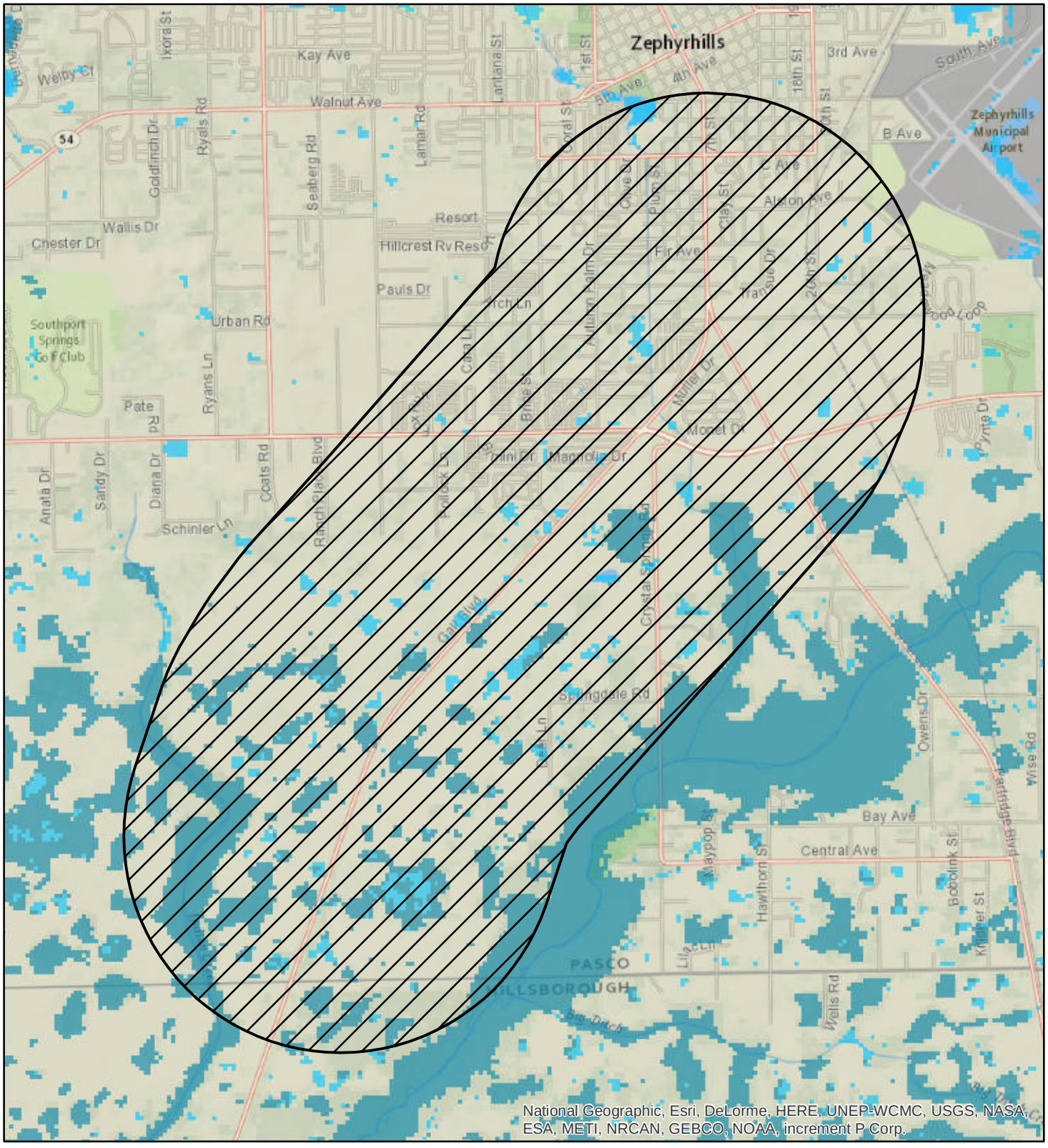

Priority Wetlands

US 301 Improvements

Florida Fish and Wildlife Conservation Commission
MyFWC.com

Priority Wetlands

Project

- 1-3 Species, Wetlands habitat
- 4-6 Species, Wetlands habitat
- 7-9 Species, Wetlands habitat
- 10-11 Species, Wetlands habitat

N

January 8, 2015

FWC ID: 2015_6040

Miles

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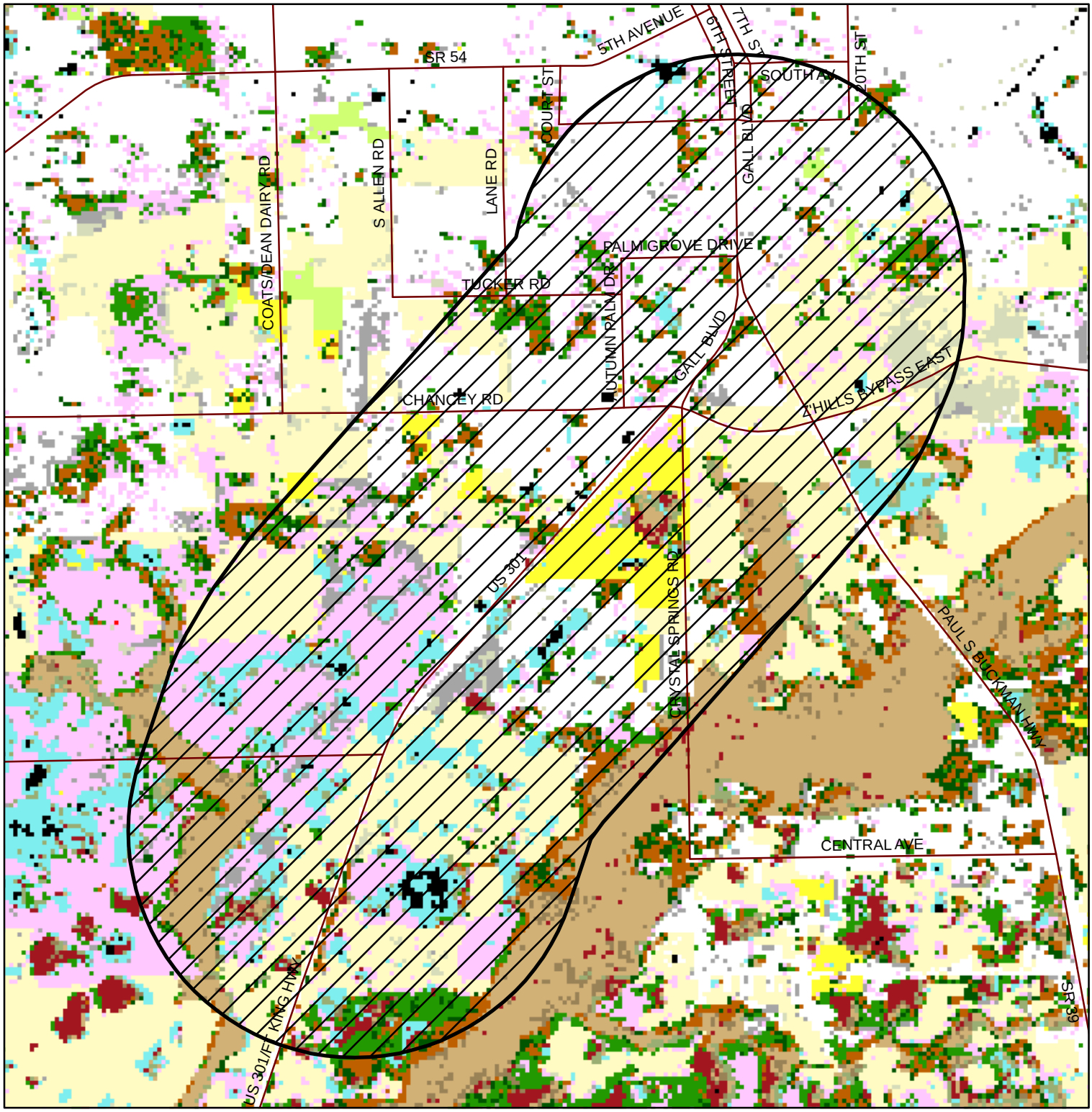

2003 Landcover

US 301 Improvements

Florida Fish and Wildlife Conservation Commission

MyFWC.com

N

January 8, 2015

FWC ID: 2015_6040

Project Site

Major Roads

- Coastal Strand
- Sand/Beach
- Xeric Oak Scrub
- Sand Pine Scrub
- Sandhill
- Dry Prairie
- Mixed Pine-Hardwood Forest
- Hardwood Hammocks and Forest
- Pinelands
- Cabbage Palm-Live Oak Hammock
- Tropical Hardwood Hammock
- Freshwater Marsh and Wet Prairie
- Sawgrass Marsh
- Cattail Marsh
- Shrub Swamp
- Bay Swamp
- Cypress Swamp
- Cypress/Pine/Cabbage Palm
- Mixed Wetland Forest
- Hardwood Swamp
- Hydric Hammock
- Bottomland Hardwood Forest
- Salt Marsh
- Mangrove Swamp
- Scrub Mangrove
- Tidal Flat
- Open Water
- Shrub and Brushland
- Grassland
- Bare Soil/Clearcut
- Improved Pasture
- Unimproved Pasture
- Other Agriculture
- Citrus
- Exotic Plants
- High and Low Impact Urban
- Extractive

Miles

0 0.25 0.5 1 1.5 2

FLORIDA
Natural Areas
INVENTORY

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www.fnai.org

January 8, 2015

Tia Norman
URS Corporation
Environmental Sciences
7650 West Courtney Campbell Causeway
Tampa, FL 33607-1462

Dear Ms. Norman,

Thank you for requesting information from the Florida Natural Areas Inventory (FNAI). We have compiled the following information for your project area.

