Project Development & Environment Study

SR 60 PD&E Study

From Valrico Road to the Polk County Line

Final
Wetland Evaluation and Biological Assessment Report

WPI Segment No.: 430055-1
Hillsborough County

Prepared for the

Florida Department of Transportation
District Seven

April 2015

Stephanie Pierce
FDOT Project Manager

Project Development & Environment Study

FINAL WETLAND EVALUATION AND BIOLOGICAL ASSESSMENT REPORT

State Road (SR) 60
From Valrico Road to the Polk County Line
Project Development and Environment (PD&E) Study
Hillsborough County, Florida

FDOT District 7
FPN: 430055-1-22-01

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EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT) conducted a Project Development and Environment (PD&E) Study to evaluate alternative improvements for State Road 60 (SR 60) from Valrico Road to the Polk County Line in Hillsborough County. The total project length is approximately 12.3 miles. Study objectives include the following: determine proposed typical sections and develop preliminary conceptual design plans for proposed improvements while minimizing impacts to the environment; consider agency and public comments; and ensure project compliance with all applicable federal and state laws. Improvement alternatives will be identified which will improve safety and meet future transportation demand.

The project was evaluated through the FDOT's Efficient Transportation Decision Making (ETDM) process. This project is designated as ETDM project #4131. An ETDM *Programming Screen Summary Report* was published on June 8, 2012 containing comments from the Environmental Technical Advisory Team (ETAT) on the project's effects on various natural, physical and social resources. Based on the ETAT comments, the FHWA determined that this project qualified as a Type 2 Categorical Exclusion (CE).

This *Wetlands Evaluation and Biological Assessment Report* (*WEBAR*) is being prepared as part of this PD&E Study. This report summarizes the possible impacts to wetlands, federally and state protected species, and protected habitats. The identification of measures to avoid, minimize and mitigate for any potential impacts is also discussed.

Wetlands

Pursuant to Executive Order 11990 entitled "Protection of Wetlands," (May 1977) the U.S. Department of Transportation (USDOT) developed a policy, Preservation of the Nation's Wetlands (USDOT Order 5660.1A), dated August 24, 1978, which requires all federally-funded highway projects to protect wetlands to the fullest extent possible. In accordance with this policy, as well as *Part 2, Chapter 18 - Wetlands* of the FDOT *PD&E Manual*, project alternatives were assessed to determine potential wetland impacts associated with the construction of each alternative.

Although unavoidable wetland impacts will occur as a result of the proposed build alternative, these wetlands are located adjacent to, and/or within, the existing roadway and were previously disturbed by roadway construction, maintenance activities, and the invasion of nuisance and exotic species.

Identified and mapped along the project corridor were 3.22 acres of jurisdictional wetlands and surface waters and 3.10 acres of other surface waters. A description of the dominant floral species, soil types, land use, and other pertinent remarks are provided in subsequent sections of this report. The Uniform Mitigation Assessment Methodology (UMAM) analysis was performed on representative wetland impact areas.

Surface waters impacted by proposed improvements consist primarily of ditches that are located within the existing right of way (ROW). Wetlands impacted by proposed improvements consist of the outer edges of existing creek and floodplain crossings that have been disturbed through previous roadway construction and maintenance activities.

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

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

Protected Species & Habitat

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

Field surveys and database searches for protected species were conducted on January 10 and 22, 2013, February 1, 2013, June 7, 2013, and April 17, 2014. Three federally protected species and seven state protected species were determined to be present or have a high likelihood for utilization of project habitats. One protected, non-listed species was also observed. No federally or state listed plant species were observed or are documented in the project area.

The **wood stork** (*Mycteria americana*) is designated as endangered by both the US Fish and Wildlife Service (USFWS) and the Florida Fish and Wildlife Conservation Commission (FWC). The project corridor is located within the Core Foraging Area (CFA) of nine (9) documented wood stork rookeries. No wood storks were observed during field reviews, however, Suitable Foraging Habitat (SFH) exists within roadside ditches along the corridor. A Foraging Habitat Assessment Procedure may be required to quantify impacts to SFH. However, because loss of these areas will either be mitigated or replaced, the project "may affect, but is not likely to adversely affect" this species.

The **Eastern indigo snake** (*Drymarchon corais couperi*) is federally and state listed as threatened. The Eastern indigo snake and the gopher tortoise are commensal species. No documentation exists in the vicinity and no sightings of individuals of this species were observed during field surveys; however, suitable habitat is present within the ROW and on adjacent lands. The FDOT will commit to implementing the Standard FDOT Construction Precautions for the Eastern Indigo Snake (Appendix A). It is therefore anticipated that this project "may affect, but is not likely to adversely affect" the Eastern indigo snake.

The **American alligator** (*Alligator mississippiensis*) is listed by the USFWS as threatened due to its similarity of appearance to the American crocodile (*Crocodylus acutus*). No American alligators were observed during field surveys, however, they are likely to be present within habitats found along the corridor. Because unavoidable impacts to these habitats will be minimized and mitigated, and due to the common occurrence in local habitats, it is anticipated that the project will have "no effect" on the American alligator.

The **gopher tortoise** (*Gopherus polyphemus*) is listed as threatened by the FWC. Gopher tortoises and burrows were observed in one area of the project corridor. Current FWC protection measures require the relocation of gopher tortoises located within 25 feet of proposed impact areas and allows for the relocation of commensal species such as the gopher frog (*Rana capito*) and Florida mouse (*Podomys floridanus*). Surveys to identify all affected burrows and relocations of gopher tortoises and commensals will be conducted, therefore the project "may affect, but is not likely to adversely affect" these species.

Several FWC listed wetland dependent avian species have a high likelihood of occurrence along the project corridor. One wading bird rookery was documented just over one mile from the corridor in 1999. Wetland dependent species with a high potential to utilize corridor habitats include: Florida sandhill crane (*Grus canadensis pratensis*), little blue heron (*Egretta caerulea*), roseate spoonbill (*Ajaia ajaia*), snowy egret (*Egretta thula*), tricolored heron (*Egretta tricolor*), and white ibis (*Eudocimus* albus). Florida sandhill crane is listed as threatened by the FWC; the remaining species are listed as species of special concern by the FWC. Because unavoidable impacts to wetlands which provide foraging habitat will be mitigated, the project "may affect, but is not likely to adversely affect" wetland dependent bird species.

During field surveys in April 2014 three active osprey (*Pandion haliaetus*) nests were observed on two platforms on utility poles and one cell phone tower immediately adjacent to the ROW. Ospreys are afforded protection under the Migratory Bird Treaty Act (MBTA) (16 U.S.C.703-712) and state protected by Chapter 68A of the Florida Administrative Code (F.A.C.). If the nest is in the way of construction and must be removed, a permit must be received from the FWC, which typically authorize the removal of inactive nest (i.e. nests containing no eggs or flightless young). Requests for removal of active nests (i.e. containing eggs and/or flightless chicks) are issued if the nest presents a safety hazard for the birds or humans. Active nest removal permits are issued with less frequency on a case-by-case basis. Removal of an active nest also requires permits from the USFWS.

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

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Section 1 – INTRODUCTION

1.1 Project Description

The Florida Department of Transportation (FDOT) conducted a Project Development and Environment (PD&E) Study to consider the proposed widening of a portion of SR 60. Located in Hillsborough County, the limits of this study are from Valrico Road at the west end extending eastward to the Polk County Line, a distance of approximately 12.3 miles (Figure 1-1 and Figure 1-2). Within the project limits, the existing roadway is a principal arterial, and the improvement will expand the current 4-lane facility to 6-lanes. SR 60 is a major east-west arterial roadway and is part of the Florida Strategic Intermodal System (SIS). The project is within Sections 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29 and 30 of Township 29 South, Range 21 East; Sections 19, 20, 21, 22, 25, 26, 27, 28, 29 and 30 of Township 29 South, Range 22 East of the Public Land Survey System (PLSS).

This project was evaluated through the FDOT's Efficient Transportation Decision Making (ETDM) process, designated as ETDM project #4131. An ETDM Programming Screen Summary Report was published on June 8, 2012, containing comments from the Environmental Technical Advisory Team (ETAT) on the project's effects on various natural, physical and social resources. Based on the ETAT comments included in the Summary Report and undertaking the public involvement process to date, it has been determined that the proposed improvements to SR 60 would not create any significant impacts to the environment. Also, when the project went through the ETDM Programming Screen process, the FDOT planned to seek approval of the PD&E study's environmental document by the Federal Highway Administration (FHWA). In the meantime, the FDOT determined that it would instead process the study's environmental document as a State Environmental Impact Report (SEIR). The project is currently fully funded for design in the FDOT's 2024-2040 SIS Cost Feasible Plan and all subsequent phases, right-of-way and construction, are being considered to be added in future updates.

Figure 1-1: SR 60 Project Location Map

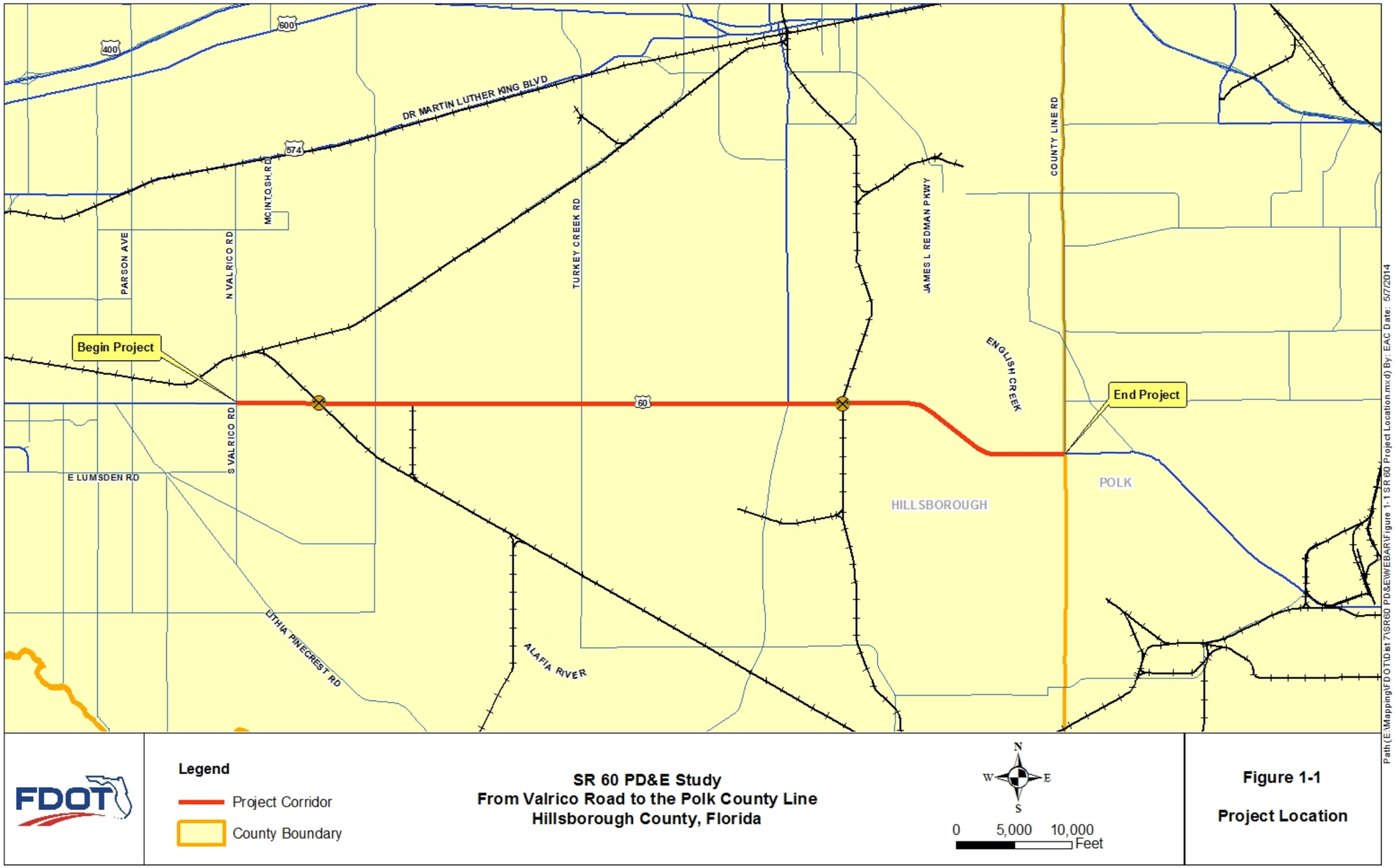
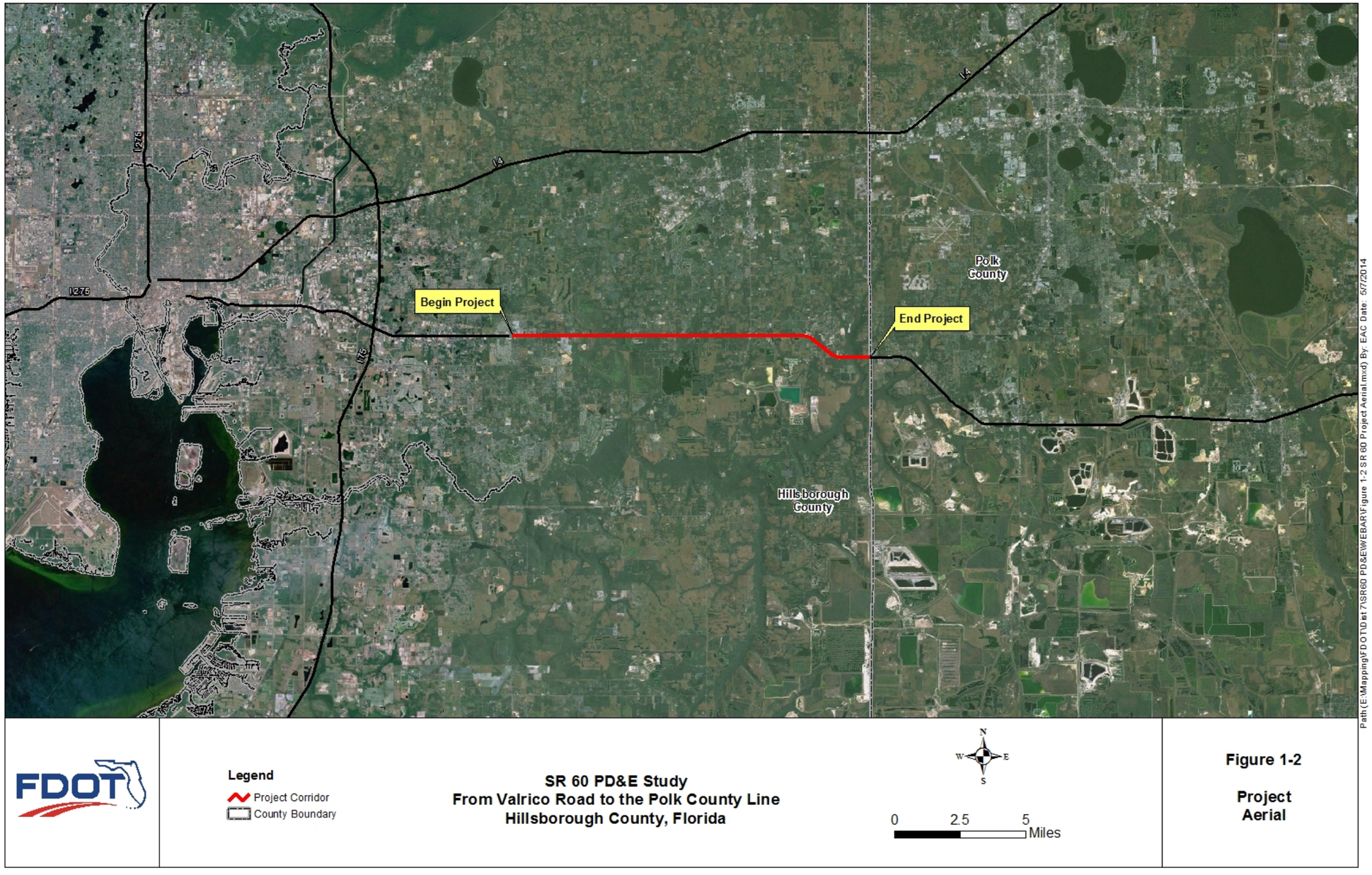


Figure 1-2: SR 60 Project Aerial



1.2 Purpose of the Report

This *Wetlands Evaluation and Biological Assessment Report* (*WEBAR*) is one of several documents being prepared as part of this PD&E Study. This report documents wetlands and protected species within the project corridor. Pursuant to Presidential Executive Order 11990 entitled "Protection of Wetlands," the U.S. Department of Transportation (USDOT) has developed a policy, Preservation of the Nation's Wetlands (USDOT Order 5660.1A), dated August 24, 1978, which requires all federally-funded highway projects to protect wetlands to the fullest extent possible. In accordance with this policy, as well as *Part 2, Chapter 18 - Wetlands* of the FDOT *PD&E Manual*, two (2) project alternatives were assessed to determine potential wetland impacts associated with construction of each alternative.

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

1.3 Purpose and Need

The purpose of the proposed project is to accommodate increases in traffic due to the estimated employment increase for Hillsborough County as a whole and a population increase for unincorporated Hillsborough County. SR 60 is a major east-west arterial roadway and is part of the Florida Strategic Intermodal System (SIS). The SIS is comprised of facilities of statewide and interregional significance that move people and goods and provide for smooth and efficient transfers between modes and major facilities.