Project: US 301 South of SR 39

Date Received: 1/8/2015

Location: Pasco County

Element Occurrences

A search of our maps and database indicates that we currently have a few element occurrences mapped in the vicinity of the study area (see enclosed map and element occurrence table). Our database also indicates that there are several *Mycteria americana* (Wood Stork) occurrences within 15 miles 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.

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

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 npasco@fnai.org.

Sincerely,

Nathan Pasco

Nathan Pasco
GIS / Data Services

Encl

US 301 South of SR 39

Site boundaries are approximate.

Pasco County

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Tallahassee, FL 32303
(850) 224-8207
(850) 681-9364 Fax
www.fnai.org

FLORIDA Natural Areas INVENTORY

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

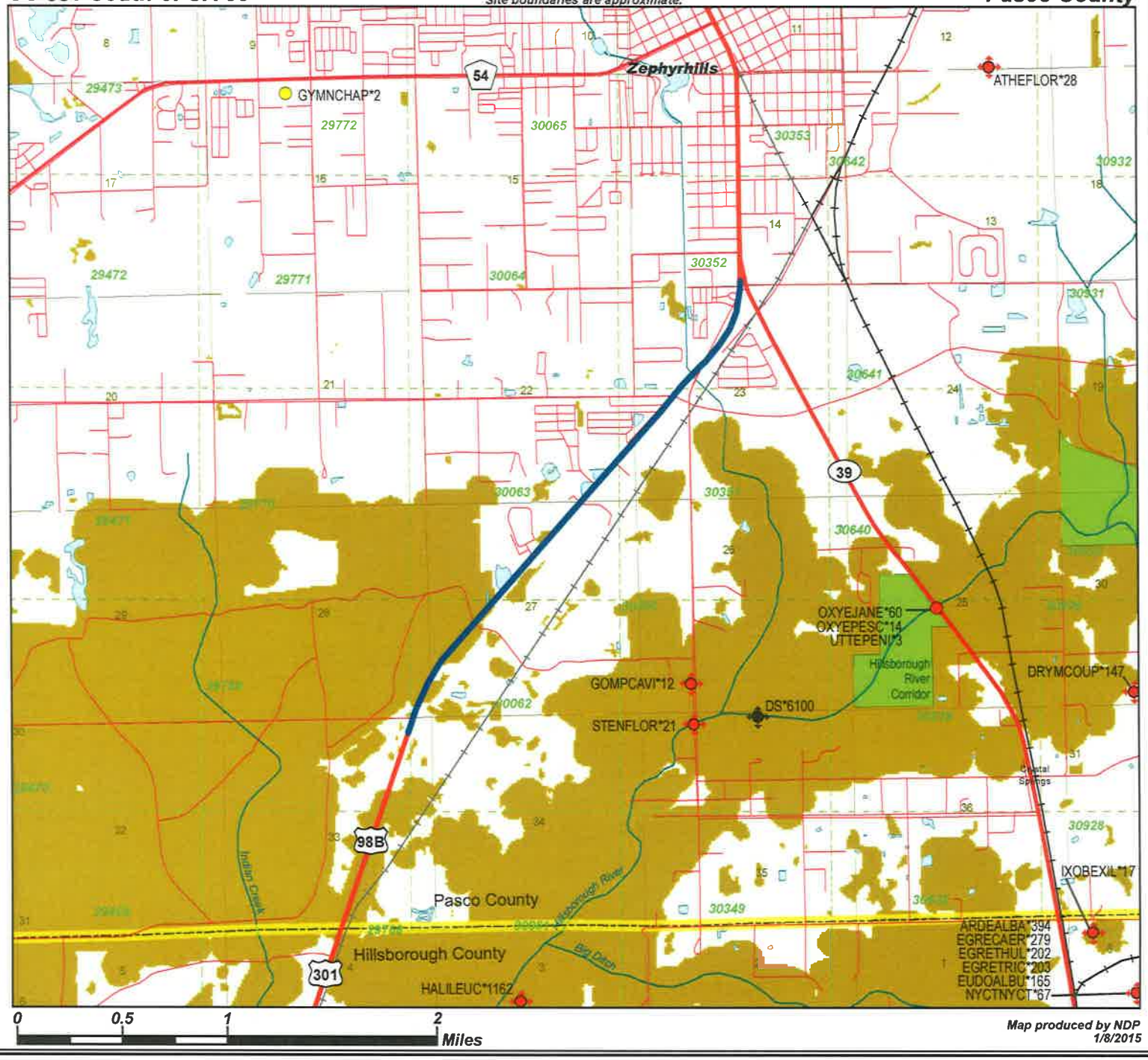
Land Acquisition Projects

- Florida Forever 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 NDP
1/8/2015

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FLORIDA Natural Areas INVENTORY

FNAI ELEMENT OCCURRENCE REPORT on or near

US 301 South of SR 39

Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
ATHEFLOR*28	*Athene cunicularia floridana*	Florida Burrowing Owl	G4T3	S3	N	SSC	1999	1999: Urban, airport (U99BOW01FLUS).	1999: Four territories - 6 adults and 0 young (too early?) observed (U99BOW01FLUS). 1990: OBSERVATION OF SEVERAL OWLS AND THEIR NESTS.
DS*6100	*Data Sensitive Element*	Data Sensitive	G5	S2	N	LE	1936-02-02	Data Sensitive	Data Sensitive
GOMPCAVI*12	*Gomphus cavillaris*	Sandhill Clubtail	G4	S4	N	N	1978-09-18	1978-09-18: No description given (U09DEP01FLUS).	1978-09-18: Staff from the Florida Department of Environmental Protection collected this species (U09DEP01FLUS).
STENFLOR*21	*Stenacron floridense*	A Mayfly	G3G4	S3S4	N	N	1998-09-16	1998-09-16: No description given (U09DEP01FLUS).	1998-09-16: Staff from the Florida Department of Environmental Protection collected this species (U09DEP01FLUS).

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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
Likely					
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	FT
Mesic flatwoods		G4	S4	N	N
Mycteria americana	Wood Stork		S2	LE	FE
Scrub		G2	S2	N	N
Potential					
Asplenium erosum	Auricled Spleenwort	G5	S2	N	LE
Asplenium heteroresiliens	Wagner's Spleenwort	GNA	S1	N	N
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	SSC
Carex chapmanii	Chapman's Sedge	G3	S3	N	LT
Centrosema arenicola	Sand Butterfly Pea	G2Q	S2	N	LE
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S2	N	N
Eriogonum longifolium var. gnaphalifolium	Scrub Buckwheat	G4T3	S3	LT	LE
Forestiera godfreyi	Godfrey's Swampprivet	G2	S2	N	LE
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Grus canadensis pratensis	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Gymnopogon chapmanianus	Chapman's Skeletongrass	G3	S3	N	N
Heterodon simus	Southern Hognose Snake	G2	S2	N	N
Lechea cernua	Nodding Pinweed	G3	S3	N	LT
Lithobates capito	Carolina Gopher Frog		S3	N	SSC
Matelea floridana	Florida Spiny-pod	G2	S2	N	LE
Monotropsis reynoldsiae	Pygmy Pipes	G1Q	S1	N	LE
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3	S3	N	N
Nemastylis floridana	Celestial Lily	G2	S2	N	LE
Neofiber alleni	Round-tailed Muskrat	G3	S3	N	N
Nolina brittoniana	Britton's Beargrass		S3	LE	LE
Notophthalmus perstriatus	Striped Newt	G2G3	S2S3	C	N
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Picoides borealis	Red-cockaded Woodpecker		S2	LE	FE
Podomys floridanus	Florida Mouse		S3	N	SSC
Polygala lewtonii	Lewton's Polygala	G2G3	S2S3	LE	LE
Rostrhamus sociabilis plumbeus	Snail Kite	G4G5T2	S2	LE	FE
Sciurus niger shermani	Sherman's Fox Squirrel	G5T3	S3	N	SSC
Ursus americanus floridanus	Florida Black Bear	G5T2	S2	N	ST*
Warea carteri	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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(850) 681-9364 Fax
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FLORIDA Natural Areas INVENTORY

Woodstork within 15 miles US 301 Project south of SR 39

Pasco County

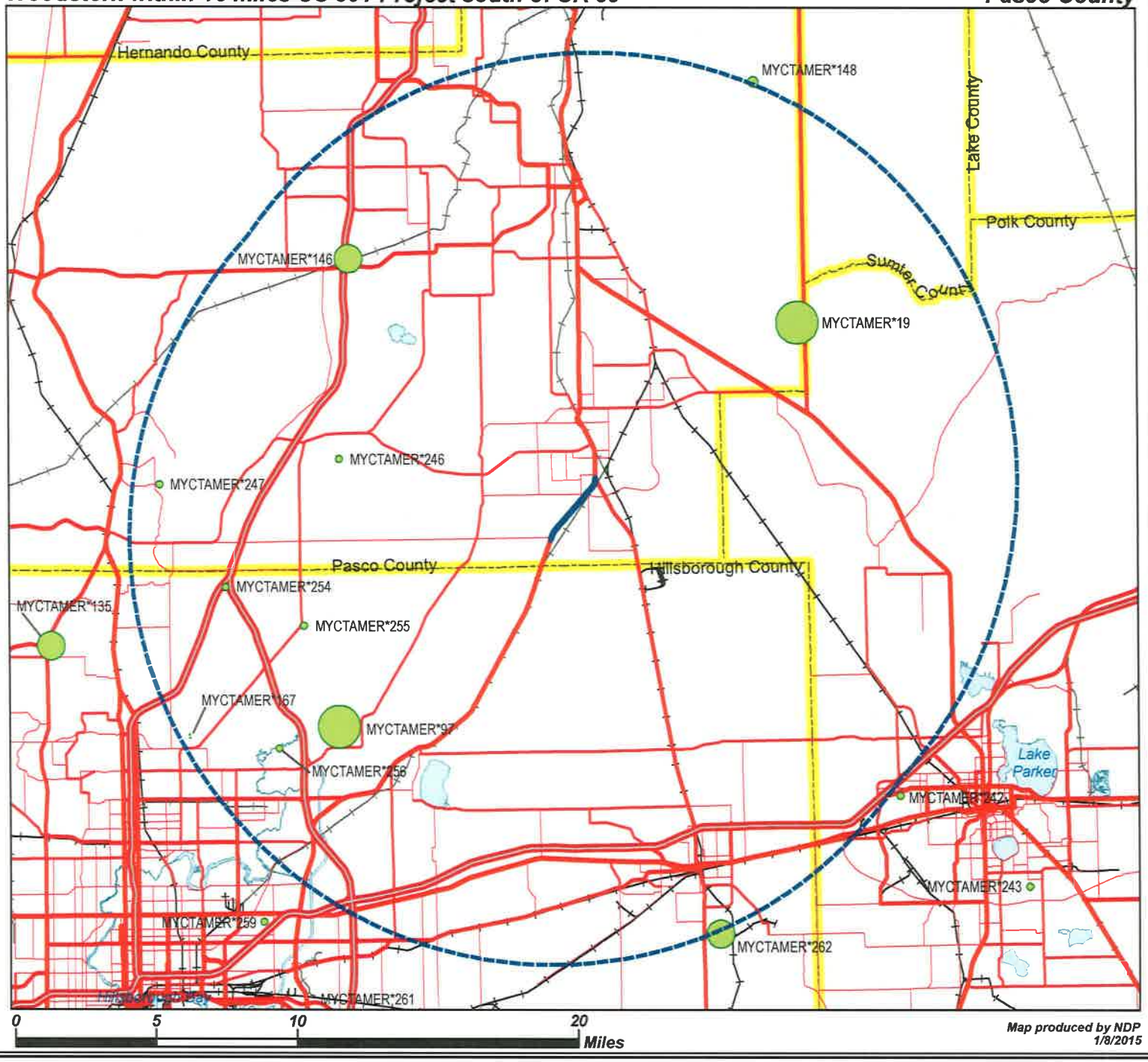
Element Occurrences

- Mycteria americana

- County Boundary
- Interstate
- Turnpike
- Major Highway
- Local Road
- Railroad [Inactive railroads shown in Gray]

Site boundaries are approximate.

NOTE
Map should not be interpreted without accompanying documents.



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Map produced by NDP
1/8/2015

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FLORIDA Natural Areas INVENTORY

FNAI ELEMENT OCCURRENCE REPORT on or near

Woodstork within 15 miles US 301 Project south of SR 39

Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
MYCTAMER*146	*Mycteria americana*	Wood Stork	G4	S2	LE	FE	1989-04-24	No general description given	Colony active for 6 years (of 13 years that were checked, from 1981 to 2010) and found inactive in 2010; high count of 263 nests in 1983 (U11TSA01FLUS). Spreadsheet in U11TSA01FLUS gives number of nests by year.
MYCTAMER*148	*Mycteria americana*	Wood Stork	G4	S2	LE	FE	2004	Lowland forest or swamp	Colony active for 11 years (of 21 years that were checked from 1978 to 2010) and found inactive in 2010; high count of 450 nests in 1985 (U11TSA01FLUS). Last active year in 2004 with 8 nests. Spreadsheet in U11TSA01FLUS gives number of nests by year.<br
MYCTAMER*167	*Mycteria americana*	Wood Stork	G4	S2	LE	FE	2010-05-05	2010-05-05: two islands composed mostly of willow trees and surrounded by water (U10JOH01FLUS).	2010-05-05: Approximately 5 nests (10 adults plus young) observed on two small willow islands a couple of hundred feet from each other; wood storks were on nests, flying, and feeding young (U10JOH01FLUS). Tsai et al. compilation lists as active in 2010 (
MYCTAMER*19	*Mycteria americana*	Wood Stork	G4	S2	LE	FE	2005	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 for 21 years (of 26 years that were checked, from 1975 to 2010) and found inactive in 2010; high count of 600 nests in 1982; last active year, 2005, had 14 nests (U11TSA01FLUS). Spreadsheet in U11TSA01FLUS gives number of nests by year.
MYCTAMER*246	*Mycteria americana*	Wood Stork	G4	S2	LE	FE	2010	2011 aerial photography shows small dome swamp in golfing community surrounded by residential neighborhoods and patches of undeveloped flatwoods and depression marshes (NeSmith).	Colony active for 7 years from 2004 to 2010; high number of nests (62) in 2010 (U11TSA01FLUS). Spreadsheet in U11TSA01FLUS gives number of nests by year.
MYCTAMER*247	*Mycteria americana*	Wood Stork	G4	S2	LE	FE	2010	2011 aerial shows small vegetated island in a small lake rimmed by dense housing; just west of large Cypress Creek Flood Detention Area, a long north-south oriented cypress swamp (NeSmith).	Colony active for 7 years from 2004 to 2010; high number of nests (42) in 2006 (U11TSA01FLUS). Spreadsheet in U11TSA01FLUS gives number of nests by year.

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FLORIDA Natural Areas INVENTORY

FNAI ELEMENT OCCURRENCE REPORT on or near

Woodstork within 15 miles US 301 Project south of SR 39

Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
MYCTAMER*254	*Mycteria americana*	Wood Stork	G4	S2	LE	FE	2010	2011 aerial shows small island in retention pond at the V formed by the two merging interstate highways; large area of Cypress Creek to the south; developed elsewhere (NeSmith).	Colony active for 11 years from 1999 to 2010; high number of nests (175) in 2003; 97 nests in 2010 (U11TSA01FLUS). Spreadsheet in U11TSA01FLUS gives number of nests by year.
MYCTAMER*255	*Mycteria americana*	Wood Stork	G4	S2	LE	FE	2010	2011 aerial shows cypress edge of retention pond associated with intersection; rest of dome continues east; looks like apartment complex around the several retention ponds, which appear to have been excavated from a once large dome swamp (NeSmith).	Colony active for 7 years from 2003 to 2010; high number of nests (168) in 2007, 34 nests in 2010 (U11TSA01FLUS). Spreadsheet in U11TSA01FLUS gives number of nests by year.
MYCTAMER*256	*Mycteria americana*	Wood Stork	G4	S2	LE	FE	1995	Floodplain swamp along the Hillsborough River (NeSmith).	Colony active for 7 years (of 24 years that were checked, from 1976 to 2010) and found inactive in 2010; high count of 200 nests in 1884 (U11TSA01FLUS). Spreadsheet in U11TSA01FLUS gives number of nests by year.
MYCTAMER*262	*Mycteria americana*	Wood Stork	G4	S2	LE	FE	1983	2011 aerial shows dome swamp in a mostly rural agricultural setting; residential to the northwest; several other remnant dome swamps in the vicinity (NeSmith).	Colony active for 3 years (of 13 years that were checked, from 1976 to 2010) and found inactive in 2010; high count of 125 nests in 1983 (U11TSA01FLUS). Spreadsheet in U11TSA01FLUS gives number of nests by year.
MYCTAMER*97	*Mycteria americana*	Wood Stork	G4	S2	LE	FE	1988-06-07	No general description given	Species present 1987-06-30 (101-250 birds), 1988-05-27 and 06-07 (1-10 birds).

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).

ETDM Summary Report

Project #3107 - US 301 FROM CHANCEY ROAD TO SR 39

Planning Screen - Published on 09/23/2005

Printed on: 3/01/2013

Table of Contents

Introduction to Planning Screen Summary Report

The Planning Screen Summary Report shown below is a read-only version of information contained in the Planning Screen Summary Report generated by the ETDM Coordinator for the selected project after completion of the ETAT Planning Screen review. The purpose of the Planning Screen Summary Report is to summarize the results of the ETAT Planning 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 Planning Phase for the project. Available information for a Planning 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 Planning Screen reviews for each alternative; and agency comments concerning potential effects and degree of effect, by issue, to natural, cultural, and community resources)
- Summary of the Secondary and Cumulative Effects analysis conducted during the Planning Screen
- General Project Commitments resulting from the ETAT Planning Screen review
- Dispute Resolution Activity Log (if any) for the project

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 Planning Screen Summary Report.