SR 60 provides connectivity with many of Florida's major highways, some of which include: US 19, US 41, Interstate 75 (I-75), US 98, US 17, US 27, US 441, Florida's Turnpike, Interstate 95 (I-95) and US 1. SR 60 on the western end terminates as a roundabout with Coronado Drive (CR 699) on Clearwater Beach in Pinellas County and the eastern terminus for SR 60 is SR A1A in Indian River County; therefore, it provides a

coast-to-coast route across the state. SR 60 is a vital link in the regional transportation network that connects the Tampa Bay region to the remainder of the state.

The need for two additional lanes on SR 60 in this area is based on current roadway level of service (LOS) combined with future growth projections. The Hillsborough County Level of Service (LOS) Report (March 2011) shows the current LOS of SR 60 between Valrico Road and Dover Road as F. This segment is currently 12% over capacity. The 2011 LOS is C between Dover Road and Turkey Creek Road and also between SR 39 and County Line Road, and the LOS is currently B between the Turkey Creek Road SR 39.

Socioeconomic growth projections from the Hillsborough County Metropolitan Planning Organization's 2035 Long Range Transportation Plan Socioeconomic Projections estimate an employment increase of 55% and a population increase of 47% for Hillsborough County between 2006 and 2035. Based on the growth projected to occur within the corridor, SR 60 is projected by the Tampa Bay Regional Planning Model (TBRPM) – Cost Feasible Network to have future traffic volumes of approximately 48,800 vehicles east of Valrico Road and 42,500 vehicles west of County Line Road by 2035, which would yield a LOS F for the corridor with the current roadway configuration. These volumes would not meet the acceptable FDOT LOS standards of LOS D for SR 60 between Valrico Road and Horton Road and LOS C for SR 60 between Horton Road and County Line Road.

1.4 Existing Facility and Proposed Improvements

Within the project limits, SR 60 currently has a 4-lane divided urban typical section from Valrico Road to Dover Road and from Sydney Washer Road to Horton Road. It also has a 4-lane rural typical section from Dover Road to Sydney Washer Road and from Horton Road to the Polk County Line (**Figure 1-3**). The existing roadway generally has four 12-foot travel lanes, 4-foot paved outside shoulders, and a 40-foot grassed median.

The posted speed varies from 50 mph to 65 mph. The existing right of way is typically 182 feet.

The New Construction Alternative and the Preferred Pavement Savings Alternative (**Figures 1-4 and 1-5**) include widening to six lanes as well as intersection improvements and construction of stormwater management facilities and bicycle and pedestrian facilities. A "No-Build" Alternative will also be considered. The proposed project is not funded in FDOT's current 5-year work program.

Figure 1-3: SR 60 Existing Typical Section

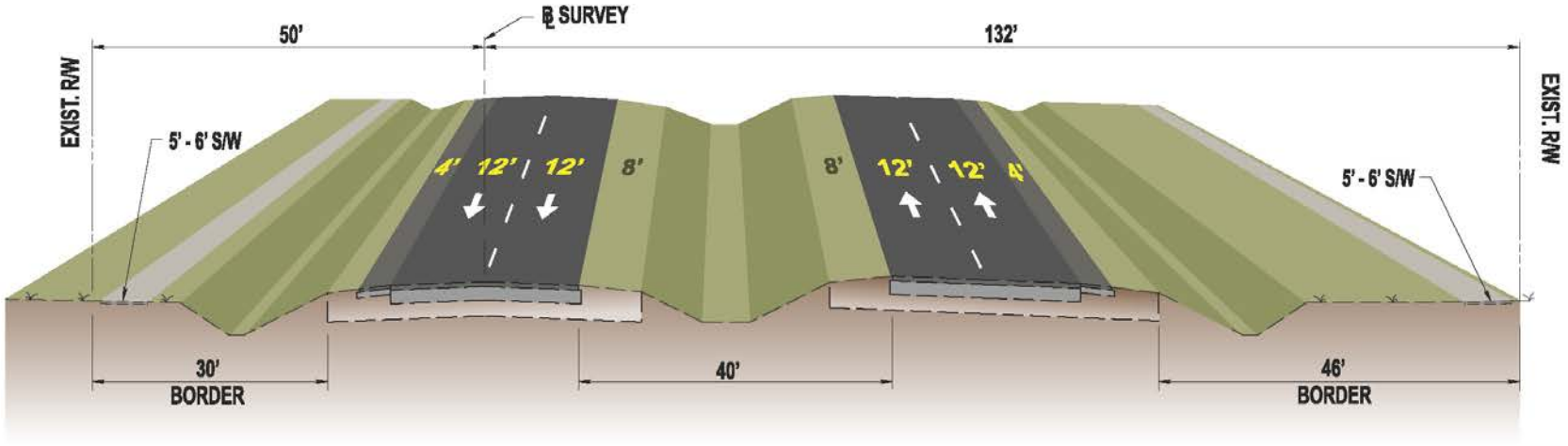


Figure 1-4: Segment 1 New Construction Typical Section

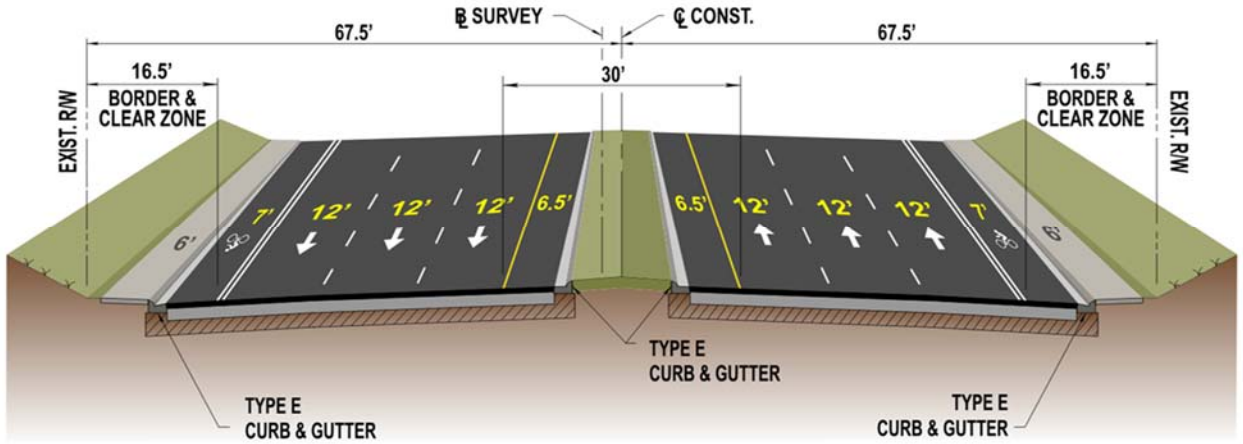
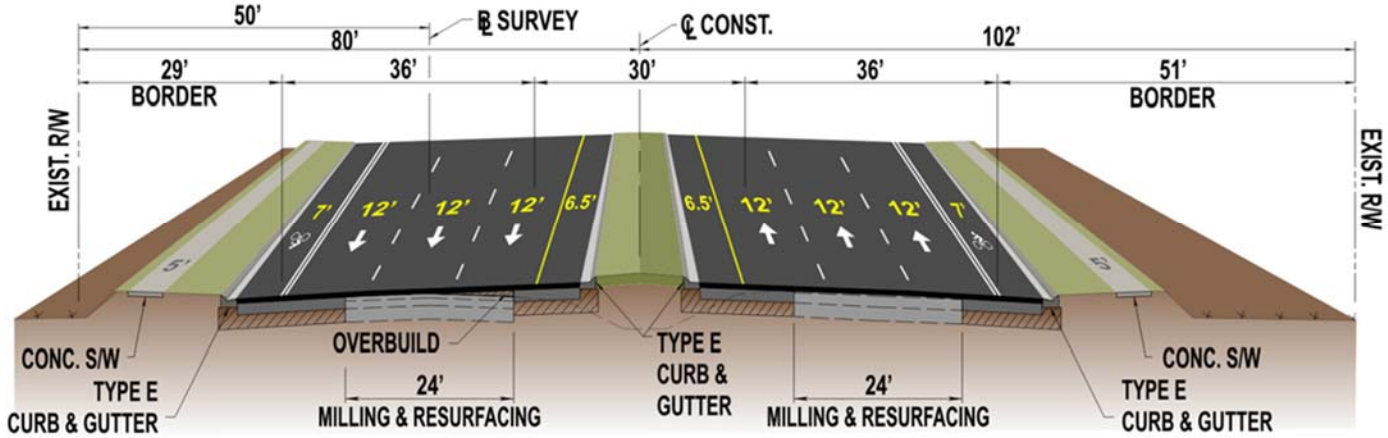


Figure 1-5: Segment 1 Preferred Pavement Saving Typical Section



Section 2 - EXISTING ENVIRONMENTAL CONDITIONS

2.1 Existing Land Use

Existing land use along the project corridor was determined utilizing a variety of resources including the National Wetlands Inventory (NWI), the Natural Resources Conservation Services (NRCS) Soil Surveys for Hillsborough County, U.S Geological Survey (USGS) topographical maps, aerial photographs (2011), land use mapping from the Southwest Florida Water Management District (SWFWMD) (SWFWMD, 2004), and field verification during wetland and habitat reviews. **Figure 2-1** depicts the overview of existing land use types for the project corridor.

Land along the western half of the corridor is dominated by residential and commercial/industrial land uses interspersed with agricultural and undeveloped areas. The eastern half of the project is dominated by agricultural use with moderately interspersed residential parcels, remnant upland forested patches, and several creek and floodplain crossings.

Most upland habitats adjacent to the project corridor have been developed as low to medium density residential and agricultural uses, as well as a few commercial and retail facilities. Upland habitats that have not been developed consist of remnant patches of pine flatwoods and hardwood conifer mixed lands. Although undeveloped at the time of surveys, most of these habitats have moderate levels of disturbance and are not considered high quality for wildlife. Descriptions of upland and wetland communities are provided in **Sections 2.1.2** and **2.1.3**. **Table 2-1** provides a summary of land use cover types and prevalence within and immediately adjacent to the project corridor, based on land use data obtained from the SWFWMD.

Figure 2-1: Existing Land Use Overview, Page 1 of 2

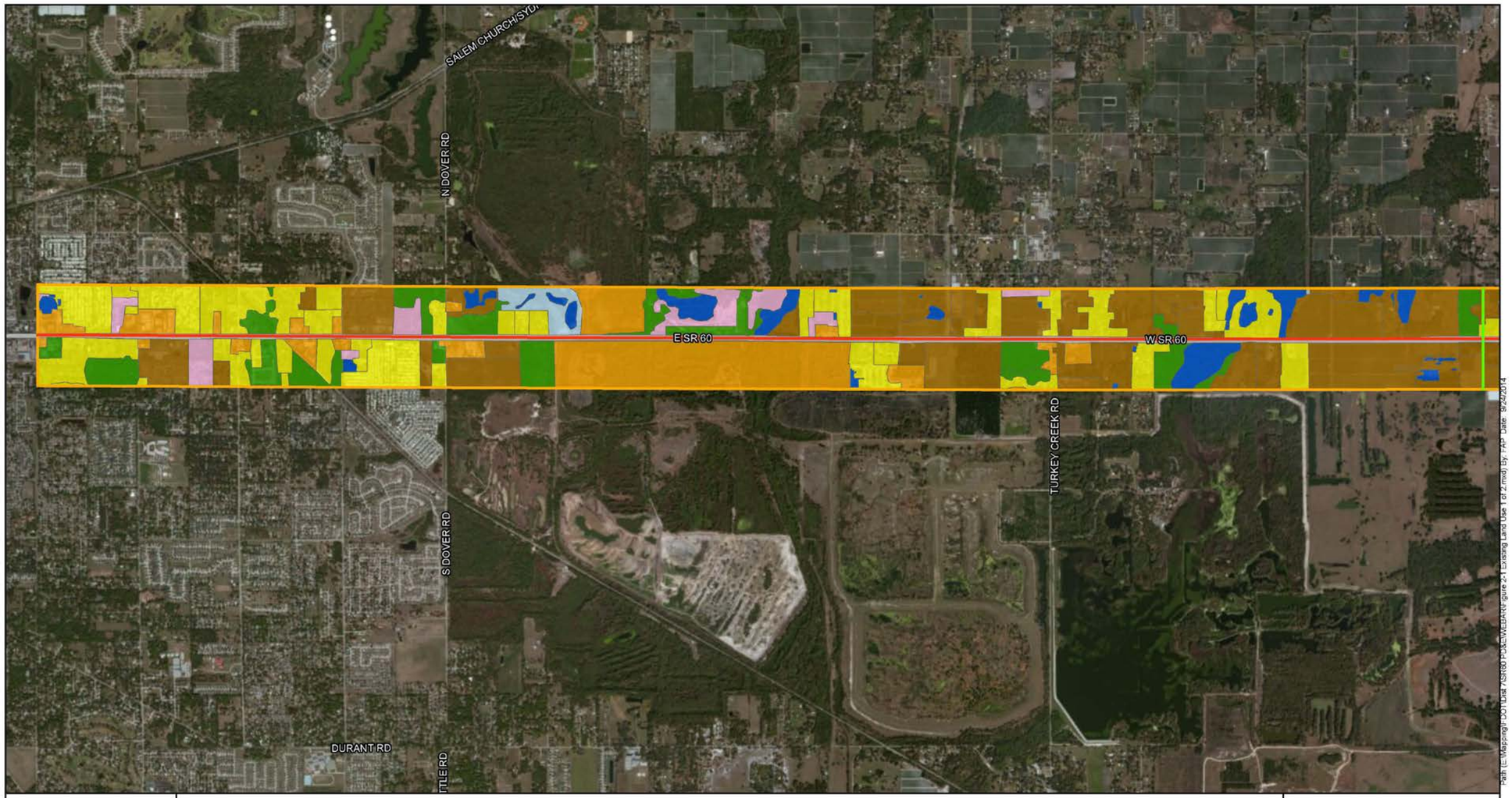


Figure 2-1: Existing Land Use Overview, Page 2 of 2

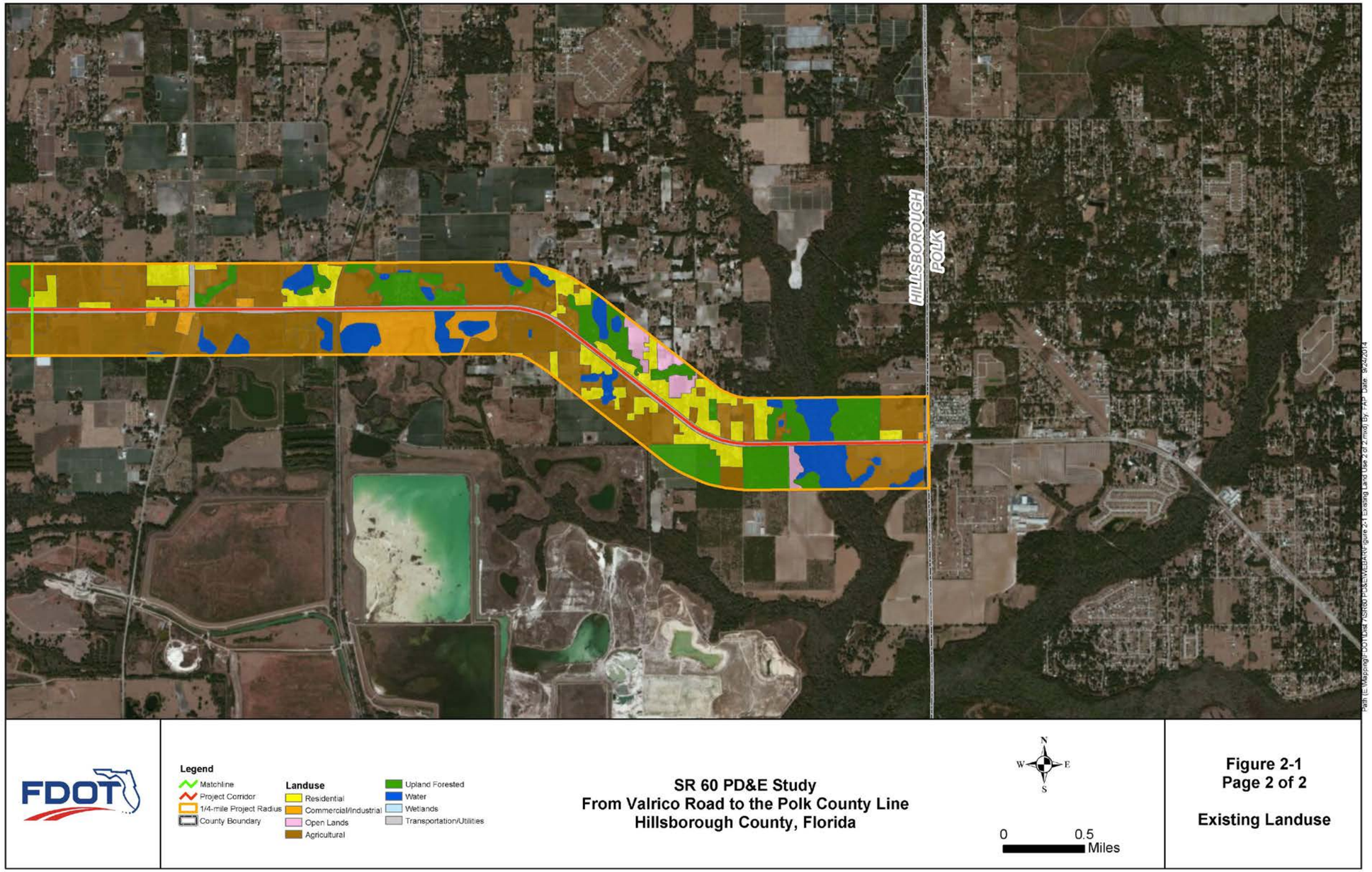


Table 2-1: Existing Land Use Cover (FLUCFCS)

FLUCFCS Code		Description	Percent Cover
100: Urban & Built-Up	110	Residential, Low Density	11.20%
	120	Residential, Medium Density	2.65 %
	130	Residential, High Density	5.06%
	140	Commercial and Services	3.37%
	160	Extractive	8.99%
	170	Institutional	0.21%
	190	Open Land	0.89%
		Total	**32.37%**
200: Agriculture	210	Cropland and Pastureland	20.63%
	220	Tree Crops	15.96%
	230	Feeding Operations	0.22%
	240	Nurseries and Vineyards	0.45%
	260	Other Open Lands	2.64%
		Total	**39.99%**
400: Upland Forests	410	Upland Coniferous Forest	3.79%
	430	Hardwood - Conifer Mixed	8.77%
		Total	**12.56%**
Water & Wetlands	530	Reservoirs	1.67%
	615	Streams and Lake Swamps	5.99%
	641	Freshwater Marshes	0.30%
		Total	**7.96%**
800: Transportation,	810	Transportation	**6.25%**

2.1.1 Natural & Biological Features

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

A total of five stream systems intersect the project corridor: The Little Alafia River, Howell Branch Creek, Turkey Creek and two unnamed streams. All five streams are contained within the Alafia River Watershed, a 418 square mile watershed of which 62%

lies in Hillsborough County. None of the streams within the project area are classified as Outstanding Florida Waters (OFW).