#3107 US 301 FROM CHANCEY ROAD TO SR 39

District: District 7
County: Pasco
Planning Organization: Pasco County MPO
Plan ID: 4
Phase: Planning Screen
From: CHANCEY ROAD
To: SR 39
Financial Management No.: Not Available
Federal Involvement: No federal involvement has been identified.

Contact Information: Manny Lajmiri 727-847-8140 mlajmiri@pascocountyfl.net
Snapshot Data From: Planning Screen Summary Report Published on 09/23/2005
Issues and Categories are reflective of what was in place at the time of the screening event.

	Natural											Cultural			Community						
	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
Alternative #1 From: CHANCEY ROAD To: SR 39 *Published: 09/23/2005 Reviewed from 03/26/2004 to 05/26/2004)*	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	3	2	2

Purpose and Need

Purpose and Need

Regional Connectivity

US 301 is a major north-south arterial located in East Pasco County. It is a truck route and provides excellent north-south access to distribution centers. US 301 is an important connection to the regional and statewide transportation network that links the Tampa Bay region to the remainder of the state and the nation. US 301 was identified as a regional roadway by the West Central Florida MPOs Chairs Coordinating Committee (CCC) and included in the Regional Roadway Network.

Plan Consistency

This project is consistent with Pasco County Local Government Comprehensive Plan adopted in June 1989 and last amended in September 2002. It is also included in the Pasco County MPO s 2025 Cost Affordable Plan adopted in December 2001.

Emergency Evacuation

US 301 is designated as an emergency evacuation route.

Future Population and Employment Growth in Corridor

Per the socio-economic data used in the development of the last Long Range Transportation Plan Update (adopted December 2001), the population growth from 1999 to 2025 is expected to grow from 2,299 to 2,613 (an increase of 314). Employment is also expected to increase from 623 to 1,072 (an increase of 449) within Traffic Analysis Zones adjacent to US 301.

Future Traffic

In 2002, US 301 from Chancey Road to SR 39 carried 11,200 vehicles per day (vpd). By 2025, segments within this section of US 301 are expected to reach a volume of 28,962 vpd. Based on the Generalized Annual Average Daily Volumes for a two-lane undivided facility from the Florida Department of Transportation 2002 Quality/Level of Service Handbook, the existing level of service is C . Without the proposed improvement, the operating conditions will continue to deteriorate to an unacceptable LOS. With the proposed improvement to widen this roadway to a four-lane divided, the LOS for 2025 is projected to be C .

Safety

Safety within the US 301 corridor will be enhanced due to the additional capacity that will be provided. Roadway congestion will be reduced, thereby decreasing potential conflict with other vehicles.

Transit

There are no transit improvements proposed as a part of this project, as no fixed route service currently exists. The 2002 Transit Development Plan (TDP) indicates a proposed bus route corridor after the year 2007.

Access to Intermodal Facilities and Freight Activity Centers

Access to intermodal facilities and movement of goods and freight are important considerations in the development of the Pasco County transportation system. The MPO s 2025 Cost Affordable Plan identifies US 301 as a future truck route, which are routes that are expected to carry the majority of freight and goods in Pasco County by the year 2025. Improvements to US 301 will also enhance access to activity centers in the area, and movement of freight in eastern Pasco County.

Relief to Parallel Facilities

The planned widening of US 301 between Chancey Road and SR 39 is part of an overall plan to improve access and relieve traffic congestion on such parallel facilities as I-75, the Suncoast Parkway, and US 41. Safety, emergency access, and truck access will all be enhanced through this improvement.

Bikeways and Sidewalks

Integration of bicycle facilities and sidewalks are planned on all County and State road projects, for new roads, the widening of existing roads, and the resurfacing of State roads. These projects are planned to be constructed to include a four-foot wide paved shoulder. The referenced segment of US 301 is designated in the MPO s Cost Affordable Plan for bicycle improvements to be implemented between the years of 2004 and 2025.

Project Description

This project is proposed to expand US 301 from a two-lane undivided to a four-lane divided facility. The length of this project, based on the limits above, is approximately 0.835 miles.

Summary of Public Comments

No specific comments have been received to date.

Additional Consistency Information

- Consistency with Air Quality Conformity is unknown.
- Consistent with Local Government Comp Plan.
- Consistent with MPO Goals and Objectives.

Potential Lead Agencies

No potential lead agencies have been assigned for this project.

Exempted Agencies

No exemptions have been assigned for this project.

Community Desired Features

No desired features have been entered into the database. This does not necessarily imply that none have been identified.

Communities Within 500 Feet

- 3636 Zephyrhills South

Purpose and Need Reviews

FL Department of Environmental Protection

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	05/25/2004	Lindy McDowell (lindy.mcdowell@dep.state.fl.us)	No Purpose and Need comments found.

FL Department of State

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	05/24/2004	Brian Yates (byates@dos.state.fl.us)	No Purpose and Need comments found.

Federal Highway Administration

Acknowledgement	Date Reviewed	Reviewer	Comments

Not Accepted	05/21/2004	Marvin Williams (marvin.williams@dot.gov)	Project Description/Purpose & Need - The information provided in the Project Description Report for Alternative 1 is not sufficient and appears to include inaccurate or inconsistent information. The estimated cost and funding source for the project is not identified. Cost is an important consideration if this project is to be included as part of the Cost Feasible Long Range Transportation Plan. Although the Pasco County MPO LRTP appears to include this as a Cost Feasible Project with funding estimated included in a larger segment to SR 56 that would cost approximately 8 million this information is not included in the Project Description Report. Instead the Project Description Report says the project is consistent with the LRTP but then in the Current and Future Conditions Table and Funding Source Table identifies it as an unfunded project in the Needs Plan. The information should be revised to address the apparent inconsistency and include project cost estimations. Project Description/Purpose & Need - The Purpose & Need Report is in a standard template format that is apparently used by the District for all ETAT projects in the Planning Screen. The template should be expanded to address the unique aspect about projects. The report was too general to identify the cause of the transportation demand in the corridor and specifically why traffic growth is expected to increase at a high rate whether the traffic demand will be predominantly local or nonlocal in nature. This information is important in identifying project alternatives that will address the cause of the capacity deficiency and should be explained in the Purpose & Need Report. Project Description/Purpose & Need - The Purpose & Need Report states There are no transit improvements proposed as part of this project as no fixed route currently exists. However the next sentence of the report states The 2002 Transit Development Plan PDP indicates a proposed bus route corridor after the year 2007. Further the Alternate 1 description indicates that transit is not a mode to be addressed by the project. The project should recognize that there is an identified need for transit on this corridor as well as a commitment to fund a transit route in this location as indicated in the PDP as well as in the Cost Feasible LRTP which identifies a commitment to fund a transit route at this location. The project in all phases should coordinate the alternatives development and project design with the future transit service needs and include transit as one of the modes to be addressed by the project.

Federal Transit Administration

Acknowledgement	Date Reviewed	Reviewer	Comments
Accepted	05/10/2004	Derek Scott (derek.scott@fta.dot.gov)	No Purpose and Need comments found.

US Army Corps of Engineers

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	05/25/2004	John Fellows (john.p.fellows@usace.army.mil)	No Purpose and Need comments found.

US Fish and Wildlife Service

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	05/20/2004	CalLee Davenport (callee_davenport@fws.gov)	No Purpose and Need comments found.

The following organizations were notified but did not submit a review of the Purpose and Need:
- Not Available. Contact the ETDM Help Desk for assistance.

Alternative #1

Alternative Description

Name	From	To	Type	Status	Total Length	Cost	Modes	SIS
Alternative was not named.	CHANCEY ROAD	SR 39	Widening	ETAT Review Complete	0.835 mi.		Roadway Bicycle Pedestrian	N

Segment Description(s)

Segment No.	Name	Beginning Location	Ending Location	Length (mi.)	Roadway Id	BMP	EMP
Unnamed Segment	Unnamed Segment			0.059	14050000		
Unnamed Segment	Unnamed Segment			0.835	14050000		

Jurisdiction and Class

Segment No.	Jurisdiction	Urban Service Area	Functional Class
Unnamed Segment	FDOT	In/Out	URBAN: Principal Arterial - Other
Unnamed Segment	FDOT	In/Out	RURAL: Principal Arterial - Other

Base Conditions

Segment No.	Year	AADT	Lanes	Config
Unnamed Segment	2002	11200	2	Lanes Undivided
Unnamed Segment	2002	11200	2	Lanes Undivided

Interim Plan

Segment No.	Year	AADT	Lanes	Config
Unnamed Segment				
Unnamed Segment				

Needs Plan

Segment No.	Year	AADT	Lanes	Config
Unnamed Segment	2025	28962	4	Lanes Divided
Unnamed Segment	2025	28962	4	Lanes Divided

Cost Feasible Plan

Segment No.	Year	AADT	Lanes	Config
Unnamed Segment	2025			
Unnamed Segment	2025			

Funding Sources

No funding sources found.

Project Effects Overview for Alternative #1

Issue	Degree of Effect	Organization	Date Reviewed
Natural			
Contaminated Sites	2 Minimal to None	Federal Highway Administration	05/21/2004
Floodplains	2 Minimal to None	Federal Highway Administration	05/21/2004
Navigation	2 Minimal to None	Federal Highway Administration	05/21/2004
Water Quality and Quantity	2 Minimal to None	FL Department of Environmental Protection	05/25/2004
Wetlands	2 Minimal to None	National Marine Fisheries Service	08/09/2004
Wetlands	2 Minimal to None	US Army Corps of Engineers	05/25/2004

Wetlands	2 Minimal to None	Federal Highway Administration	05/21/2004
Wetlands	2 Minimal to None	US Fish and Wildlife Service	05/20/2004
Wildlife and Habitat	2 Minimal to None	US Fish and Wildlife Service	05/20/2004
Cultural			
Historic and Archaeological Sites	3 Moderate	FL Department of State	05/24/2004
Historic and Archaeological Sites	2 Minimal to None	Federal Highway Administration	05/21/2004
Section 4(f) Potential	2 Minimal to None	FL Department of Environmental Protection	05/25/2004
Community			
Land Use	2 Minimal to None	FL Department of Community Affairs	05/25/2004
Mobility	1 Enhanced	Federal Highway Administration	05/21/2004
Mobility	2 Minimal to None	Federal Transit Administration	05/10/2004
Relocation	2 Minimal to None	Federal Highway Administration	05/21/2004
Secondary and Cumulative			
Secondary and Cumulative Effects	2 Minimal to None	US Army Corps of Engineers	05/25/2004

ETAT Reviews and Coordinator Summary: Natural

Air Quality

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal to None* assigned 12/16/2004 by FDOT District 7

Comments:
The project is located in an area that has been designated as attainment for all air quality standards under the criteria provided in the Clean Air Act Amendments of 1990. Based on this designation, compliance with the Transportation Conformity Rule (40 CFR Part 93, Subpart T) does not apply to this project. Therefore, FDOT recommends a Degree of Effect of Minimal to None for air quality.

None found

The following organization(s) were expected to but did not submit a review of the Air Quality issue for this alternative: Not Available. Contact the ETDM Help Desk for assistance.

Coastal and Marine

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal to None* assigned 12/16/2004 by FDOT District 7

Comments:
There is no Coastal and Marine involvement with this project; therefore, the FDOT recommends a Degree of Effect of Minimal to None. The FDOT did not receive comment from the Florida Department of Environmental Protection (DEP), but expects comments from the DEP in the Programming Screen concerning Coastal Zone Consistency Compliance.

None found

The following organization(s) were expected to but did not submit a review of the Coastal and Marine issue for this alternative: Not Available. Contact the ETDM Help Desk for assistance.

Contaminated Sites

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal to None* assigned 12/16/2004 by FDOT District 7

Comments:
The FDOT concurs with Federal Highway Administration on the Degree of Effect of Minimal to None. We acknowledge FHWA s comment regarding the existence of several petroleum storage tanks within the project corridor and concur with their recommendation that potential soil contamination issues be considered in project development.

Degree of Effect: 2 *Minimal to None* assigned 05/21/2004 by Marvin Leon Williams, Federal Highway Administration

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Direct Effects
Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):
Contaminated Sites - The project corridor appears to include several petroleum storage tanks. These present potential soil contamination issues that should be considered in developing the project alternatives, cost estimates, and project phases.

CLC Commitments and Recommendations:

The following organization(s) were expected to but did not submit a review of the Contaminated Sites issue for this alternative: Not Available. Contact the ETDM Help Desk for assistance.

Farmlands

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal to None* assigned 12/16/2004 by FDOT District 7

Comments:
The U.S. Department of Agriculture did not provide comments regarding Farmlands. The existing land is less than 10% agricultural within the 500 ft. buffer area of the project; therefore, the FDOT recommends a Degree of Effect of Minimal to None.

None found

The following organization(s) were expected to but did not submit a review of the Farmlands issue for this alternative: Not Available. Contact the ETDM Help Desk for assistance.

Floodplains

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal to None* assigned 12/16/2004 by FDOT District 7

Comments:
The FDOT concurs with Federal Highway Administration and recommends a Degree of Effect of Minimal to None. The FDOT acknowledges FHWA s recommendation that potential impacts to wetlands and floodplains should be identified and incorporated into project commitments in project development.

Degree of Effect: 2 *Minimal to None* assigned 05/21/2004 by Marvin Leon Williams, Federal Highway Administration

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Direct Effects
Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):
Floodplains - The project corridor includes locations floodplains and possible wetlands. Potential impacts to these areas should be identified, as well as the project commitments needed to sufficiently protect these areas.

CLC Commitments and Recommendations:

The following organization(s) were expected to but did not submit a review of the Floodplains issue for this alternative: Not Available. Contact the ETDM Help Desk for assistance.

Infrastructure

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal to None* assigned 12/16/2004 by FDOT District 7

Comments:
The Florida Geographic Data Library (FGDL) does not identify any infrastructure facilities in this corridor; therefore, the FDOT recommends a Degree of Effect of Minimal to None. The FDOT, however, will research any other facilities (i.e. utilities) that might be considered as infrastructure in the Programming Screen.

None found

The following organization(s) were expected to but did not submit a review of the Infrastructure issue for this alternative: Not

Available. Contact the ETDM Help Desk for assistance.

Navigation

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal to None* assigned 12/16/2004 by FDOT District 7

Comments:
The FDOT concurs with the comments from FHWA and the Degree of Effect of Minimal to None. There are no existing navigable water or facility crossings in the proposed project area. The FDOT acknowledges the recommendations from FHWA that if any bridges are required as a result of the proposed project, issues associated with constructing a potential bridge such as aesthetics, safety, environmental impacts, and navigation, if applicable, are considered during all phases of the project. The commitments necessary to address these issues will be evaluated in the Programming Screen and included in project cost estimations and Class of Action determination. These structures will also be considered in project development.

Degree of Effect: 2 *Minimal to None* assigned 05/21/2004 by Marvin Leon Williams, Federal Highway Administration

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):
Navigation - There is an intermittent stream that is crossed by this corridor that may require a bridge if road is to be expanded to 4 lanes. Project alternatives and all phases of the project should consider issues associated with building the potential bridge, including aesthetics, safety and environmental impacts, and navigation, if applicable. Future phases should then include the commitments necessary to address these issues. Project cost estimations should also take the potential need for a bridge into consideration.

CLC Commitments and Recommendations:

The following organization(s) were expected to but did not submit a review of the Navigation issue for this alternative: Not Available. Contact the ETDM Help Desk for assistance.

Special Designations

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal to None* assigned 12/16/2004 by FDOT District 7

Comments:
There are Special Flood Hazard Area designations within the proposed project area. The FDOT recommends a Degree of Effect of Minimal to None.

None found

The following organization(s) were expected to but did not submit a review of the Special Designations issue for this alternative: Not Available. Contact the ETDM Help Desk for assistance.

Water Quality and Quantity

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal to None* assigned 12/16/2004 by FDOT District 7

Comments:
The Florida Department of Environmental Protection provided no comments with their recommended Degree of Effect of Minimal to None. The Hillsborough River is within 100-ft. buffer area. The Hillsborough River is listed as Impaired Waters under the Impaired Waters Rule, Chapter 62-303, FAC. Because the constructed project will provide stormwater treatment for the new impervious surface, the FDOT recommends a Degree of Effect of Minimal to None for water quality and quantity.

Degree of Effect: 2 *Minimal to None* assigned 05/25/2004 by Lindy McDowell, FL Department of Environmental Protection

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):

CLC Commitments and Recommendations:

The following organization(s) were expected to but did not submit a review of the Water Quality and Quantity issue for this

alternative: Not Available. Contact the ETDM Help Desk for assistance.

Wetlands

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal to None* assigned 12/16/2004 by FDOT District 7

Comments:
The FDOT concurs with Federal Highway Administration (FHWA), US Fish and Wildlife Service (USFWS), and the US Army Corps of Engineers and recommends a Minimal to None Degree of Effect. The FDOT acknowledges recommendations from FHWA and USFWS that potential impacts to wetlands, floodplains, along with plant and animal species and habitats that support them, should be identified and incorporated into project commitments. The FDOT will employ avoidance and minimization of impacts during project development.

Degree of Effect: 2 *Minimal to None* assigned 08/09/2004 by Mark Sramek, National Marine Fisheries Service

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Direct Effects
Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):
The National Marine Fisheries Service, Habitat Conservation Division, has reviewed the proposed Florida Department of Transportation project through the Environmental Screening Tool. Due to our current staffing level, we are unable to adequately investigate this activity and, therefore, we can take no action on the proposed activity at this time. It should be noted that our position is neither supportive of, nor in opposition to, the subject activity.
CLC Commitments and Recommendations:

Degree of Effect: 2 *Minimal to None* assigned 05/25/2004 by John Fellows, US Army Corps of Engineers

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Direct Effects
Identified Resources and Level of Importance:
Formal Corps wetland determination not made, but review of Map View indicates that Corps wetlands may not be affected.
Comments on Effects to Resources:

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 2 *Minimal to None* assigned 05/21/2004 by Marvin Leon Williams, Federal Highway Administration

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Direct Effects
Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):
Wetlands - The project corridor includes locations floodplains and possible wetlands. Potential impacts to these areas should be identified, as well as the project commitments needed to sufficiently protect these areas.