The stream systems range from being bordered by mostly low-density residential lands (FLUCFCS 110) on the eastern portion of the project corridor, to mostly hardwood conifer mixed forests (FLUCFCS 434) and crop and pasturelands (FLUCFCS 210) along the central and western portions of the project area.

Elevations identified along the project corridor range from about 40 ft. National Geodetic Vertical Datum (NGVD) to about 120 ft. from West to East. Elevation at the western end of the project corridor is about 40 ft. NGVD while at the eastern end of the project is 100 ft. NGVD.

2.1.2 Upland Vegetation Communities

The major upland communities identified within and directly adjacent to the project corridor are described below. These communities are classified according to *Florida Land Use, Cover and Forms Classification System* (FLUCFCS), (FDOT 1999). Field reviews confirmed vegetation community types and the presence or potential for occurrence of protected plant and wildlife species. A description of federal and state protected species observed during field surveys is also included, where applicable. These protected species are also discussed in greater detail in **Section 4.**

Cropland and Pastureland (FLUCFCS 210)

This land use type includes lands that are managed for row crops or pasture production of livestock. A mix of improved and unimproved pasturelands is present along the project corridor and consists of areas that dominated by Bahia grass (*Paspalum notatum*). The majority of this land use along the corridor consists of areas of row crops. Large areas of land adjacent to the ROW are in various stages of the crop production process. These open areas may provide foraging opportunities for avian species including white ibis (*Eudocimus albus*) and Florida sandhill crane (*Grus canadensis pratensis*).

Other Open Lands (FLUCFCS 260)

Agricultural lands with an undetermined usage falls into this category. These lands are generally dominated by Bahia grass with some areas maintaining moderate numbers of pioneer shrub species and occasional laurel oak (*Quercus laurifolia*) or slash pine (*Pinus elliottii*). These open areas can potentially provide foraging for avian species as well as grazing for gopher tortoises (*Gopherus polyphemus*) although none have been observed.

Upland Coniferous Forests (FLUCFCS 410)

Any natural forested habitat which is dominated by a coniferous canopy of at least 66 percent type is included in this habitat type. Generally these areas are found scattered adjacent to the ROW and consist of pine flatwoods and pine with mesic oak. The pine flatwoods class is dominated by slash pine and longleaf pine (*Pinus palustris*) and commonly support and understory of saw palmetto (*Serenoa repens*), wax myrtle (*Myrica cerifera*), gallberry (*Ilex glabra*) and a wide variety of herbs and brush. The patches of pine flatwoods tend to be overgrown and shrubby due to fire suppression. In moister sites with this classification, slash and longleaf pines grow in strong association with a variety of mesic oaks and other hardwoods. Forested areas along the ROW contain a mix of slash pine, laurel oak and a few hardwoods. These areas can provide cover and foraging for numerous species of birds, mammals and reptiles although no listed species were observed.

Hardwood – Conifer Mixed (FLUCFCS 430)

Neither conifers nor hardwoods achieve 66% dominance in this habitat that was likely pine flatwoods (FLUCFCS 411) at one time but overgrowth of hardwoods and exotic species has occurred. Presence of these hardwoods and exotics is likely due to fire suppression. Canopy species including slash pine, red maple (*Acer rubrum*) and both laurel and live oaks (*Quercus virginiana*) are present. Evidence of gopher tortoises, state-protected species, was identified at the edges of this habitat type. Additional protected species which utilize gopher tortoise burrows may also be present.

2.1.3 Wetlands & Surface Water Features

In accordance with Executive Order 11990, "Protection of Wetlands" (May 1977), the proposed project has been evaluated for potential effects to wetlands. Wetland locations and boundaries were identified and approximated using aerial interpretation and field reconnaissance in the spring and summer of 2013, and the spring of 2014. Wetland boundaries were visually approximated using the U.S. Army Corps of Engineer's (USACE) "*Interim Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Atlantic and Gulf Coastal Plain Region"* (2008) and the Florida Department of Environmental Protection's (FDEP) "Delineation of the Landward Extent of Wetlands and Surface Waters" (1995) (Chapter 62-340, F.A.C). Maps depicting all of the wetlands and jurisdictional surface water features and FLUCFCS codes within the project ROW are provided in **Appendix B**.

2.1.3.1 Methodology

A variety of resources including NWI maps, Soil Surveys for Hillsborough County, USGS topographical maps, aerial photographs (2011), and field surveys were employed to identify the wetland communities that occur within the study area.

All wetlands and surface water features within and immediately adjacent to the project corridor were mapped on a scale of 1" = 200' aerial photographs (2011), assigned an identification number and categorized in accordance with the FLUCFCS designation. Each wetland and surface water within the project corridor was assigned a unique identification code based on type and position along the corridor. These codes include whether each site is a wetland (WL), jurisdictional surface water (SW) or other surface water (OSW), and the location on the north or south side of the existing roadway (N = North; S = South). Wetlands were also classified utilizing the "Classification of Wetlands and Deepwater Habitats of the United States" (Cowardin et al., 1979) developed by the USFWS.

Distinction between wetland habitat and other surface water systems was required on this project primarily because of the linear and generally man-made features which are

present along much of the project corridor. These surface water features are present in both upland and wetland mapped soil units. Man-made systems such as excavated ditches were identified as jurisdictional surface waters where all or major portions were excavated within hydric soil mapping units. OSW found on the corridor consist of ditches excavated in non-hydric soils, but are sufficiently hydrated to typically support wetland vegetation. Shallow swale systems associated with the roadway that support primarily turf grass and are regularly mowed are not considered wetlands or other surface waters and therefore were not evaluated for impacts or mapped during field surveys.

Two wetland habitat types and one main surface water type are present within the project corridor. Wetland habitat types include Stream and Lake Swamps and Freshwater Marsh - Excavated. Jurisdictional surface waters and other surface waters include herbaceous ditches. Detailed descriptions of the wetland and surface water community types are provided below. Representative photographs of wetland and surface water features are provided in **Appendix C**.

2.1.3.2 Wetlands

Stream and Lake Swamps (FLUCFCS 615)

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

According to the FLUCFCS manual, this community, often referred to as bottomland or stream hardwoods, is usually found on, but not restricted to river, creek and lake floodplain or overflow areas. Several stream and lake swamps are located along the project corridor and are generally located directly adjacent to or within the floodplain of riverine and creek systems (Turkey Creek, Little Alafia River, Howell Branch Creek).

State Road 60 spans Turkey Creek just east of Atkins Ranch Lane between station numbers 585 and 595. The wetlands associated with Turkey Creek are WL 2N, WL 2S and WL 4S. SR 60 also spans the Little Alafia River just east of Wallace road between stations 708 and 712. The wetlands associated with the Little Alafia River are WL 7N, WL 7S, WL 8N, WL 8S and WL 9N. SR 60 spans Howell Branch Creek just east of Miles Farms Road between stations 1010 and 1025. The wetlands associated with Howell

Branch Creek are WL 18N and WL 18S. All wetlands identified within the existing ROW and acreage for each is provided in **Table 2-2.**

Hydrologic conditions within these wetland areas generally consist of saturated soils to intermittent and seasonal flooding. Oak species are generally the dominant tree species found within this habitat type, with red maple also abundant in several areas. Canopy species observed include: red maple (*Acer rubrum*), sweetbay (*Magnolia virginiana*), sweetgum (*Liquidambar styraciflua*), cabbage palm (*Sabal palmetto*), American elm (*Ulmus americana*), sugarberry (*Celtis laevigata*) laurel oak (*Quercus laurifolia*), water oak (*Quercus nigra*) and live oak (*Quercus virginiana*). Herbaceous and shrub species observed within this habitat type include: lizard's tail (*Saururus cernuus*), dayflower (*Commelina diffusa*), wild coffee (*Psychotria nervosa*), shield fern (*Thelypteris* sp.) sword fern (*Nephrolepis* sp.), wild taro (*Colocasia esculenta*), Brittan's wild petunia (*Ruellia simplex*), Indian hemp (*Sida rhombifolia*), elderberry (*Sambucus canadensis*), Walter's viburnum (*Viburnum obovatum*), Peruvian primrose willow (*Ludwigia Peruviana*), and Brazilian pepper (*Schinus terebinthifolius*). All of the wetlands have a moderate level of disturbance and moderate to high cover of nuisance and exotic species in the herbaceous and shrub strata.

Palustrine Forested with Broad-Leaved Deciduous & Needle-Leaved Deciduous (PFO1/2)

This community is also comprised of bottomland or stream hardwoods except that it also has a cypress component. This type of stream swamp found on the project corridor is a floodplain located directly adjacent to Howell Branch Creek (often referred to as English Creek, which it connects with). SR 60 spans this creek just east of Miles Farm Road between station numbers 1012 and 1025 and is made up of wetlands WL 18N and WL 18S. Hydrologic conditions within these areas generally consist of saturated soils to intermittent and seasonal flooding. Oak species and sweetgum are generally the dominant tree species found within this habitat type with cypress also abundant. Canopy species observed include: red maple, sweetgum, cabbage palm, American elm, sugarberry, laurel oak, water oak and bald cypress (*Taxodium distichum*). Herbaceous

and shrub species observed within this habitat type include: lizard's tail, dayflower, wild coffee, shield fern, Brittan's wild petunia, elderberry, Walter's viburnum and Peruvian primrose willow. These wetlands have a moderate level of disturbance and moderate cover of nuisance and exotic species in the herbaceous and shrub strata.

2.1.3.3 Wetlands Excavated in Hydric Soils

Freshwater Marsh - Excavated (FLUCFCS 641x)

Nine manmade ditches are located along the corridor and are labeled SW 6S, SW 10N, SW 10S, SW 11N, SW 11S, SW 15N, SW15S and SW16S. These features are associated with the stormwater management facilities currently in place to serve SR 60 and adjacent roadways. These features have been cut into hydric soils and are considered jurisdictional by the resource agencies. They vary in length and width along the corridor, and provide only marginal wildlife habitat, limited primarily to forage opportunities for wading birds. Water regimes generally consist of intermittent and seasonal flooding. This feature type is represented by the one category described below (Note: x denotes "excavated"). All jurisdictional ditches identified within the existing ROW and acreage for each is provided in **Table 2-3.**

Palustrine Emergent with Persistent Vegetation (PEM1x)

The herbaceous ditches along the corridor are dominated by herbaceous species but some also have a low density of shrubby species. Shrubby species include: primrose willow, elderberry, Carolina willow (*Salix caroliniana*), and wax myrtle (*Myrica cerifera*). Herbaceous species include: dayflower, wild taro, swamp flatsedge (*Cyperus distinctus*), purple flatsedge (*Cyperus ovatus*), tropical flatsedge (*Cyperus surinamensis*), spikerush (*Eleocharis* sp.), southern fleabane (*Erigeron quercifolius*), pennywort (*Hydrocotyle umbellata*), West Indian marsh grass (*Hymenachne amplexicaulis*), softrush (*Juncus effusus subsp. solutus*), bighead rush (*Juncus megacephalus*), Mexican sprangletop grass (*Leptochloa fusca subsp. uninervia*), winged seedbox (*Ludwigia decurrens*), large seedbox (*Ludwigia octovalvis*), parrot's feather (*Myriophyllum aquaticum*), torpedograss (*Panicum repens*), Florida pellitory (*Parietaria floridana*), bahia grass, smartweed

(*Polygonum glabrum*), dotted smartweed (*Polygonum punctatum*), pickerelweed (*Pontederia cordata*), dock (*Rumex* sp.), knotroot foxtail (*Setaria parviflora*), cattail (*Typha* sp.) and paragrass (*Urochloa mutica*).

2.1.3.4 Other Surface Waters

Twenty-three (23) manmade ditches that support wetland vegetation but are not considered to be jurisdictional based on excavation within uplands are located along the corridor. These features have been labeled as OSW and include areas OSW 3N, OSW 5N, OSW 5S, OSW 6S, OSW 7S, and OSW 9S through OSW 20S. These features are associated with the stormwater management facilities currently in place to serve SR 60 and adjacent roadways. Water regimes generally consist of intermittent and seasonal flooding. All OSW identified within the existing ROW and acreage for each is provided in **Table 2-4.**

2.1.3.5 Additional Drainage Features

A variety of non-wetland, man-made swales and shallow ditches are located along the corridor. These features also tend to be associated with the stormwater management system currently in place to serve SR 60 and adjacent roadways. These drainage features are man-made conveyances constructed within upland soil mapping units and do not support a dominance of wetland vegetation. Water regimes generally consist of intermittent flooding. Dominant vegetation is turf grasses, and mowing of these areas is conducted on a routine basis.

Table 2-2: Total ROW Wetland Acreages

Wetland ID	FLUCFCS	Total ROW Acreage
Wetlands		
WL 2N	615	0.028
WL 2S	615	0.223
WL 4S	615	0.155
WL 7N	615	0.097
WL 7S	615	0.316
WL 8N	615	0.075
WL 8S	615	0.068
WL 9N	615	0.099
WL 18N	615	0.387
WL 18S	615	0.910
	Total	2.358

Table 2-3: ROW Total Surface Water Acreages

Wet ID	FLUCFCS	Total ROW Acreage
Jurisdictional Surface Waters		
SW 6S	641	0.078
SW 10N	641	0.024
SW 10S	641	0.282
SW 11N	641	0.035
SW 11S	641	0.073
SW 15N	641	0.154
SW 15S	641	0.174
SW 16S	641	0.039
	Total	0.859

Table 2-4: ROW Total Other Surface Water Acreages

Wet ID	FLUCFCS	Total ROW Acreage
Other Surface Waters		
OSW 1N	510	0.112
OSW 1S	510	0.404
OSW 3N	510	0.126
OSW 5N	510	0.262
OSW 5S	510	0.083
OSW 6S	510	0.011
OSW 7S	510	0.004
OSW 9S	510	0.043
OSW 10N	510	0.061
OSW 10S	510	0.248
OSW 11N	510	0.022
OSW 12S	510	0.076
OSW 13N	510	0.059
OSW 14N	510	0.006
OSW 14S	510	0.329
OSW 15N	510	0.332
OSW 15S	510	0.073
OSW 16S	510	0.248
OSW 17N	510	0.062
OSW 17S	510	0.444
OSW 18S	510	0.023
OSW 19S	510	0.033
OSW 20S	510	0.035
	Total	3.096

2.2 Soils

Review of the United States Department of Agriculture (USDA) NRCS soil survey for Hillsborough (HIL) County, Florida, Soil Survey Geographic (SSURGO), (SSURGO, 2013) identified 29 soil types within the project corridor. Dominant soil types identified along the corridor and their identification numbers include: Sefner fine sand (HIL #47), Fort Meade loamy fine sand (HIL #18), Candler fine sand, 0 to 5 percent slopes (HIL #7),

Taveres-Millhopper fine sand (HIL #53), and Quartzipsaments (HIL #43). According to the Florida Association of Environmental Soil Scientists' (FAESS) Hydric Soils of Florida Handbook (2007), the most common hydric soil types found within the project corridor include the following: Winder (HIL #60) , Felda fine sand (HIL #16), and St. John's fine sand (HIL #46). All of these state listed hydric soils are also federally listed with hydric classifications obtained from the NRCS website in March 2014.