CLC Commitments and Recommendations:

Degree of Effect: 2 *Minimal to None* assigned 05/20/2004 by CalLee Davenport, US Fish and Wildlife Service

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Direct Effects
Identified Resources and Level of Importance:
Federally listed plant and animal species and habitats that support them. High level of importance.
Comments on Effects to Resources:
A review of the GIS database associated with the Environmental Screening Tool, shows that minimal to no impacts to wetlands will occur as a result of the proposed project.
Additional Comments (optional):

CLC Commitments and Recommendations:

The following organization(s) were expected to but did not submit a review of the Wetlands issue for this alternative: Not Available. Contact the ETDM Help Desk for assistance.

Wildlife and Habitat

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal to None* assigned 12/16/2004 by FDOT District 7

Comments:
The FDOT concurs with comments from U.S. Fish and Wildlife Service and the Degree of Effect of Minimal to None. The FDOT recommends revisiting the effects of the project on the Federally threatened and endangered species and their support habitats during the Programming screen. If it is determined that a technical report is needed, the FDOT would like the report completed prior to commencing the PD&E study for the project. If significant time elapses between the Planning and Programming screens and the project development phase, the FDOT recognizes additional site surveys may be required.

Degree of Effect: 2 *Minimal to None* assigned 05/20/2004 by CalLee Davenport, US Fish and Wildlife Service

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Direct Effects

Identified Resources and Level of Importance:
Federally listed plant and animal species and habitats that support them. High level of importance.
Comments on Effects to Resources:
The Service has reviewed our Geographic Information Systems (GIS) database and the GIS database on the Environmental Screening Tool for recorded locations of federally listed threatened and endangered species on or adjacent to the project study area. The Service's GIS database is a compilation of data received from several sources. No federally listed plants or animals were located during the GIS review.

Land use adjacent to the existing alignment primarily consists of residential, commercial, and industrial parcels. A site visit was not conducted by the Service. We assume that listed species occur in suitable ecological communities and recommend site surveys to determine the presence or absence of listed species.

Additional Comments (optional):

CLC Commitments and Recommendations:

The following organization(s) were expected to but did not submit a review of the Wildlife and Habitat issue for this alternative: Not Available. Contact the ETDM Help Desk for assistance.

ETAT Reviews and Coordinator Summary: Cultural

Historic and Archaeological Sites

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal to None* assigned 12/16/2004 by FDOT District 7

Comments:
The FDOT acknowledges the comments from the Florida Department of State and Federal Highway Administration regarding the potential effect of the proposed project on Historic and Archaeological Sites in the area. The FDOT concurs with comments from Florida Department of State stating that all resources identified within the 500-ft. buffer were evaluated as ineligible for listing in the National Register of Historic Places. Potential effects to these resources are negligible; therefore, the FDOT recommends a Minimal to None Degree of Effect. The FDOT will reassess the need for a Cultural Resources Assessment Survey (CRAS) during the Programming screen.

Degree of Effect: 3 *Moderate* assigned 05/24/2004 by Brian Yates, FL Department of State

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Direct Effects

Identified Resources and Level of Importance:
The below resources are all recorded historic properties within the 500-ft. buffer of the proposed project:

Florida Site File Historic Standing Structures

Buffer distance: 100 ft. (19.44 acres).
Structure Name Site ID
4008 GALL BOULEVARD (US HWY 301) PA00674 determined not eligible, importance low
3951 GALL BOULEVARD (US HWY 301) PA00675 determined not eligible, importance low

Comments on Effects to Resources:
Potential effects to the two recorded historic structures are negligible as they were both determined not eligible for listing in the National Register of Historic Places. However, effects to unidentified and unrecorded historic properties can not be determined until an appropriate level of identification and evaluation is attempted.

Additional Comments (optional):
The proposed project corridor should be subject to a systematic cultural resources assessment survey by a qualified professional prior to any ground disturbing activities. The results of this survey should be forwarded to our office for review and comment.
CLC Commitments and Recommendations:

Degree of Effect: 2 *Minimal to None* assigned 05/21/2004 by Marvin Leon Williams, Federal Highway Administration

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Direct Effects
Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):
Archaeological and Historic Sites - The project corridor includes two archaeological or historic sites at its northern end that may, based on information from the Environmental Screening Tool, have Section 4F potential. Potential impacts to these areas should be identified, as well as the project commitments needed to sufficiently protect these areas.
CLC Commitments and Recommendations:

The following organization(s) were expected to but did not submit a review of the Historic and Archaeological Sites issue for this alternative: Not Available. Contact the ETDM Help Desk for assistance.

Recreation Areas

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal to None* assigned 12/16/2004 by FDOT District 7

Comments:
There is no potential impact to Recreation Areas; therefore, FDOT recommends a Degree of Effect of Minimal to None.

None found

The following organization(s) were expected to but did not submit a review of the Recreation Areas issue for this alternative: Not Available. Contact the ETDM Help Desk for assistance.

Section 4(f) Potential

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal to None* assigned 12/16/2004 by FDOT District 7

Comments:
The FDOT concurs with the Florida Department of Environmental Protection on the Degree of Effect of Minimal to None. There are currently no Section 4(f) properties within the project area.

Degree of Effect: 2 *Minimal to None* assigned 05/25/2004 by Lindy McDowell, FL Department of Environmental Protection

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Direct Effects
Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):

CLC Commitments and Recommendations:

The following organization(s) were expected to but did not submit a review of the Section 4(f) Potential issue for this alternative: Not Available. Contact the ETDM Help Desk for assistance.

ETAT Reviews and Coordinator Summary: Community

Aesthetics

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal to None* assigned 12/16/2004 by FDOT District 7

Comments:
Within the 100 ft. project buffer, there are 1.5 acres of Residential, Medium Density land uses and 4.4 acres of Residential, High Density land uses. Within the 200 ft. project buffer, there are 3.3 acres of Residential, Medium Density land uses and 8.9 acres of Residential, High Density land uses. 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 . The FDOT will consider these design alternatives in order to implement a project that is in harmony with the community and preserves and/or enhances the natural, environmental, scenic and aesthetic values of the area. In consideration of these factors, the FDOT recommends a Degree of Effect of Minimal to None.

None found

The following organization(s) were expected to but did not submit a review of the Aesthetics issue for this alternative: Not Available. Contact the ETDM Help Desk for assistance.

Economic

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal to None* assigned 12/16/2004 by FDOT District 7

Comments:
There were no agency Degree of Effect recommendations submitted; however, the FDOT recommends a Degree of Effect of Minimal to None. The proposed improvements to US 301, which is a regional north-south route, should increase the economic viability of the area as it will provide increased accessibility and visibility for commercial and residential uses located along the roadway. Improvements to US 301 will also enhance access to activity centers in the area, and movement of freight in eastern Pasco County.

None found

The following organization(s) were expected to but did not submit a review of the Economic issue for this alternative: Not Available. Contact the ETDM Help Desk for assistance.

Land Use

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal to None* assigned 12/16/2004 by FDOT District 7

Comments:
The FDOT concurs with the Florida Department of Community Affairs and recommends a Degree of Effect of Minimal to None.

Degree of Effect: 2 *Minimal to None* assigned 05/25/2004 by Ken Metcalf, FL Department of Community Affairs

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):

CLC Commitments and Recommendations:

The following organization(s) were expected to but did not submit a review of the Land Use issue for this alternative: Not Available. Contact the ETDM Help Desk for assistance.

Mobility

Project Effects

Coordinator Summary Degree of Effect: 1 *Enhanced* assigned 12/16/2004 by FDOT District 7

Comments:
The FDOT acknowledges the comments from the Federal Highway Administration (FHWA) regarding safety and continuity issues/alternatives that should be addressed as a part of the proposed US 301 improvement. The current roadway configuration within the area of the proposed US 301 improvement presents challenges related to safety and mobility for all modes using the facility. The FDOT concurs with FHWA s recommendation that safety and operational issues associated with the merging of US 301 and SR 39 be fully addressed in the development of alternatives during project development. The FDOT will coordinate with Pasco County during project development and design phases concerning any proposed transit routes. In consideration of these factors, the FDOT concurs with FHWA s recommended Degree of Effect of Enhanced.

Degree of Effect: 1 *Enhanced* assigned 05/21/2004 by Marvin Leon Williams, Federal Highway Administration

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):

Safety/Continuity - The alternatives considered as part of this improvement should address the merging of this roadway with SR39, and how all modes will utilize this intersection, including pedestrian crossings from the nearby high density residential areas. Alternatives should include a T-intersection, which could improve safety for all modes. In addition, The LRTP indicates that US301 north of SR39 will be a one-way corridor. The portion of US301 that is part of this project should address the continuity of merging the two-way traffic with the one-way traffic.

CLC Commitments and Recommendations:

Degree of Effect: 2 *Minimal to None* assigned 05/10/2004 by Derek Scott, Federal Transit Administration

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Direct Effects
Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):

CLC Commitments and Recommendations:

The following organization(s) were expected to but did not submit a review of the Mobility issue for this alternative: Not Available. Contact the ETDM Help Desk for assistance.

Relocation

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 12/16/2004 by FDOT District 7

Comments:
The FDOT concurs with the comments from Federal Highway Administration regarding the existence of Medium and High Density residential areas within the 100ft. buffer areas for the proposed project. It appears approximately 30% of Residential Low to Medium density; along with commercial, business, and community center land uses may be impacted. The FDOT will consider impacts to these uses and will develop alternatives to avoid or minimize relocations. In consideration of these factors, the FDOT recommends a Degree of Effect of Moderate.