Although a soil may be listed as hydric based on hydric soil criteria, nullifying factors include the inclusion of other non-hydric soil types, drainage activities and landscape position. Hydric soil identifications will be finalized during the permitting and design stage of this project.

The NRCS soils map for the project corridor is presented in **Figure 2-2**. Detailed descriptions of the dominant soil types follow.

Figure 2-2: NRCS Soils Overview Map, Page 1 of 2

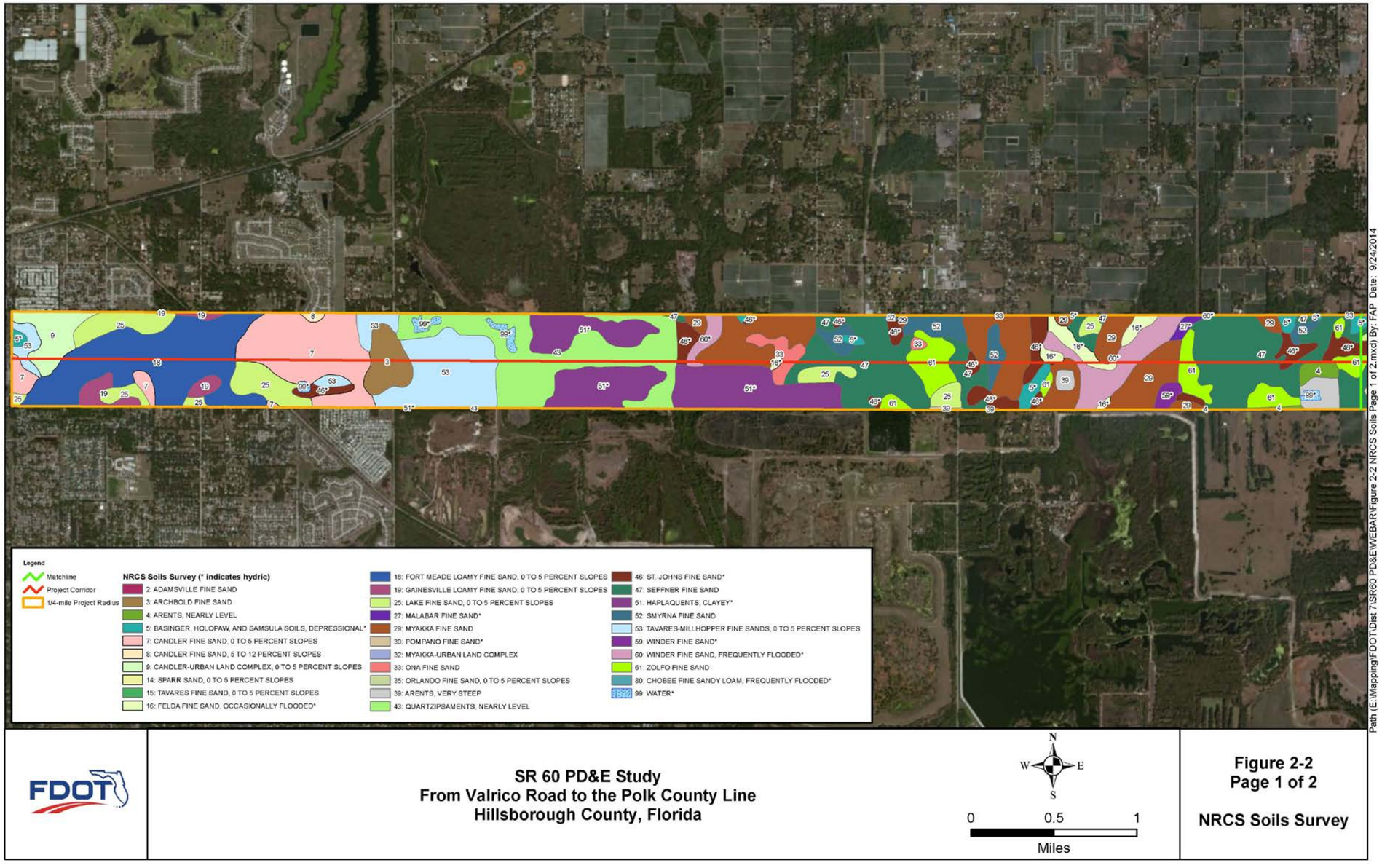
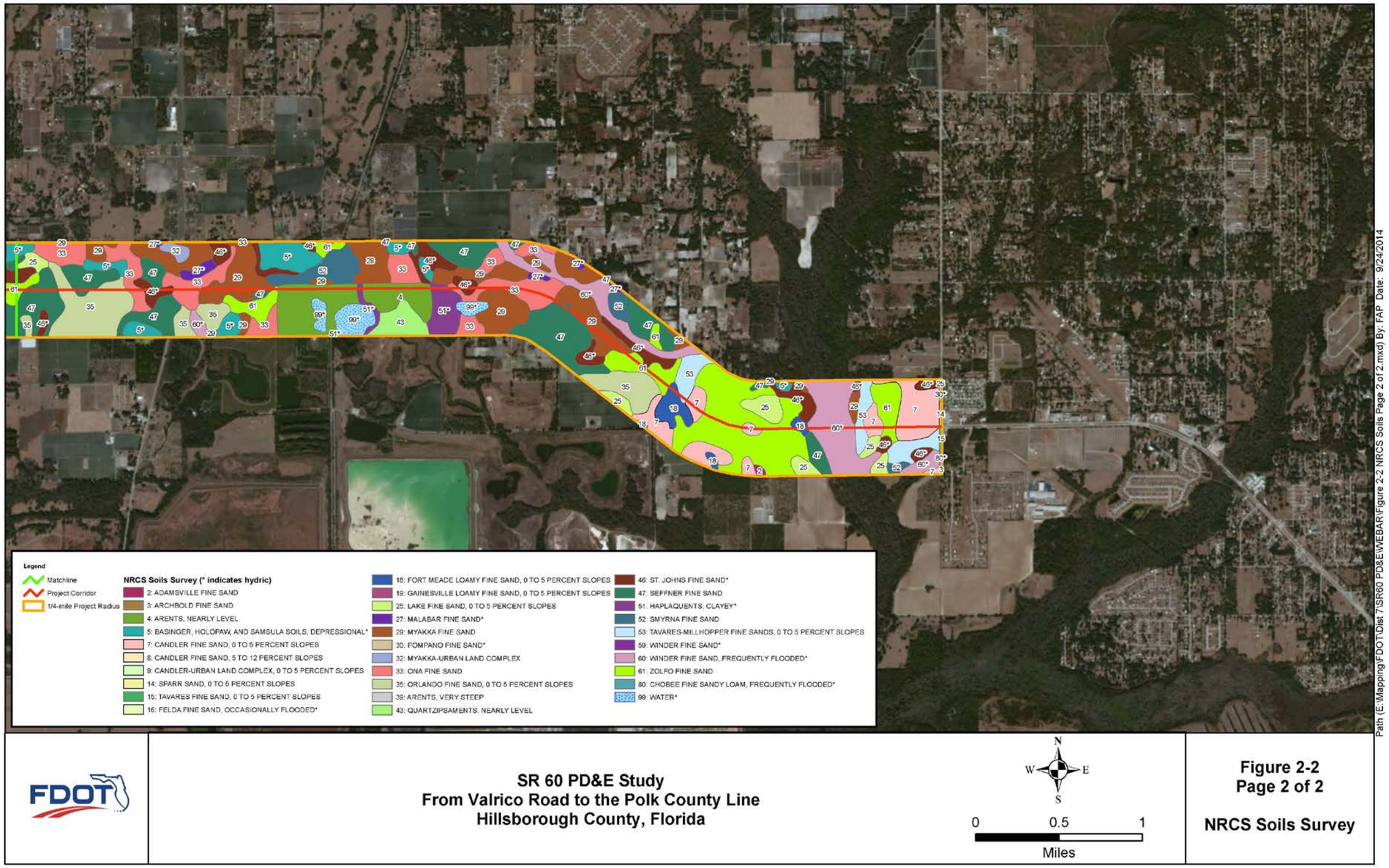


Figure 2-2: NRCS Soils Overview Map, Page 2 of 2



- **Seffner (HIL #47)** –This soil is nearly level and somewhat poorly drained. It is on the rims of depressions and on broad, low ridges on the flatwoods. Slopes range from 0 to 2 percent. The surface layer is very dark gray fine sand about 13 inches thick. In most years, under natural conditions, the water table is at a depth of 20 to 40 inches for 2 to 6 months and recedes to a depth of less than 60 inches during prolonged dry periods.

- **Fort Meade Loamy Fine Sand (HIL #18)** – This soil is nearly level to gently sloping and well drained. It is on the uplands. Slopes range from 0 to 5 percent. The surface layer is very dark gray loamy fine sand about 26 inches thick. In most years, under natural conditions, the water table is at a depth of more than 72 inches.

- **Candler Fine Sand, 0-5% Slopes (HIL #7) –** This soil is nearly level to gently sloping and excessively drained. It is on the uplands. Slopes range from 0 to 5 percent. The surface layer is dark gray fine sand about 6 inches thick. In most years, under natural conditions, the water table is at a depth of more than 80 inches.

- **Quartzipsamments, nearly level (HIL #43) –** This soil is nearly level and moderately well drained to excessively drained. They formed in accumulations of sand from phosphate mining operations. Quartzipsamments generally are confined to areas in specially constructed basins. Sand, a by- product of phosphate mining operations, has been pumped into these basins and allowed to dry. These soils have a variable water table that is dependent upon the water table of the surrounding soils. in most gently sloping and well drained. It is on the uplands. Slopes range from 0 to 5 percent. The surface layer is very dark gray loamy fine sand about 26 inches thick. In most years, under natural conditions, the water table is at a depth of more than 72 inches.

2.3 Significant Waters & Protection Areas

2.3.1 Outstanding Florida Waters (OFWs)

No waterways classified as Outstanding Florida Waters occur within the project corridor.

2.3.2 Protection Areas

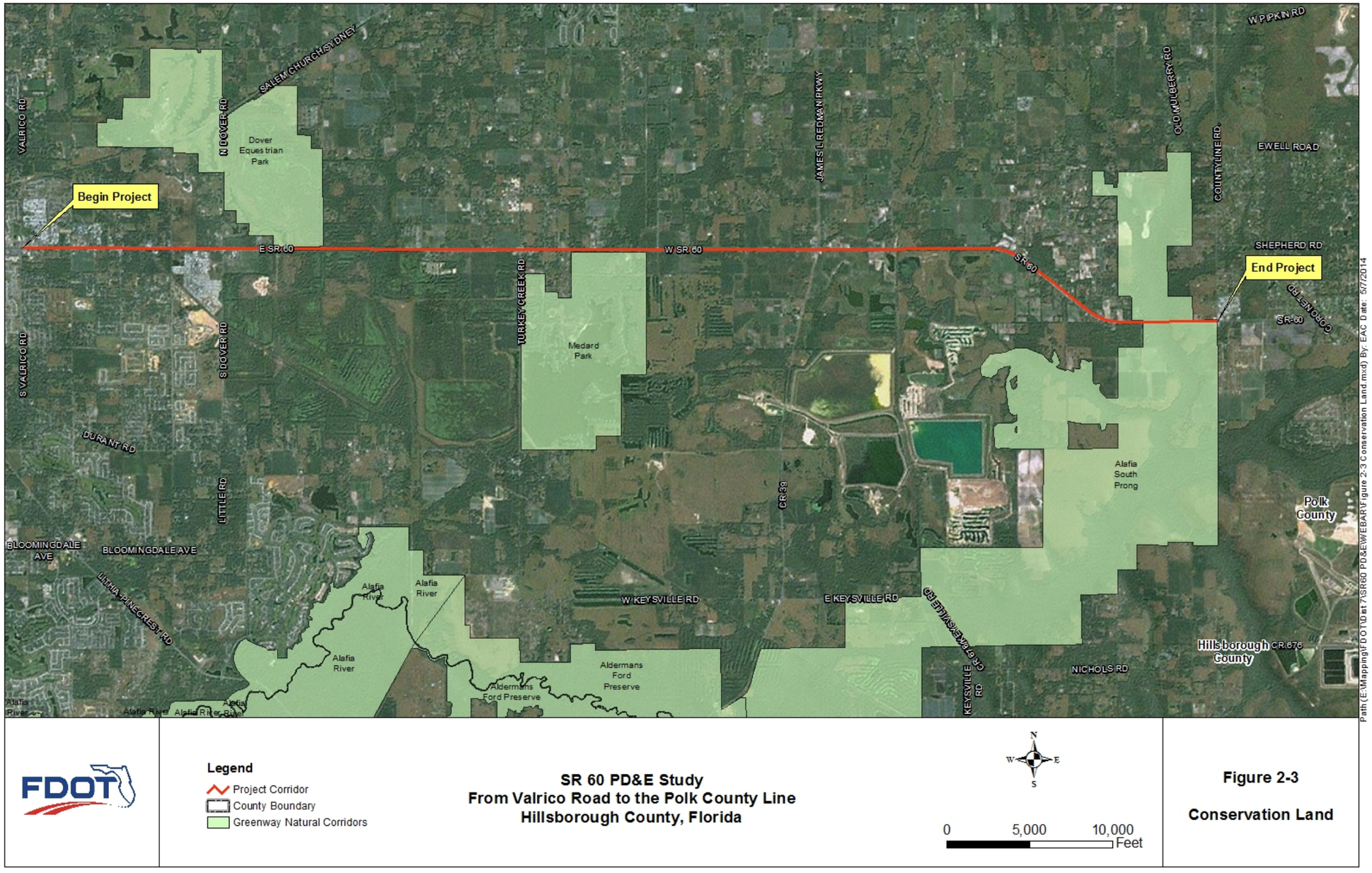
Three areas designated by Hillsborough County as Greenway Natural Corridors are adjacent to the project corridor (**Figure 2-3**).

The Dover Equestrian Park is a 1,480 acre park owned and managed by Hillsborough County and located adjacent to and north of SR 60 along either side of Dover Road. Land use in the park is dominated by extractive lands (FLUCFCS 160) to the east of Dover Road and open land (FLUCFCS 190) and hardwood conifer mixed forest (FLUCFCS 434) to the west of Dover Road. The park contains numerous equestrian trails for recreational horseback riding.

Medard Park (FLUCFCS 165, reclaimed land) is located in the central portion of the project corridor just east of Turkey Creek Road. It is a popular formerly mined recreational area also owned and managed by Hillsborough County. The park is 1,357 acres in size with a 700 acre reservoir as its main attraction. The park provides equestrian trails, camping, boating and fishing opportunities.

The South Prong of the Alafia River Watershed is along the eastern edge of the project area, along the east side of County Line Road. The South Prong is part of the 418 square mile Alafia River Watershed basin of which, 260 square miles are in Hillsborough County. The South Prong is roughly 16 square miles in size and is dominated by wetland forested, mixed (FLUCFCS 630), crop and pasture lands (FLUCFCS 210) and pine flatwoods (FLUCFCS 411) in the vicinity of the project corridor.

Figure 2-3: Conservation Land



Section 3 - WETLAND IMPACTS

3.1 Design Alternatives

Total acreage for wetlands and jurisdictional surface waters within the ROW is 3.217 (2.358 and 0.859, respectively), and total acreage for other surface waters is 3.096. All of the improvements to the SR 60 corridor are proposed to occur within the existing ROW and will impact wetlands and surface waters.

The New Construction Alternative will result in a total of 2.116 acres of impact to wetlands; 0.859 acres of impact to jurisdictional surface waters; and 2.915 acres of impact to other surface waters (**Tables 3-1, 3-2**, and **3-3)**. The Pavement Saving Alternative is the preferred alternative and will impact 2.208 acres of wetlands; 0.859 acres of jurisdictional surface waters, and 2.772 acres of other surface waters (**Tables 3-4, 3-5, and 3-6)**. The surface waters proposed for impact generally consist of roadside ditches that are of limited habitat value and support moderate to high coverage of nuisance and exotic species. The affected creek crossings have been moderately impacted by past activities, and the impact areas consist of the outer fringes that have been previously affected by roadway and bridge construction.

Conceptual design plans for the project are provided in **Appendix D**. Compensatory mitigation will be proposed for all wetland impacts during the permitting phase for this project.