Degree of Effect: 2 *Minimal to None* assigned 05/21/2004 by Marvin Leon Williams, Federal Highway Administration

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Direct Effects
Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):
Relocation - There appear to be medium and high-density residential areas within 100 feet of the centerline of the existing roadway. Alternatives should consider the potential need for relocating residences, and the issues associated with relocation needs.

CLC Commitments and Recommendations:

The following organization(s) were expected to but did not submit a review of the Relocation issue for this alternative: Not Available. Contact the ETDM Help Desk for assistance.

Social

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal to None* assigned 12/16/2004 by FDOT District 7

Comments:
There are several petroleum storage tanks within the project corridor. Potential soil contamination issues will be considered in project development.

The FDOT concurs with comments from Florida Department of State stating that all historic and archeological resources identified within the 500-ft. buffer were evaluated as ineligible for listing in the National Register of Historic Places. Potential effects to these resources are negligible. The FDOT recommends a Degree of Effect of Minimal to None.

None found

The following organization(s) were expected to but did not submit a review of the Social issue for this alternative: Not Available. Contact the ETDM Help Desk for assistance.

ETAT Reviews and Coordinator Summary: Secondary and Cumulative

Secondary and Cumulative Effects

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal to None* assigned 12/16/2004 by FDOT District 7

Comments:
Transportation improvement needs are identified in the Long Range Transportation Plan (LRTP) and in response to the development allowed in the local government Comprehensive Plans, of which, the Future Land Use Plan is an element.
This project is identified in the Pasco County MPO s LRTP. Therefore, the proposed project would appear to have little influence, if any, on the rate of development in the area. The current and future development will continue to occur, if it is financially viable and consistent with the approved development thresholds in the local Comprehensive Plan and applicable federal and state laws. As a result, indirect, secondary, and cumulative impacts associated with the project implementation are recognized when developing Future Land Use Plans.
Given the projected future growth and land use designations, the implementation of the proposed US 301 project is not expected to substantially alter development patterns along the project. In consideration of these factors, the FDOT recommends at Minimal to none as the Degree of Effect.

Degree of Effect: 2 *Minimal to None* assigned 05/25/2004 by John Fellows, US Army Corps of Engineers

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*
At-Risk Resource: Wetlands
Comments on Effects: Formal Corps wetland determination not made, but review of Map View indicates that Corps wetlands may not be affected.
Recommended Avoidance, Minimization, and Mitigation Measures: None found.
Recommended Actions to Improve At-Risk Resources: None found.

The following organization(s) were expected to but did not submit a review of the Secondary and Cumulative Effects issue for this alternative: Not Available. Contact the ETDM Help Desk for assistance.

Eliminated Alternatives

There are no eliminated alternatives for this project.

Project Scope

General Project Commitments

Date	Description
08/12/2004	CORRECTION: Please disregard the SR 54 language that was inadvertedly inserted into the tool on 8/9/04. The language below for the US 301 project is correct. US 301 from Chancey Road to SR 39 Pasco County Response to FHWA: Based on FDOT s recent discussions with the Federal Highway Administration (FHWA), we offer the following in response to comments received during the ETAT review: The estimated project cost and funding source, as indicated in the Pasco MPO s 2025 Cost Affordable Transportation Plan, will be added to the Project Description/Purpose and Need during the Programming Screen. Accident data will also be provided. The proposed project is included in both the MPO s 2025 Needs Plan and Cost Affordable Plan. The funding source was not included when proposed projects were entered into the Planning Screen; however, FDOT did not intend to indicate the project was an unfunded need. As mentioned above, funding information will be added to the Project Description/Purpose and Need during the Programming Screen. This additional information will eliminate the apparent inconsistency identified by FHWA. As your agency indicated, the ETDM standard template is the required format and we have to work within its parameters. FDOT acknowledges the standard format does have limitations in which to present unique aspects of projects. FDOT Central Office staff is currently developing a number of enhancements to the Environmental Screening Tool (EST); therefore, the standard template may also be revised as a part of their efforts. FHWA also raised questions regarding the need for the proposed project and specifically whether growth and transportation demand in the corridor has been clearly demonstrated. Since the proposed project is included in the MPO s 2025 Needs Plan and Cost Affordable Plan, growth and demand in the corridor has been evaluated carefully during the Plan development process. As a part of Plan development, capacity deficiencies have been assessed, alternatives have been tested, needed improvements have been defined and corresponding funding sources identified. Consideration of the concerns expressed by your agency are inherent in the process to develop a long range transportation plan; therefore, FDOT trusts that no further action is needed to address FHWA s comments. In response to comments regarding transit, there are no transit improvements proposed as part of this specific project. As stated in the Purpose and Need statement, currently no fixed route service exists for US 301; however, the 2002 Transit Development Plan (TDP) indicates a proposed bus route corridor beyond the year 2007. The FDOT acknowledges this point and will coordinate with Pasco County during project development and design phases concerning any proposed transit routes.

Dispute Resolution Activity Log

Action Date	Issue	Attachment(s)	Action

12/01/2005	Infrastructure	None	US 301 from Chancey Road to SR 39 Pasco County Response to FHWA: Based on FDOT s recent discussions with the Federal Highway Administration (FHWA), we offer the following in response to comments received during the ETAT review: The estimated project cost and funding source, as indicated in the Pasco MPO s 2025 Cost Affordable Transportation Plan, will be added to the Project Description/Purpose and Need during the Programming Screen. Accident data will also be provided. The proposed project is included in both the MPO s 2025 Needs Plan and Cost Affordable Plan. The funding source was not included when proposed projects were entered into the Planning Screen; however, FDOT did not intend to indicate the project was an unfunded need. As mentioned above, funding information will be added to the Project Description/Purpose and Need during the Programming Screen. This additional information will eliminate the apparent inconsistency identified by FHWA. As your agency indicated, the ETDM standard template is the required format and we have to work within its parameters. FDOT acknowledges the standard format does have limitations in which to present unique aspects of projects. FDOT Central Office staff is currently developing a number of enhancements to the Environmental Screening Tool (EST); therefore, the standard template may also be revised as a part of their efforts. FHWA also raised questions regarding the need for the proposed project and specifically whether growth and transportation demand in the corridor has been clearly demonstrated. Since the proposed project is included in the MPO s 2025 Needs Plan and Cost Affordable Plan, growth and demand in the corridor has been evaluated carefully during the Plan development process. As a part of Plan development, capacity deficiencies have been assessed, alternatives have been tested, needed improvements have been defined and corresponding funding sources identified. Consideration of the concerns expressed by your agency are inherent in the process to develop a long range transportation plan; therefore, FDOT trusts that no further action is needed to address FHWA s comments. In response to comments regarding transit, there are no transit improvements proposed as part of this specific project. As stated in the Purpose and Need statement, currently no fixed route service exists for US 301; however, the 2002 Transit Development Plan (TDP) indicates a proposed bus route corridor beyond the year 2007. The FDOT acknowledges this point and will coordinate with Pasco County during project development and design phases concerning any proposed transit routes.

Appendices

PED Comments

Advanced Notification Comments

There are no comments for this project.

GIS Analyses

Since there are so many GIS Analyses available for Project #3107 - US 301 FROM CHANCEY ROAD TO SR 39, they have not been included in this ETDM Summary Report. GIS Analyses, however, are always available for this project on the Public ETDM Website. Please click on the link below (or copy this link into your Web Browser) in order to view detailed GIS tabular information for this project:

http://etdmpub.fla-etat.org/est/index.jsp?tpID=3107&startPageName=GIS%20Analysis%20Results

Special Note: Please be sure that when the GIS Analysis Results page loads, the **Planning Screen Summary Report Published on 09/23/2005 Milestone** is selected. GIS Analyses snapshots have been taken for Project #3107 at various points throughout the project's life-cycle, so it is important that you view the correct snapshot.

Project Attachments

There are no attachments for this project.

Degree of Effect Legend

Color Code	Meaning	ETAT	Public Involvement
N/A	Not Applicable / No Involvement	There is no presence of the issue in relationship to the project, or the issue is irrelevant in relationship to the proposed transportation action.	
0	None (after 12/5/2005)	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. The *None* degree of effect is new as of 12/5/2005.	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	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.
2	Minimal to None (assigned prior to 12/5/2005)	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	Potential Dispute (Planning Screen)	Project may not conform to agency statutory requirements and may not be permitted. Project modification or evaluation of alternatives is required before advancing to the LRTP Programming Screen.	Community strongly opposes the project. Project is not in conformity with local comprehensive plan and has severe negative impact on the affected community.
5	Dispute Resolution (Programming Screen)	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.	

Project-Level Hardcopy Maps

No Project-Level Hardcopy Maps Available.

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. 04EF1000-2016-I-0040

October 27, 2015

Nicole Selly
District 7 Environmental Specialist
Florida Department of Transportation
11201 N. McKinley Drive
Tampa, Florida 33612-6456

RE: US 301 from SR 56 to SR 39_Pasco Project Development and Environment Study Pasco County, Florida

Dear Ms. Selly:

The U.S. Fish and Wildlife Service (Service) has completed its review of the Draft Wetland Evaluation and Biological Assessment Report (WEBAR) for the Project Development & Environment Study (PD&E) that is evaluating the Build Alternative for the US 301 from SR 56 to SR 39 project. The proposed project is evaluating maximizing the corridor's capacity and safety and operating conditions improvements within US 301 in Pasco County, Florida. 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 Florida Department of Transportation (FDOT) on September 30, 2015, for review of the draft WEBAR for the proposed project. The draft document includes determinations of "may affect, not likely to adversely affect" for the wood stork (*Mycteria americana*) and eastern indigo snake (*Drymarchon corais couperi*) and a no effect determination for the Florida scrub jay (*Aphelocoma coerulescens*). It is our understanding 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 FDOT'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*)

A 'may affect, but not likely to adversely affect' determination for the eastern indigo snake was due to the fact that the species and/or gopher tortoise burrows were not observed during the field survey, eastern indigo snakes have not been observed within the project study area, and FDOT's commitment to implementing the Service's Standard Protection Measures for the Indigo Snake during construction of the project. Although eastern indigo snakes have

not been documented in the proposed project area, eastern indigo snakes have been documented within 5 miles of the proposed project site and potential suitable habitat exists within the proposed project site. Based on our review of the information provided and FDOT's commitment to implement the Standard Protection Measures for the Eastern Indigo Snake the Service concurs with a 'may affect, but not likely to adversely affect' determination for the Eastern indigo snake.

Wood Stork (*Mycteria americana*)

Suitable habitat is present within the proposed project study area, the draft WEBAR identified seven (7) active colony sites within a 15-mile radius of the proposed project site, and no wood storks were observed during the field review. To reach a "may affect, not likely to adversely affect" determination for the wood stork, FDOT commits to re-initiating informal Section 7 consultation prior to construction and mitigate for the loss of suitable foraging habitat compensation within the core foraging area (CFA). The Service recommends and prefers that mitigation for this species is "like-for-like" habitat within the same ecological CFA. The Service has reviewed the information provided and FDOT's commitments, 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.

Florida scrub jay (*Aphelocoma coerulescens*)

Potential habitat for the Florida scrub jay was not identified at the proposed project site. No observations were documented during the field reviews and the closest documented observations have been at 3.5 south and 10.2 miles northeast from the proposed project site. Based on the location of the proposed project and the information provided in the draft WEBAR the Service concurs with FDOT's "no effect" 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. If you have any questions, please contact Lourdes Mena at (904)731-3119.

Sincerely,

for Jay B. Herrington
Field Supervisor

cc: Stephanie Pierce, FDOT
Robin Rhinesmith, FDOT

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 *Asplenium erosum*	NL	E		Wetland hammocks, cypress swamps.	Yes	No
Sinkhole fern *Blechnum occidentale*	NL	E		Pine flatwoods.	No	No
Sand butterfly pea *Centrosema arenicola*	NL	E		Sandhill, scrubby flatwoods, dry upland woods.	No	No
Tampa vervain *Glandularia tampensis*	NL	E		Live oak, pine flatwoods with palmetto understory.	No	No
Pond spice *Litsea aestivalis*	NL	E		Edges of baygalls, flatwoods ponds, cypress domes.	No	No
Pygmy pipes *Monotropsis reynoldsiae*	NL	E		Upland mixed hardwood forest, mesic and xeric hammock, sand pine and oak scrub.	Yes	No
Narrowleaf naiad *Najas filifolia*	NL	T		Freshwater lakes and river reaches.	No	No
Celestial lily *Nemastylis floridana*	NL	E		Wet flatwoods, prairies, marshes, cabbage palm hammock edges.	Yes	No
Britton's beargrass *Nolina brittoniana*	E	E		Scrub, sandhill, scrubby flatwoods, and xeric hammock.	No	No
Hand fern *Ophioglossum palmatum*	NL	E		Maritime hammocks and wet hammocks.	Yes	No
Plume polypody *Pecluma plumula*	NL	E		Tree branches or limestone in hammocks, wet woods, and lime sinks.	Yes	No
Fish						
Gulf sturgeon *Acipenser oxyrhynchus desotoi*	T		FT	Bays, estuaries, major rivers with freshwater and saltwater	No	No
Amphibians						
Gopher frog *Lithobates capito*	NL		SSC	Dry sandy uplands, sandhill, scrub that includes isolated wetlands or large ponds.	No	No
Striped newt *Notophthalmus perstriatus*	C		NL	Xeric uplands with ephemeral wetlands, needs frequent fire, undisturbed soils and vegetative groundcover.	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]			
Reptiles						
Loggerhead *Caretta caretta*	T		FT	Marine coastal and oceanic waters.	No	No
Green turtle *Chelonia mydas*	E		FE	Marine coastal and oceanic waters.	No	No
Leatherback *Dermochelys coriacea*	E		FE	Marine coastal and oceanic waters.	No	No
Eastern indigo snake *Drymarchon corais couperi*	T		FT	Scrub and sandhill to wet prairies and mangrove swamps.	Yes	No
Gopher tortoise *Gopherus polyphemus*	C		T	Dry uplands, sandhills, scrub, xeric oak hammock, pastures, and roadsides.	Yes	No
Short-tailed snake *Lampropeltis extenuate*	NL		T	Dry sandy uplands, especially longleaf pine-turkey oak and sometimes adjacent xeric oak hammocks and rosemary-sand pine scrub.	No	No
Kemp's ridley *Lepidochelys kempii*	E		FE	Marine coastal and oceanic waters.	No	No
Florida pine snake *Pituophis melanoleucus mugitus*	NL		SSC	Xeric uplands with sandy soils.	No	No
Suwannee cooter *Pseudemys concinna suwanniensis*	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 *Ammodramus maritimus peninsulae*	NL		SSC	Extensive stands of black needle rush, with smooth cord grass and scattered areas of salt grass.	No	No
Florida scrub jay *Aphelocoma coerulescens*	T		FT	Fire-dominated, low-growing, oak scrub habitat found on well-drained sandy soils.	No	No
Limpkin *Aramus guarauna*	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 *Athene cunicularia floridana*	NL		SSC	High, sparsely vegetated, sandy ground. Natural habitats include dry prairie and sandhill.	Yes	No
Everglade snail kite *Rostrhamus sociabilis plumeus*	E		FE	Shallow marshes and littoral zones of lakes, habitat supporting apple snails	No	No
Red-cockaded woodpecker *Picoides borealis*	E		FE	Old growth pine forests	No	No
Piping plover *Charadrius melodus*	T		FT	Found on open, sandy beaches and on tidal mudflats and sandflats along both coasts.	No	No
Marian's marsh wren *Cistothorus palustris marianae*	NL		SSC	Black needle rush and taller vegetation found along tidal creeks.	No	No
Little blue heron *Egretta caerulea*	NL		SSC	Permanently and seasonally flooded wetlands, streams, lakes, and swamps, and in manmade impoundments and ditches.	Yes	No
Snowy egret *Egretta thula*	NL		SSC	Permanently and seasonally flooded wetlands, streams, lakes, and swamps, and in manmade impoundments and ditches.	Yes	No
Tricolored heron *Egretta tricolor*	NL		SSC	Permanently and seasonally flooded wetlands, streams, lakes, and swamps, and in manmade impoundments and ditches.	Yes	No
White ibis *Eudocimus albus*	NL		SSC	Permanently and seasonally flooded wetlands, streams, lakes, and swamps, and in manmade impoundments and ditches.	Yes	Yes
Southeastern American kestrel *Falco sparverius paulus*	NL		T	Open pine habitats, woodland edges, prairies and pastures.	Yes	No
Florida sandhill crane *Grus canadensis pratensis*	NL		T	Prairies, freshwater marshes, and pastures.	Yes	Yes
American oystercatcher *Haematopus palliatus*	NL		SSC	Beach, sandbar, mud flat, and shellfish beds.	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]			
Wood stork *Mycteria americana*	T		FT	Nests in inundated forested wetlands. Forages in freshwater marshes, swamps, flooded pastures.	Yes	No
Brown pelican *Pelecanus occidentalis*	NL		SSC	Shallow estuarine waters and (less often) far offshore.	No	No
Roseate spoonbill *Platalea ajaja*	NL		SSC	Marine tidal flats and ponds, coastal marshes, mangrove-dominated inlets and pools, and freshwater sloughs and marshes.	Yes	No
Black skimmer *Rynchops niger*	NL		SSC	Coastal waters, including beaches, bays, estuaries, sandbars, tidal creeks.	No	No
Least tern *Sternula antillarum*	NL		T	Coastal shallow habitats and shorelines.	No	No
Mammals						
Florida mouse *Podomys floridanus*	NL		SSC	Xeric uplands with sandy soils.	No	No
Sherman's fox squirrel *Sciurus niger shermani*	NL		SSC	Sandhills, pine flatwoods, pastures.	Yes	No
West Indian manatee *Trichechus manatus*	E		FE	Coastal waters, bays, and rivers.	No	No
Other Species of Concern						
Bald eagle *Haliaeetus leucocephalus*	NL[4]		NL[4]	Nests in tall trees. Forages near bodies of water.	Yes	No
Florida black bear *Ursus americanus floridanus*	NL		NL[5]	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 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).
[5] 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 <u>LIVE</u> EASTERN INDIGO SNAKE ON THE SITE:

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

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

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

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

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

PRE-CONSTRUCTION ACTIVITIES

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

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

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

DURING CONSTRUCTION ACTIVITIES

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

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

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

POST CONSTRUCTION ACTIVITIES

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

IF YOU SEE A LIVE EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and allow the 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 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.

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

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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.

August 12, 2013

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.