Table 3-1: Reconstruction Alternative Wetland Impacts

Wetland ID	Side	Impacted Area (AC)
WL 2N	LT	0.010
WL 4S	RT	0.155
WL 7N	LT	0.097
WL 7S	RT	0.316
WL 8N	LT	0.075
WL 8S	RT	0.068
WL 9N	LT	0.099
WL 18N	LT	0.387
WL 18S	RT/MID	0.909
	TOTAL (AC)	**2.116**

Table 3-2: SR 60 Jurisdictional Surface Waters Impacts

Reconstruction		
ID	**Side**	**Impacted Area (AC)**
SW 6S	RT	0.078
SW 10N	LT	0.024
SW 10S	RT	0.282
SW 11N	LT	0.035
SW 11S	RT	0.073
SW 15S	RT	0.174
SW 15N	LT	0.154
SW 16S	RT	0.039
TOTAL (AC)		**0.859**

Table 3-3: SR 60 Other Surface Waters (OSW) Impacts

Reconstruction		
ID	**Side**	**Impacted Area (AC)**
OSW 1S	RT	0.242
OSW 1N	LT	0.100
OSW 3N	LT	0.119
OSW 5N	LT	0.262
OSW 5S	RT	0.083
OSW 6S	RT	0.011
OSW 7S	RT	0.004
OSW 9S	RT	0.043
OSW 10S	RT	0.248
OSW 10N	LT	0.061
OSW 11N	LT	0.022
OSW 12S	RT	0.076
OSW 13N	LT	0.059
OSW 14S	RT	0.329
OSW 14N	LT	0.006
OSW 15S	RT	0.073
OSW 15N	LT	0.332
OSW 16S	RT	0.248
OSW 17S	RT	0.444
OSW 17N	LT	0.062
OSW 18S	RT	0.023
OSW 19S	RT	0.033
OSW 20S	RT	0.035
	TOTAL (AC)	**2.915**

Table 3-4: Pavement Saving Preferred Alternative Wetland Impacts

Wetland ID	Side	Impacted Area (AC)
WL 2N	LT	0.010
WL 4S	RT	0.155
WL 7N	LT	0.097
WL 7S	RT	0.316
WL 8N	LT	0.167
WL 8S	RT	0.068
WL 9N	LT	0.099
WL 18N	LT	0.387
WL 18S	RT/MID	0.909
	TOTAL (AC)	**2.208**

Table 3-5: Preferred Pavement Saving Alternative

ID	Side	Impacted Area (AC)
SW 6S	RT	0.078
SW 10N	LT	0.024
SW 10S	RT	0.282
SW 11N	LT	0.035
SW 11S	RT	0.073
SW 15S	RT	0.174
SW 15N	LT	0.154
SW 16S	RT	0.039
	TOTAL (AC)	**0.859**

Table 3-6: Preferred Pavement Saving Alternative Other Surface Waters Impacts

ID	Side	Impacted Area (AC)
OSW 1S	RT	0.099
OSW 1N	LT	0.100
OSW 3N	LT	0.119
OSW 5N	LT	0.262
OSW 5S	RT	0.083
OSW 6S	RT	0.011
OSW 7S	RT	0.004
OSW 9S	RT	0.043
OSW 10S	RT	0.248
OSW 10N	LT	0.061
OSW 11N	LT	0.022
OSW 12S	RT	0.076
OSW 13N	LT	0.059
OSW 14S	RT	0.329
OSW 14N	LT	0.006
OSW 15S	RT	0.073
OSW 15N	LT	0.332
OSW 16S	RT	0.248
OSW 17S	RT	0.444
OSW 17N	LT	0.062
OSW 18S	RT	0.023
OSW 19S	RT	0.033
OSW 20S	RT	0.035
	TOTAL (AC)	**2.772**

3.2 Results of UMAM Analysis

Uniform Mitigation Assessment Method (UMAM) analyses were conducted to evaluate wetland function and values for representative wetlands for each type of wetland that may be affected by the project. UMAM values range from 0 to 1, with a value of 0 reflecting the lowest quality wetland and a value of 1 representing the highest quality wetland. The scores for wetlands that may be impacted by the project range from 0.2 for the herbaceous wetlands that occur as roadside ditches, to 0.5 for forested stream crossings. The Functional Losses (FL) that would result from the proposed impacts range from 0.45 for the roadside ditches to 1.04 for the forested edges. See **Appendix E** for UMAM sheets.

3.3 Wetland Impact Mitigation

Project constraints and ROW limits provide no practicable alternatives that would result in complete avoidance of impacts to wetlands. Whenever possible, permanent impacts will be limited to the smallest degree possible through design modification. Temporary impacts to wetlands will be conducted utilizing Best Management Practices (BMP) and/or FDOT's "*Standard Specifications for Road and Bridge Construction*".

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

Several other options for mitigation of wetland impacts exist for FDOT and include public or private mitigation banks and wetland creation, restoration, and / or preservation within the project watersheds, which include the Hillsborough River and Alafia River watersheds. Mitigation options will be investigated further during the final design phase of the project.

3.4 Coordination with the Permitting Agencies

This project was recently evaluated through the FDOT's ETDM process (ETDM project #4131). An ETDM *Programming Screen Summary Report* was published on June, 2012,

containing comments from the ETAT on the project's effects on various natural, physical and social resources. Relevant sections of this report are included in Appendix F.

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

- United States Army Corps of Engineers (USACE) – Section 404 Wetland Dredge and Fill Permit
- United States Fish and Wildlife Service (USFWS) – ESA Section 7 Coordination for impacts to wood stork SFH
- SWFWMD – Environmental Resource Permit (ERP)
- (Florida Department of Environmental Protection (FDEP) - National Pollutant Discharge Elimination System (NPDES) Permit.
- Florida Fish and Wildlife Conservation Commission (FWC) – Gopher Tortoise Relocation Permit

Section 4 - PROTECTED SPECIES & HABITAT

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

4.1 Methodology

Literature reviews, agency data base searches, and preliminary field reviews of potential habitat areas were conducted to identify state and federally protected species occurring or potentially occurring within the project area. The Hillsborough County Soil Survey and recent aerial photographs (2011) were reviewed to determine habitat types occurring within and adjacent to the project corridor. Information sources and databases utilized include the following:

- USFWS Databases

- Florida Natural Areas Inventory (FNAI)
- FWC Databases
- Hillsborough County Soil Survey
- FWC - Eagle Nest Locator for Hillsborough County (2012-2013 nesting season data) (1 mile radius)
- FWC - Waterbird Colony Locator (1999) (1 mile radius)
- FWC - Strategic Habitat Conservation Areas (SHCA) (1994) (10 mile radius)
- USFWS - Critical Habitat for Threatened and Endangered Species
- USFWS - Wood Stork Rookeries Core Foraging Area (CFA) (15.0 mile radius)

Figure 4-1 provides results of field observations as well as historic species occurrence results from the database searches, based on a 1-mile radius from the project corridor. **Figure 4-2** depicts wood stork colonies documented within 15 miles of the corridor, which represents the CFA for this species in Hillsborough County.

Based on the results of database searches, preliminary field reviews and review of aerial photographs and soil surveys, field survey methods for specific habitat types and lists of target species were developed. Additionally, environmental concerns expressed by the ETAT members in the ETDM Programming Screen Summary Report were considered when identifying target species and survey methods. Field reviews consisted of vehicular surveys, roadside observations and detailed pedestrian surveys through natural areas and altered habitats with the potential to support protected species. In the absence of physical evidence of a protected species, evaluation of the appropriate habitat was conducted to determine the likelihood of a species being present. Species specific surveys for protected plants, including the golden aster (*Chrysopsis floridana***),** were not conducted due to lack of suitable habitat, however, general surveys did occur in all remaining native upland habitats. Surveys were performed on January 10 and 22, 2013, February 1, 2013, June 7, 2013, and April 17, 2014. Surveys took place within the existing ROW of SR 60, with visual observations conducted on adjacent lands. Any observations of protected species or indicators of their presence (i.e., vocalizations, tracks, scat, burrows, etc.) within or immediately adjacent to the study area were documented. Observed protected species occurrences are depicted on **Figure 4-1**.

Figure 4-1: Historic Listed Species

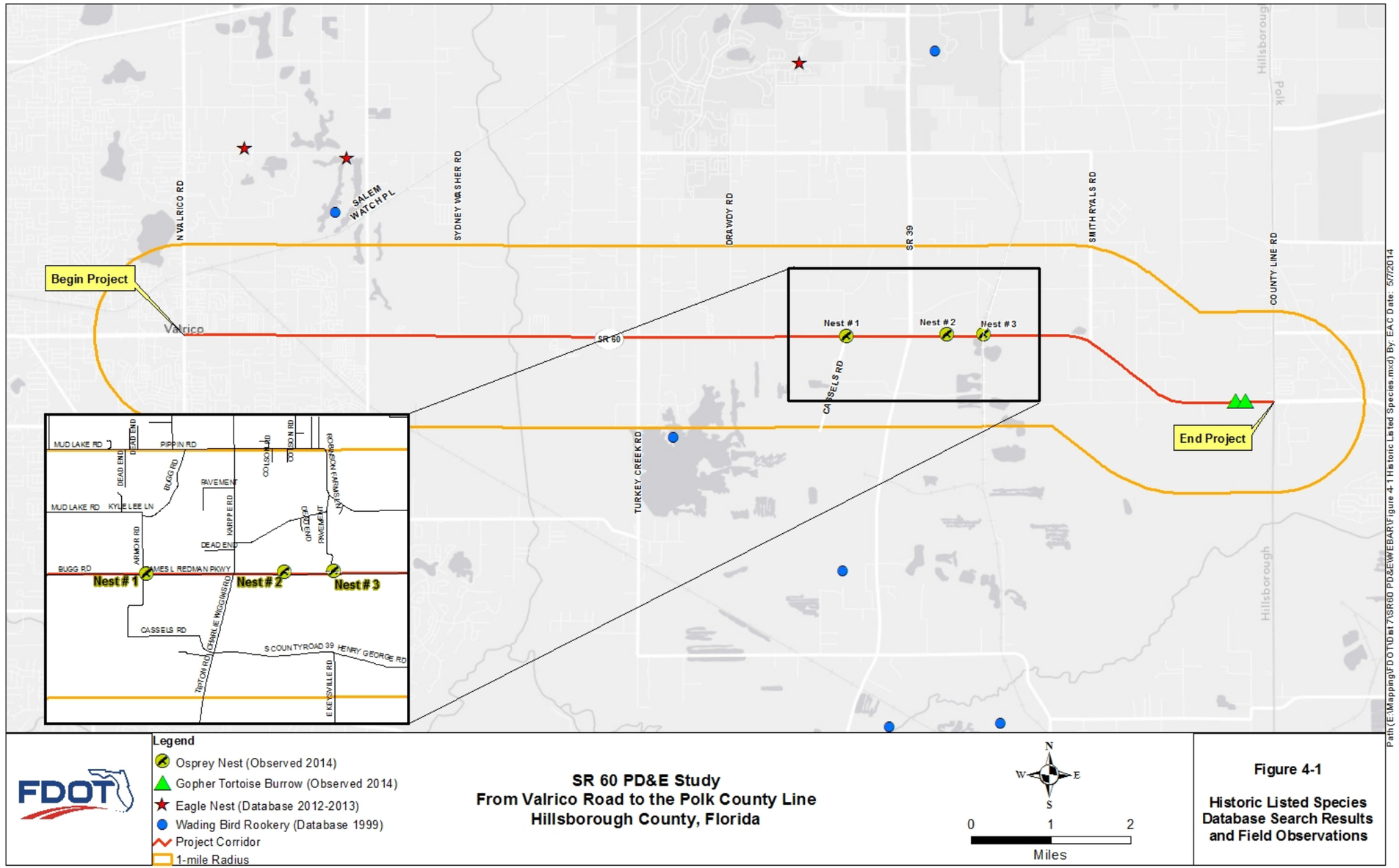
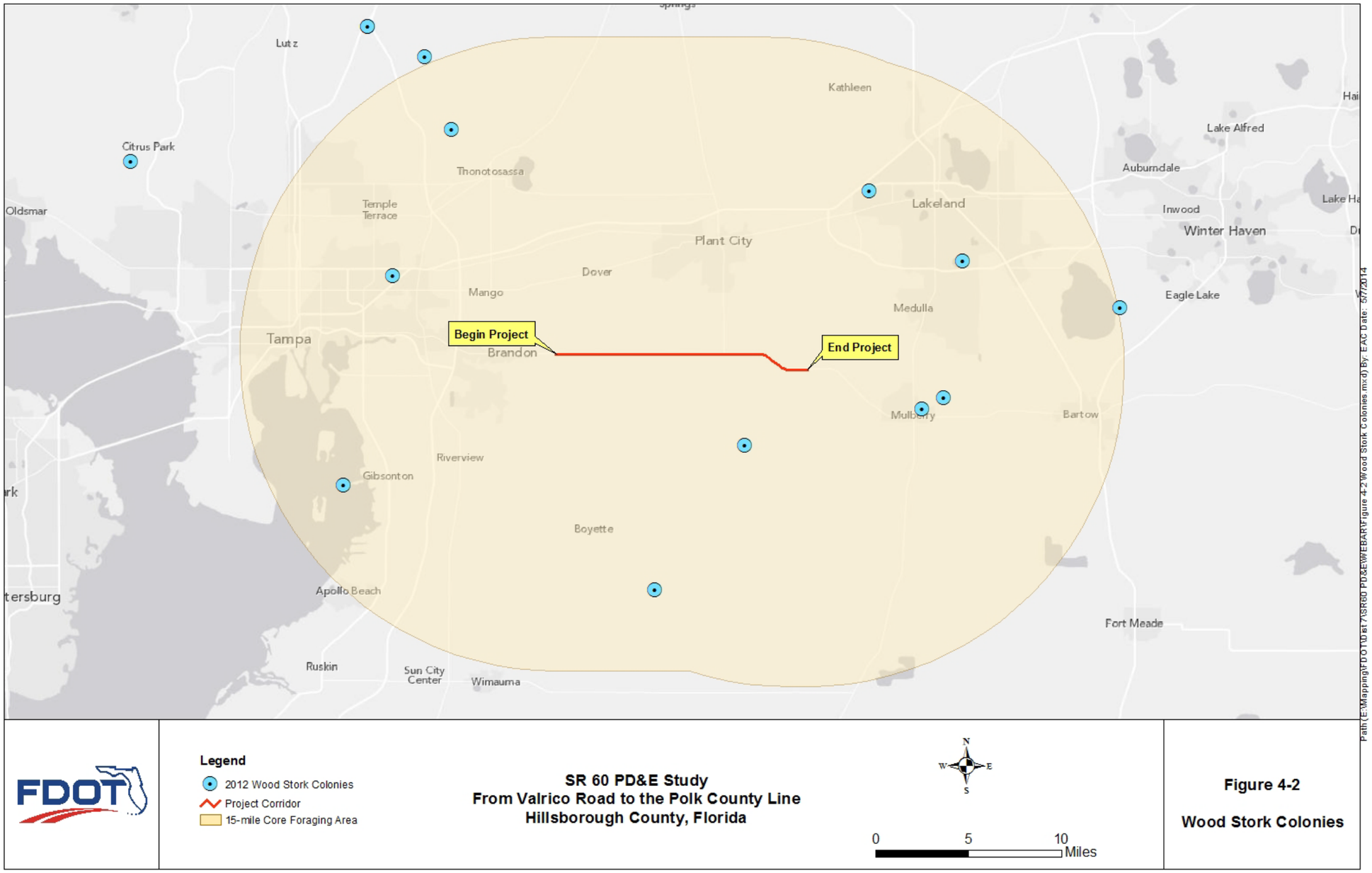


Figure 4-2: Wood Stork Rookeries



Based on the above methods, a list of potentially occurring protected species was developed, and each species was assigned a low, moderate or high likelihood for occurrence within habitats found on the project corridor. If a species or species indicator was observed during field reviews it is identified as present. **Table 4-1** lists the federal and state protected wildlife species with the potential to occur within the project corridor, based on potential availability of suitable habitat and known ranges. **Table 4-2** provides the same information for federal and state protected plant species. Definitions for likelihood of occurrence are provided below:

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

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

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

Table 4-1: Potentially Occurring Listed Wildlife Species

SPECIES	COMMON NAME	FFWCC[1]	USFWS[2]	HABITAT[3]	PROBABILITY OF PRESENCE OR OCCURRENCE[4]
AMPHIBIANS					
Rana capito	Gopher (crayfish) frog	SSC (1,2)	X	Associated w/ gopher tortoise burrows, high-dry sandy areas	Low
REPTILES					
Alligator mississippiensis	American alligator	SSC (1,3)	T (S/A)	Tidal marsh, tidal swamp, lacustrine (lakes, ponds), palustrine, riverine	High
Drymarchon corais couperi	Eastern indigo snake	T	T	Hydric hammock, palustrine, sandhill, scrub, upland pine forest, mangrove swamp	Low
Gopherus polyephemus	Gopher tortoise	T	T(1)	Old field, sandhill, scrub, xeric hammock, ruderal, dry prairie, pine flatwood	Present
Pituophis melanoleucus mugitus	Florida pine snake	SSC (2)	X	Sandhill, scrubby flatwoods, xeric hammock, pine flatwoods, ruderal	Low
Pseudemys concinna suwanniensis	Suwannee cooter	SSC (1,2)	X	Alluvial stream, blackwater stream, spring fed stream	High
BIRDS					
Platalea ajaja *(=Ajaia ajaja)*	Roseate spoonbill	T	X	Coastal marsh, tidal ponds, sloughs, fresh water marsh, mudflats, tidal swamps	Moderate
Aramus guarauna	Limpkin	SSC (1)	X	Floodplain swamp, floodplain marsh, rivers, streams, sloughs, lakes	Low
Egretta caerulea	Little blue heron	SSC (1,4)	X	Estuarine, lacustrine, riverine, tidal marsh, tidal swamp	Present
Egretta thula	Snowy egret	SSC (1)	X	Estuarine, lacustrine, riverine, tidal marsh, tidal swamp	High
Egretta tricolor	Tricolored (=Louisiana) heron	SSC (1,4)	X	Estuarine, lacustrine, riverine, tidal marsh, tidal swamp	High
Eudocimus albus	White ibis	SSC (2)	X	Estuarine, lacustrine, riverine, tidal marsh, tidal swamp	Present
Falco sparverius paulus	Southeastern American kestrel	T	X	Sandhill, mesic flatwoods, ruderal, dry prairie	Moderate
Grus canadensis pratensis	Florida sandhill crane	T	X	Basin marsh, depression marsh, dry prairie, marl prairie, pastures	High
Haliaeetus leucocephalus	Bald eagle		(2)	Estuarine, lacustrine, riverine, tidal marsh, tidal swamp	Present
Mycteria americana	Wood stork	E	E	Estuarine tidal swamps/marshes, lacustrine, seepage stream, ditches, ruderal	High
Pandion haliaetus	Osprey	SSC(5)	X	Open Water; areas of cypress, mangrove, pine and swamp hardwoods for nesting	Present
Athene cunicularia *(=Speotyto cunicularia)*	Burrowing owl	SSC (1)	X	Dry prairie, sandhill, pastures, golf courses, ruderal, athletic fields	Low
MAMMALS					
Blarina carolinensis shermani	Sherman's short-tailed shrew	SSC (2)	X	Hydric hammock, prairie hammock, ruderal, moist forests	Low
Sciurus niger shermani	Sherman's fox squirrel	SSC (1.2)	X	Sandhill, scrub, scrubby flatwoods, upland hammock,	Low
Ursus americanus floridanus	Florida black bear	T[3]	X	Palustrine, terrestrial, pine flatwoods, sand pine scrub, cypress swamps	Low

1. USFWS - U.S. Fish and Wildlife Service status, Official lists of Threatened and Endangered species, 50 CFR 17.11 updated on 6/3/2014.
Accessed through Legal Information Institute. http://www.law.cornell.edu/cfr/text/50/17.11
[ranking: E - endangered, T - threatened] [X - not present on Federal lists]
USFWS Notations:
(1) The Gopher Tortoise is afforded Federal protection where ever found west of
Mobile and Tombigbedd Rivers in AL, MS, LA.
(2) The Bald Eagle is afforded federal protection through the Migratory Bird
Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA).
FFWCC Notations:
(1) Has a significant vulnerability to habitat modification, environmental alteration, human disturbance, or human exploitation which, in the foreseeable future, may result in its becoming a threatened species unless appropriate protective or management techniques are initiated or maintained;
(2) May already meet certain criteria for designation as a threatened species but for which conclusive data are limited or lacking;
(3) May occupy such an unusually vital or essential ecological niche that should it decline significantly in numbers or distribution other species would be adversely affected to a significant degree;
(4) Has not sufficiently recovered from past population depletion, and
(5) The Osprey is afforded status in Florida as a State Species of Special Concern (only in Monroe County) (FFWCC)

3. Habitats described by:
Hall, D and Newman, C. 1998. TESS 2.0: Threatened and Endangered Species Software, Professional Version. Envirotools, Inc. Gainesville, Fl.
Moler, P.E. 1992. Rare and endangered biota of Florida. University Press of Florida. Gainesville, Fl.
4. Likelihood of occurrence: Low, Moderate, or High based on best available data and selective field observations.
1. USFWS - U.S. Fish and Wildlife Service status, Official lists of Threatened and Endangered species, 50 CFR 17.11 updated on 6/3/2014
2. .
Accessed through Legal Information Institute. http://www.law.cornell.edu/cfr/text/50/17.11
[ranking: E - endangered, T - threatened] [X - not present on Federal lists
FFWCC Notations:
(1) The Gopher Tortoise is afforded Federal protection whereever found west of
Mobile and Tombigbedd Rivers in AL, MS, LA.
(2) The Bald Eagle is afforded federal protection through the Migratory Bird
Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA).

Table 4-2: Potentially Occurring & Observed Listed Plant Species

SPECIES	COMMON NAME	FDACS-DPI	FWS	HILLSBOROUGH COUNTY	HABITAT	PROBABILITY OF PRESENCE OR OCCURRENCE[4]
Andropogon arctatus	pine-woods bluestem	T		T	dry to wet flatwoods and sand pine scrub.	Low
Asclepias curtissii	Curtis's milkweed	E		E	dry hammocks, scrub, flatwoods	Low
Campanula robinsiae	Brooksville bellflower	E	E		Seepage areas on slopes and pond margins.	Low
Carex champmanii	Chapman's sedge	T			hammocks, woodlands	Low
Centrosema arenicola	sand butterfly-pea	E		E	mixed woodlands, pine thickets	Moderate
Chrysopsis floridana	golden aster	E	E	E	sand pine, oak scrub, disturbed scrub edges	Low
Coelorachis tuberculosa	piedmont joint grass	T			marshes, pond margins	Moderate
Eulophia ecristata	giant orchid			T	sandhills, pinelands, and oak hammocks.	Low
Glandularia tampensis	Tampa vervain			E	remnants of live oak (*Q. virginiana*), grassy openings	Low
Lechea divaricata	spreading pinweed			E	flatwoods.	Moderate
Listeria australis	Catesby lily	T			low moist woods, stream banks	Moderate
Lobelia cardinalis	cardinal flower	T			riverbanks, moist hammocks	Low
Lycopodium cernuum	nodding club-moss	CE			wet depressions, ditches	Moderate
Ophioglossum palmatum	hand fern	E		E	hammocks and cypress swamps; epiphytic, usually on *Sabal palmetto*.	Moderate
Osmunda cinnamomea	cinnamon fern	CE			swamps, wetlands	High
Osmunda regalis	royal fern	CE			swamps, wetlands	High
Pinguicula caerulea	blue-flowered butterwort	T			flatwoods, ditches, roadsides	High
Pinguicula lutea	yellow-flowered butterwort	T			flatwoods, seepage bogs, ditches, roadsides	High
Platanthera blephariglottis	white-fringed orchid	T			marshes, meadows, bogs	Low
Platanthera ciliaris	yellow-fringed orchid	T			bogs, marshes, flatwoods, savannas	Low
Platanthera cristata	crested fringed orchid	T			bogs, meadows, flatwoods, savannas	Low
Platanthera flava	gypsy-spikes	T			mud flats, floodplain swamps, meadows	Low
Platanthera nivea	snowy orchid	T			bogs, flatwoods, savannas	Low
Pogonia ophioglossoides	rose pogonia	T			bogs, meadows, flatwoods, savannas	Low
Rhynchospora megaplumosa	large-plumed beaksedge	E			scrubby flatwoods.	Moderate
Sarracenia minor	hooded pitcher-plant	T			flatwoods, bogs, ditches	Low
Schwalbea americana	chaff-seed		E	E	open hammocks and flatwoods.	Low
Thelypteris serrata	toothed maiden fern	E			cypress swamps, occassionally epiphytic.	Moderate
Spiranthes laciniata	lace-lip ladies' tresses	T			lake shores, flatwoods, marshes	Moderate
Spiranthes longilabris	long-lip ladies' tresses	T			prairies, flatwoods, marshes	Moderate
Spiranthes tuberosa	little pearl-twist	T			flatwoods	Low
Stenorrhynchus lanceolatus	beaked orchid	T			pastures, wet flatwoods, sandhill	Moderate
Tillandsia utriculata	giant wild-pine	E			on trees in hammocks, cypress swamps, pinelands	Low
Verbena tampensis	Tampa vervain	E		E	clearings in moist hammocks.	Low
Zephyranthes simpsonii	Simpson's zephyr-lily	T		E	wet pinelands and pastures, wet roadsides	Moderate
Zephyranthes treatiae	Treat's zephyr-lily	T			flatwoods, roadsides	Moderate

1. FNAI - Florida Natural Areas Inventory; Matrix of habitats and distribution by county of rare/endangered species in Florida, published April, 1990
2. FDACS. Notes on Florida's Endangered and Threatened Plants. 2010. Patti J Anderson and Richard E Weaver.
4. FWS Species Reports, Listings and Occurrances for Florida http://ecos.fws.gov/tess_public/pub/stateListingAndOccurrenceIndividual.jsp?state=FL
5. FWS Endangered Species Search http://ecos.fws.gov/tess_public/countySearch!speciesByCountyReport.action?fips=12057
6. Habitats described by: Hansen, B.F. and Wunderlin, R.P. 2003. Guide to the vascular plants of Florida. University Press of Florida. Gainesville. 787 pp.
7. Hillsborough County listed species http://www.hillsboroughcounty.org/DocumentCenter/Home/View/2288

4.2 Survey Results

Land use along the corridor varies from suburban and commercial development on the western portion to a mix of primarily rural and agricultural lands on the eastern end. Agricultural lands provide habitat to many wildlife and plant species, some of which are protected, while the more developed areas provide limited habitat value. Subsequently, wildlife observations were limited to the eastern portion of the project.

Gopher tortoises, a state listed species, and their burrows were observed near the eastern project terminus. One non-listed federally protected species, the osprey was also observed. Several active osprey nests were observed on utility pole platforms, also near the eastern project terminus (**Figure 4-1**). No state or federally listed plant species were observed. Descriptions are provided below for those species which have been observed along the project corridor or have high potential to occur within habitats identified on the corridor.

4.3 Federally Protected Species

Federally protected wildlife species which have been identified as having a high probability for occurrence in the vicinity of the corridor includes the wood stork (*Mycteria americana*), American alligator (*Alligator mississippiensis*), and Eastern indigo snake (*Drymarchon corais couperi*). No federally listed plant species were observed or are documented for the corridor.

4.3.1 Wood Stork

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

No wood storks or rookeries were observed during field surveys conducted on January 10 and 22, 2013, February 1, 2013, June 7, 2013, and April 17, 2014. The project falls within the core foraging area (CFA) of nine wood stork rookeries (**Figure 4-2**). Suitable

Foraging Habitat (SFH) is provided by many of the roadside ditches along the corridor. As defined by the USFWS, SFH includes wetlands and surface waters which have areas of water that are relatively calm, uncluttered by dense thickets of aquatic vegetation, and have permanent or seasonal water depth between 2 and 15 inches. SFH within the project corridor will be re-evaluated during final permitting of the project as vegetative structure of wetlands will change over time and as a result of surface water management systems maintenance activities.

Detailed calculations of SFH biomass may be required during future permitting phases of the project if significant foraging habitat is permanently lost (currently > 0.5 acres) and the USFWS continues to utilize these calculations to determine mitigation. Unavoidable wetland impacts will be mitigated as appropriate. Impacts to other surface water features will be compensated for in the future design of the stormwater management system. As such, when applying the project specifics to the September 2008 Effect Determination Key for the Wood Stork in Central and North Peninsular Florida, indications are that the project may affect, but is not likely to adversely affect the wood stork.

4.3.2 American Alligator

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

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

Compensatory mitigation will be provided for all jurisdictional wetland and surface water impacts. Additionally, this species is common in local habitats and long term viability of this species is not anticipated to be affected. The USFWS does not consult or make determinations of affect for this species due to its commonality, and listing is maintained primarily for law enforcement purposes. Due to these factors, this project will have no effect on the American alligator.

4.3.3 Eastern Indigo Snake

Eastern indigo snakes are large, black, non-venomous snakes which are distributed throughout the southeastern United States. The Eastern indigo snake occurs in a wide variety of habitats, including forested uplands and wetlands as well as wet and dry prairies. This species feeds on snakes, frogs, salamanders, toads, small mammals, birds and young turtles. Eastern indigo snakes are listed as threatened by both the USFWS and FWC.

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

To assure the protection of this species during construction, when it is most likely to be affected, the FDOT will require that the Standard Construction Precautions for the Eastern Indigo Snake be implemented (**Appendix A)**. As such, when applying the project specifics to the August 13, 2013, updated addendum to the **Eastern Indigo Snake Programmatic Effect Determination Key**, indications are that the project may affect, but is not likely to adversely affect the Eastern indigo snake.

4.4 State Protected Species

State listed wildlife species which have been identified as having a high probability for occurrence in the vicinity of the corridor includes gopher tortoise (*Gopherus polyephemus*) and several species of wetland dependent birds. No state listed plant species were observed or recorded in the project area.

4.4.1 Gopher Tortoise

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

The gopher tortoise is listed by the FWC as threatened, and is currently a candidate for listing by the USFWS. Two active and one inactive gopher tortoise burrows are located within the project ROW near the eastern terminus (**Figure 4-1)**. An adult tortoise was observed at the mouth of one of these burrows during field surveys, and several additional burrows were observed to the north of the ROW, beyond the fence line. The mowed slope within the ROW appears to be utilized for grazing by tortoises in this area.

Comprehensive surveys for tortoises and their burrows will be conducted during the final design phase of the project. Per FWC requirements, gopher tortoise burrows located within 25 feet of proposed impact areas must be excavated and tortoises relocated to an approved recipient site. Commensal species that may utilize the burrows, such as the gopher frog (*Rana capito*) and Florida mouse (*Podomys floridanus*) will also be relocated if encountered.

Because of the small number of potentially affected burrows, and the FWC rules that require the relocation of this species, the project may affect, but is not likely to adversely affect the gopher tortoise.

4.4.2 Wetland Dependent Avian Species

This category includes state listed wetland dependent avian species that have a potential to occur on the project corridor. This includes: Florida sandhill crane, little blue heron (*Egretta caerulea*), roseate spoonbill (*Ajaia ajaia*), snowy egret (*Egretta thula*), tricolored heron (*Egretta tricolor*), and white ibis (*Eudocimus* albus). Florida sandhill crane is listed as threatened by the FWC; the remaining species are listed as species of special concern by the FWC.

No wetland dependent bird species were observed during field surveys conducted during the nesting season, however a mixed wading bird rookery identified in the Florida Atlas of Breeding Sites for Herons and their Allies (Atlas #615104) was documented within one mile of the project corridor within Medard Park (**Figure 4-1**). The colony was active on May 6, 1999, located in closed canopy, and consisted of 90% cattle egrets (*Bubulcus ibis*), 10% double-crested cormorants (*Phalacrocorax auritus*), and 1% great egrets (*Ardea alba*). None of these species are listed by FWC. No rookeries for these or other species were observed during field surveys.

Wetlands and surface waters that provide foraging potential for the wetland dependent avian species include ditches/swales, ponds, and riverine systems. Unavoidable wetland impacts will be mitigated as appropriate. Impacts to other surface water features will likely be compensated for in the future design of the stormwater management system. The project therefore may affect, but is not likely to adversely affect these wetland dependent avian species.

4.5 Protected, Non-Listed Species

4.5.1 Osprey

Ospreys are afforded protection under the Migratory Bird Treaty Act (MBTA) (16 U.S.C.703-712) and state protected by Chapter 68A of the Florida Administrative Code (F.A.C.). Ospreys require nest sites in open surroundings for easy approach that are safe from ground predators, such as raccoon. They readily build nests on manmade structures, such as telephone poles and nest platforms designed especially for these birds.

Two active osprey (*Pandion haliaetus*) nests were observed on platforms on utility poles and one active osprey nest was observed on a cell phone tower, all immediately adjacent to the ROW (**Figure 4-1**). Although both active and inactive osprey nests are federally protected, only active nests require Federal permits for taking. Under state rules only inactive osprey nests may be taken, as determined by the absence of eggs or flightless young at the nest. Typically a replacement nesting structure located in the immediate vicinity is required to be erected.

Surveys to update locations of active osprey nest sites will be conducted during the permitting phase of the project, and permits will be acquired if impacts during construction are unavoidable. Avoidance and nest structure replacement will take place such that the project may affect, but is not likely to adversely affect the osprey.

4.5.2 Bald Eagle

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

The most recent FWC data show three bald eagle nests in the vicinity, however, none are located within one mile of the project corridor (**Figure 4-1**). The project is anticipated to have no effect on the bald eagle.

4.6 Critical Habitat

The project corridor was assessed for Critical Habitat (CH) designated by Congress in 17 CFR 35.1532. Review of the USFWS's available GIS data for CH resulted in the identification of no Critical Habitats.

Section 5 - CONCLUSIONS & COMMITMENTS

5.1 Wetlands

Alternatives for the SR 60 Corridor from Valrico Road to the Polk County Line provide for widening to occur within the current ROW limits along SR 60. Wetlands and surface waters determined as jurisdictional by the permitting agencies consist of primarily roadside ditches excavated within hydric soils, as well as several creek and floodplain crossings. Other Surface Waters occurring within the ROW include roadside ditches excavated in non-hydric soils, but maintain hydrology sufficient to support wetland vegetation. Additional man-made shallow ditches and swales that support primarily turf grasses and are regularly mowed and maintained are also found within the ROW.

Surface waters proposed for impact generally consist of roadside ditches that were constructed within hydric soils, are of limited habitat value, and support moderate to high coverage of nuisance and exotic species. The affected creek crossings have been moderately impacted by past activities, and the impact areas consist of the outer fringes that have been previously affected by roadway and bridge construction.

Impacts are proposed to jurisdictional wetlands and surface waters, as well as other surface waters. A total of 5.89 acres of wetlands and surface waters are potentially affected by the New Construction (Reconstruction) Alternative, which includes 2.116 acres of wetlands; 0.859 acres of jurisdictional surface waters; and 2.915 acres of other surface waters. For the preferred Pavement Saving Alternative, a total of 5.839 acres are proposed for impact, which includes 2.208 acres of wetlands; 0.859 acres of jurisdictional surface waters; and 2.772 acres of other surface waters.

Storage and drainage provided by impacted man-made surface water features will likely be replaced with new surface water facilities designed to accommodate proposed improvements. Any functional loss associated with these impacted man-made surface waters would therefore be replaced by new surface water features. Wetland and surface water habitat losses that are not offset in this manner will be addressed through compensatory mitigation.

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

- Practicable measures to avoid or minimize wetland impacts will be addressed during final design for the project.

- Best Management Practices will be incorporated during construction to minimize wetland impacts.

- Unavoidable wetland impacts will be mitigated pursuant to S. 373.4137F.S. to satisfy all mitigation requirements of Part IV, Chapter 373,F.S. and 33 U.S.C.s 1344 or by purchase of mitigation bank credits.

5.2 Protected Species & Habitat

The project may affect but is not likely to adversely affect federally and state protected wildlife species.

Federally protected species which may be affected but are not likely to be adversely affected by the project include the wood stork and Eastern indigo snake. State protected species which may be affected but are not likely to be adversely affected by the project include gopher tortoise and wetland dependent avian species. One protected, non-listed species that may be affected but is not likely to be adversely affected is the osprey. The project is anticipated to have no effect on the bald eagle and American alligator.

Multiple avenues of protection will be employed to negate and minimize any potential affects to these species. Some of the measures employed will include detailed surveys and agency coordination during the project design phase, BMPs during construction, adherence to FDOT's "*Standard Specification for Road and Bridge Construction*", relocation of potentially affected gopher tortoises and commensal species, and utilization of standard construction precautions for species such as the Eastern indigo snake.

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

- To assure the protection of the Eastern indigo snake during construction, the FDOT will incorporate the most current USFWS guideline "*Standard Protection Measures for the Eastern Indigo Snake*" if it is determined that the project's construction limits would involve habitat for this species. **Appendix A** provides an example of the currently approved construction guidelines.

- Surveys for potentially affected gopher tortoise burrows will be conducted prior to construction, and permits to relocate tortoises and commensals as appropriate will be obtained from the FWC.

- Impacts to potential wood stork SFH will be evaluated during the design phase, and mitigation for unavoidable impacts will be provided as appropriate.

- Surveys to update locations of active osprey nest sites will be conducted during the permitting phase of the project, and permits will be acquired if impacts during construction are unavoidable. Coordination with FWC will take place, and a replacement nesting structure will be located in the immediate vicinity as appropriate.

Section 6 - REFERENCES

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APPENDIX A

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.

ATTENTION:

THREATENED EASTERN INDIGO SNAKES MAY BE PRESENT ON THIS SITE!!!

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.
- Thoroughly soak the dead snake in water and then freeze the specimen. The appropriate wildlife agency will retrieve the dead snake.

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

Killing, harming, or harassing indigo snakes is strictly prohibited and punishable under State and Federal Law.

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: 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.

August 12, 2013

APPENDIX B

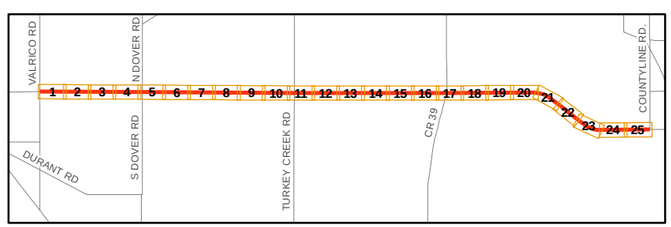
Existing FLUCFCS, Wetlands and Surface Waters within the Project Area

Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



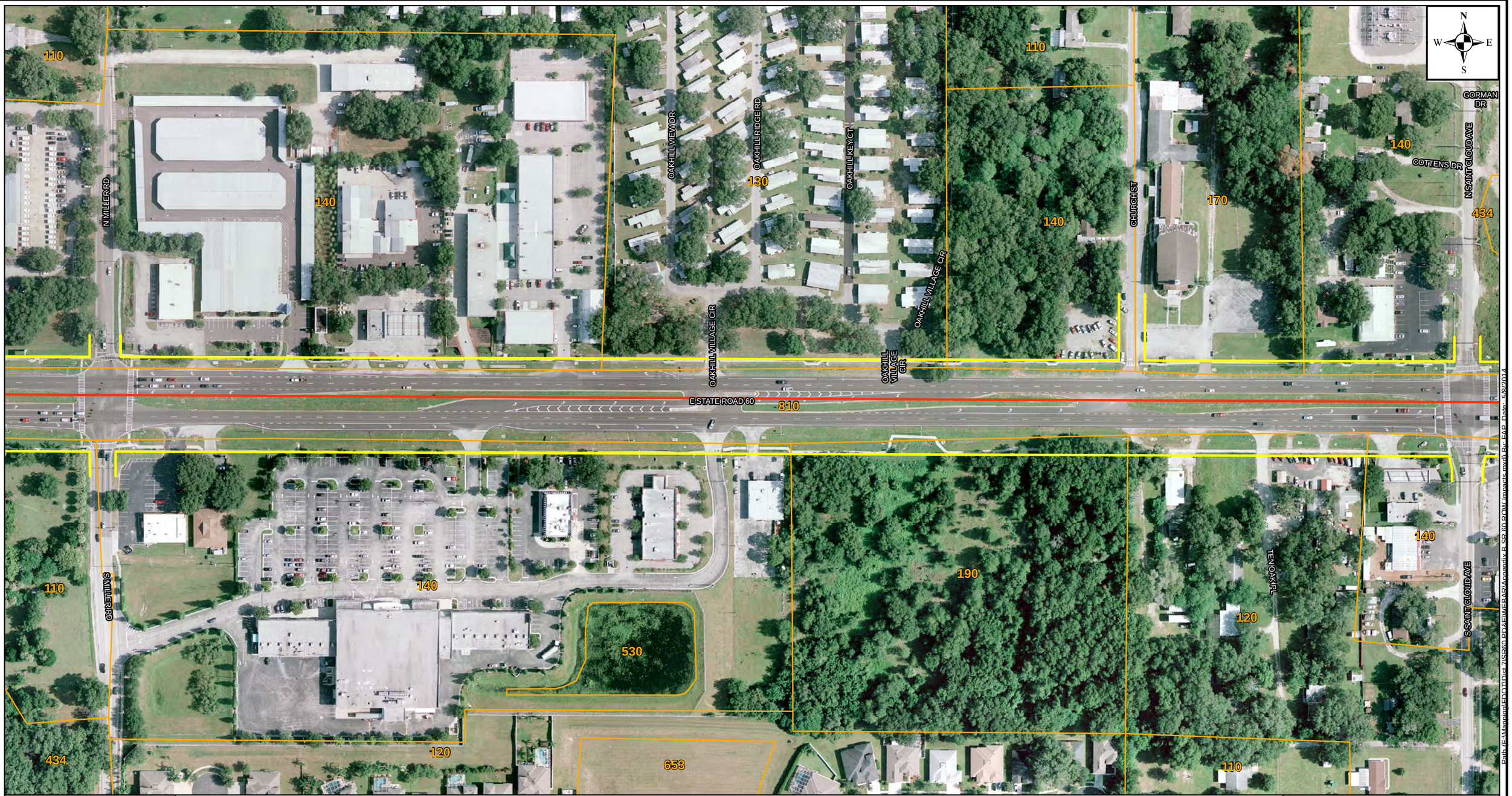
SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

Sheet 1 of 25

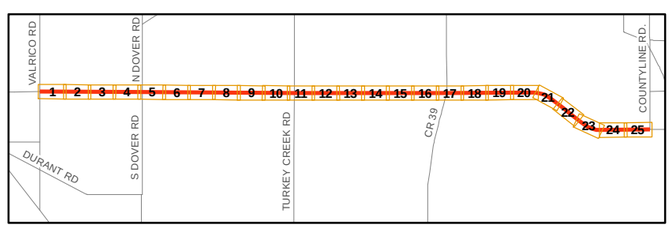


Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

Sheet 2 of 25

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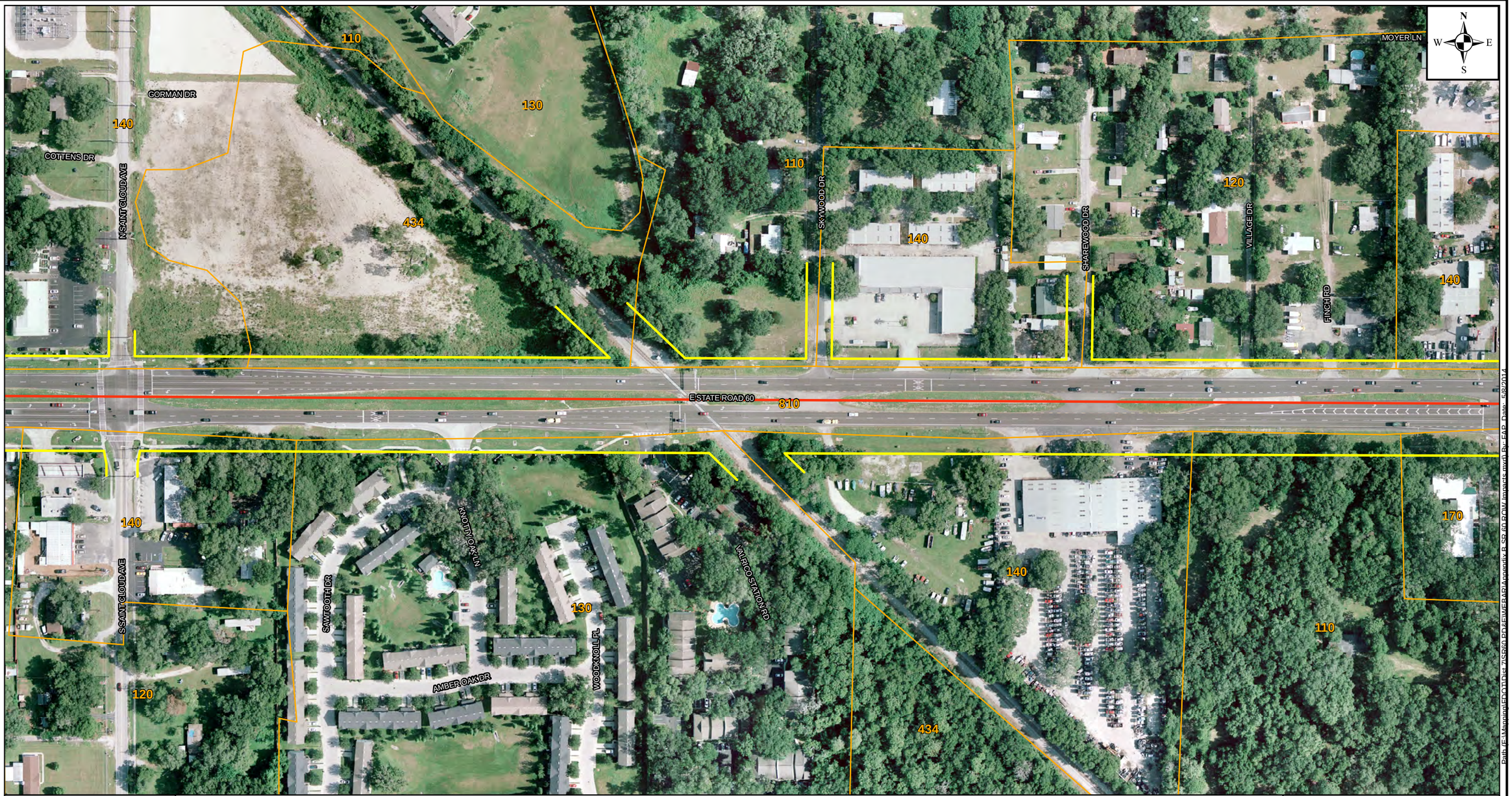
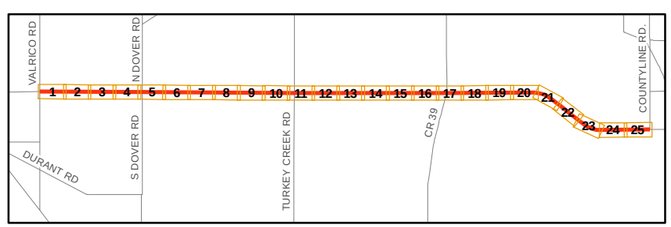


Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

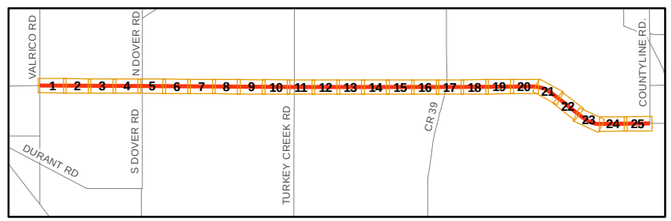
Sheet 3 of 25

Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

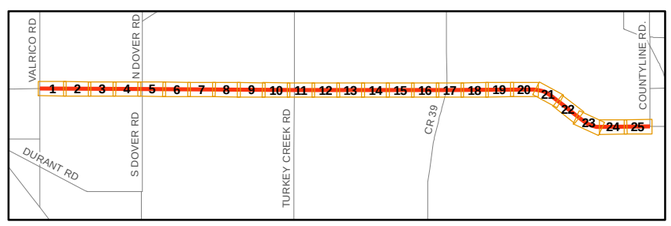
Sheet 4 of 25

Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

Sheet 5 of 25

Path: (FM\Mapping\FDOT\Dist_7\SR60_PD&E\WFEAR\Appendix_B_SR_60_ROW_Impacts.mxd) By: FAP Date: 5/8/2014

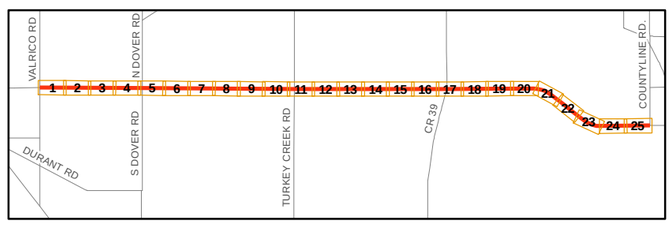
FDOT

Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



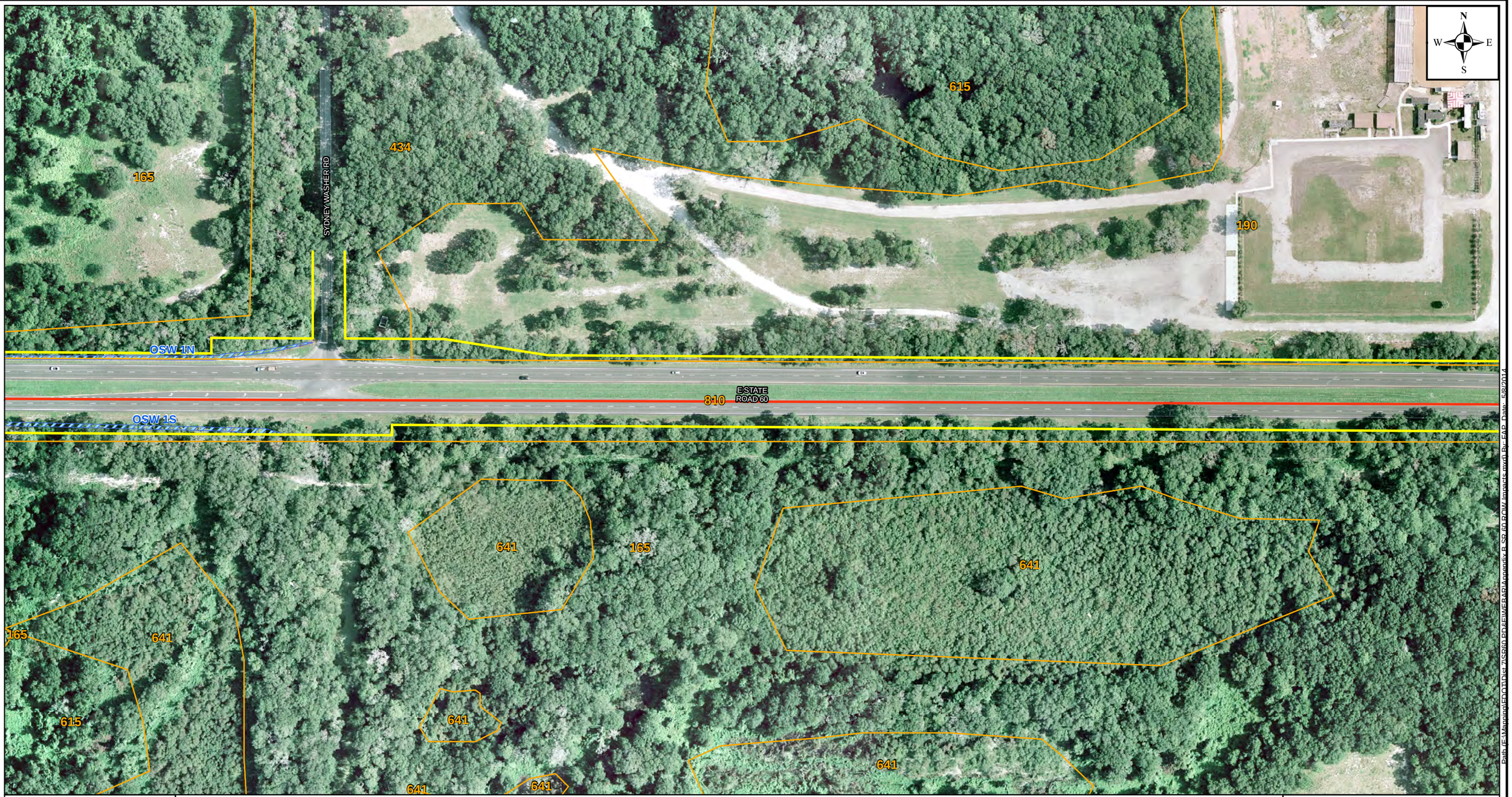
SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

Sheet 6 of 25

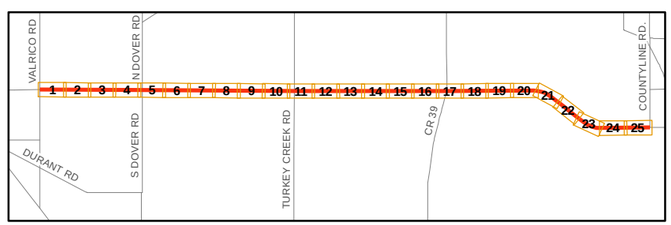


Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

Sheet 7 of 25

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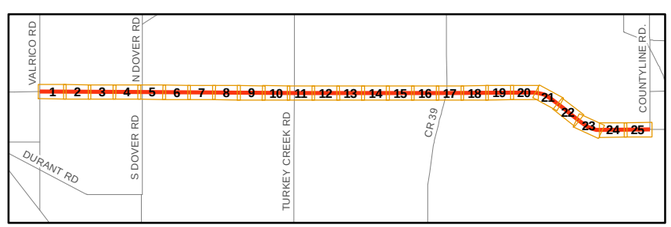
Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

Sheet 8 of 25

644
260
130
140
434
214
434
JERRY SMITH RD
OSW 3N
OSW 5N
ESTATE ROAD 60
810
WL 4S
WL 4S
OSW 5S
OSW 5S
BOCA GRANDE CIR
BELVEAL RD
SCHMITZ LN
165
130
120
260
214
260
130
165
BOCA GRANDE CIR
CORAL GABLES PL
BRINY BREEZE DR
BRINY BREEZE DR
SIESTA KEY LOOP

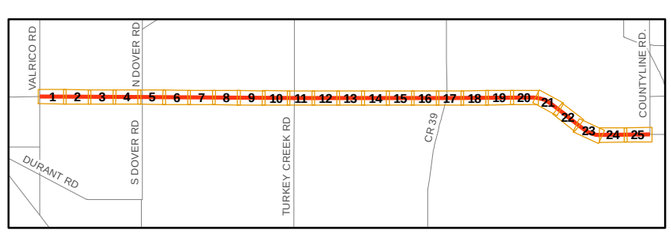
N
W
E
S

Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

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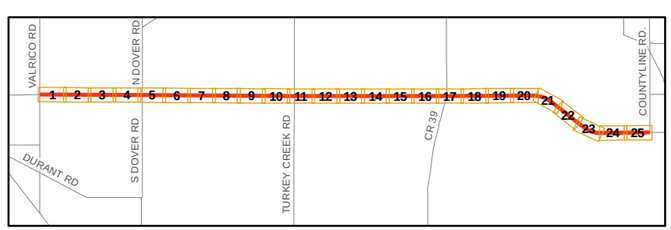
Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

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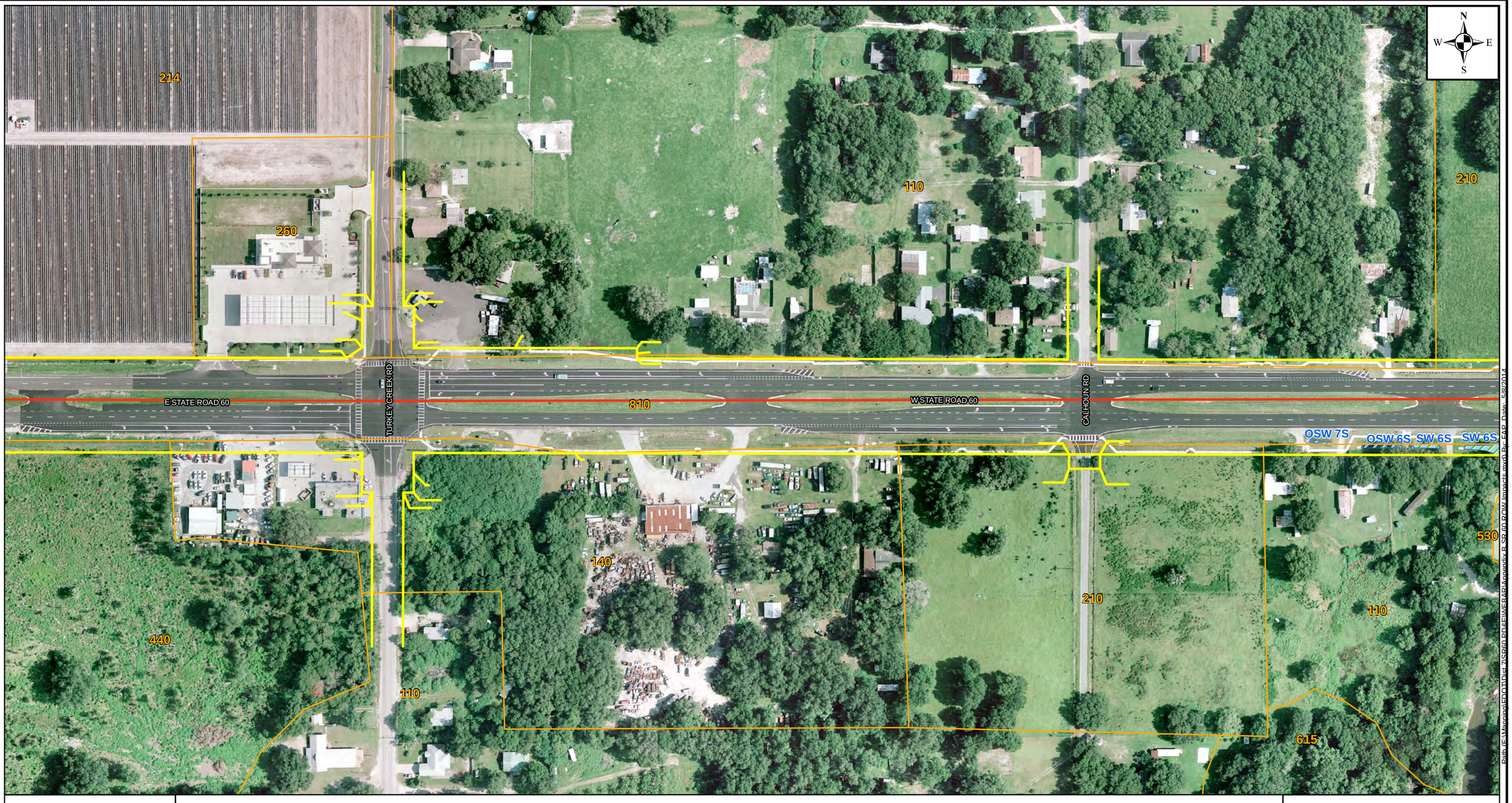
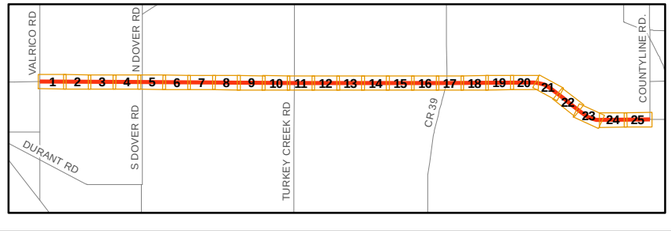


Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

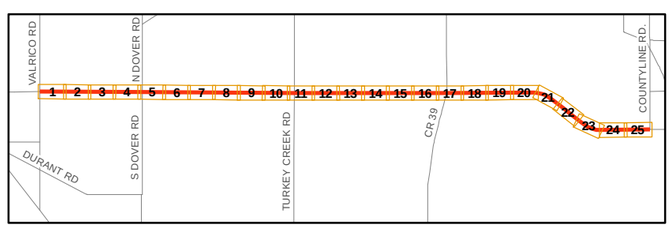
Sheet 11 of 25

Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

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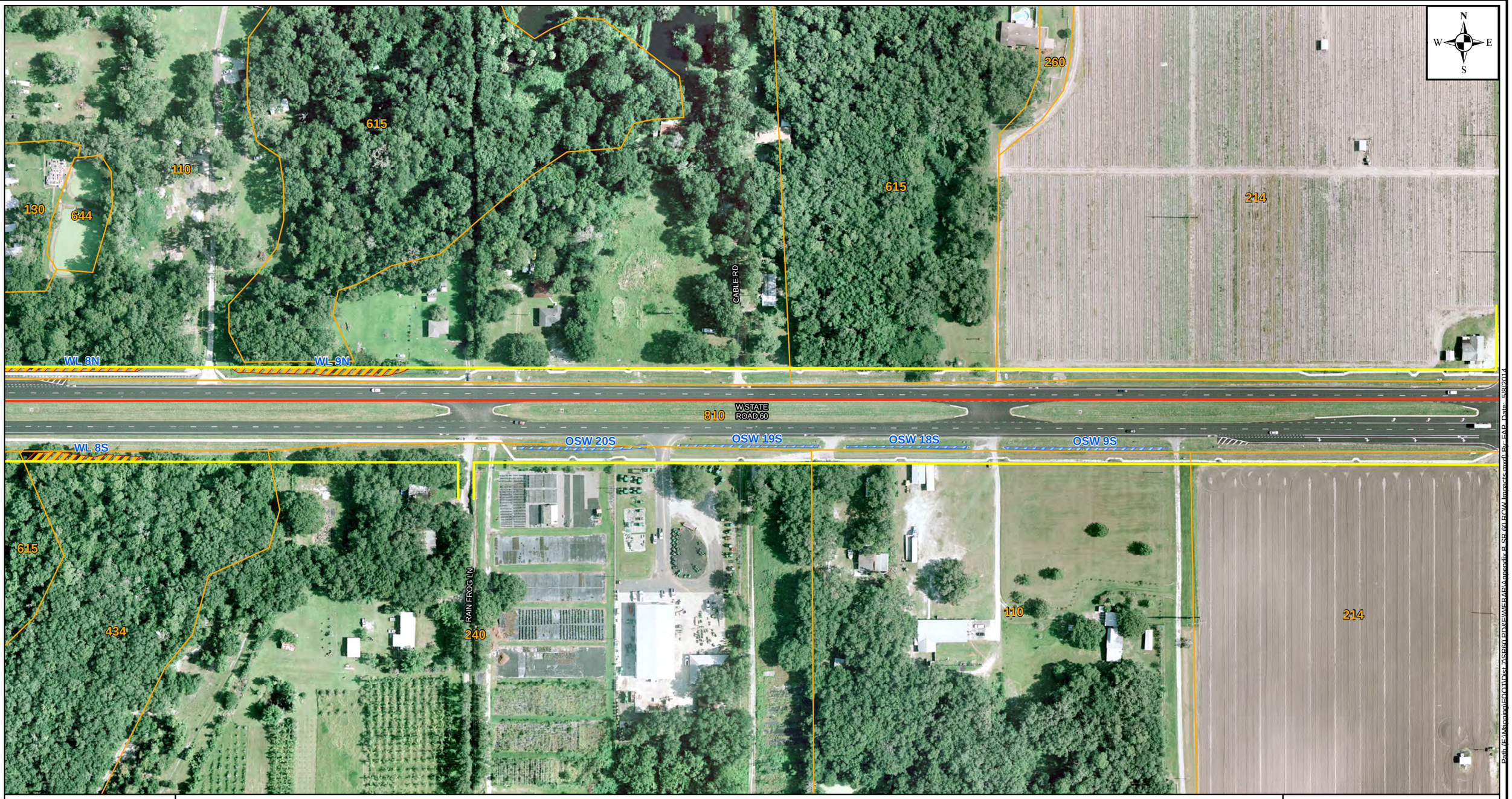
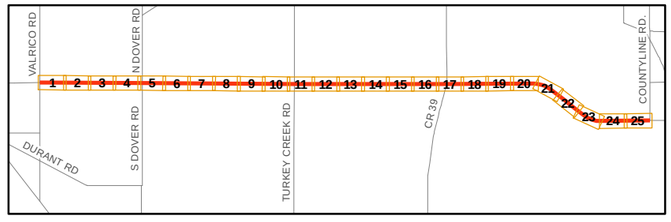


Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

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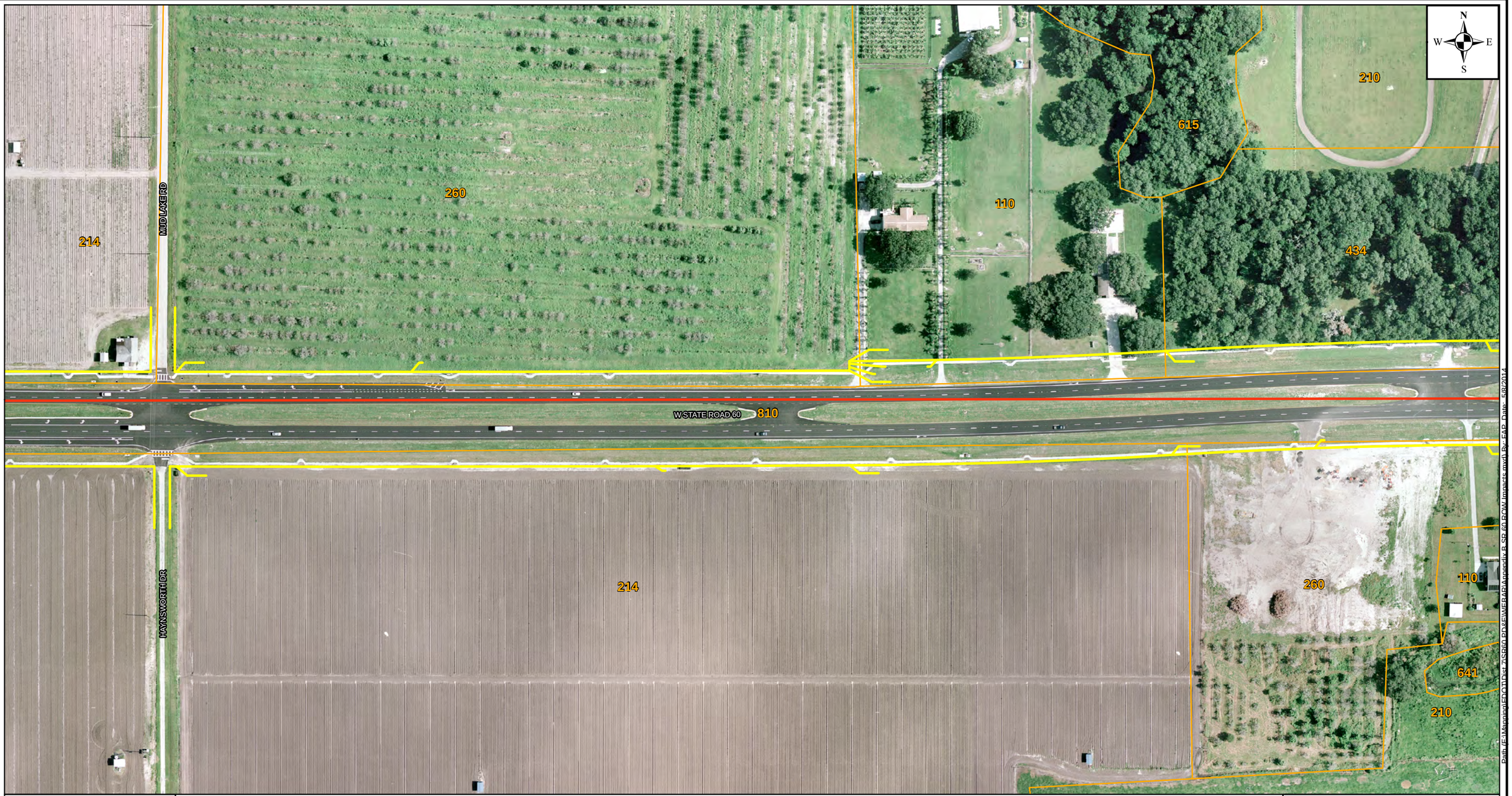


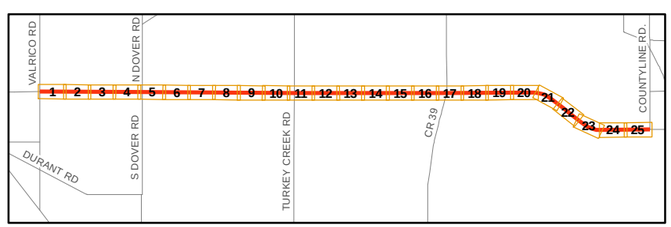
FDOT

Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

Sheet 14 of 25

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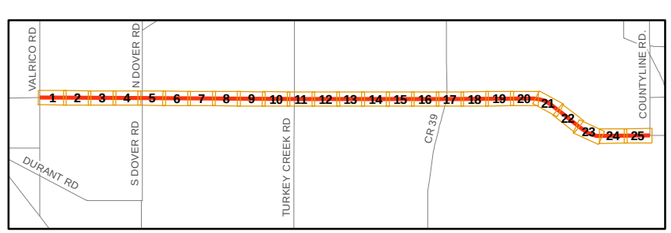
Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

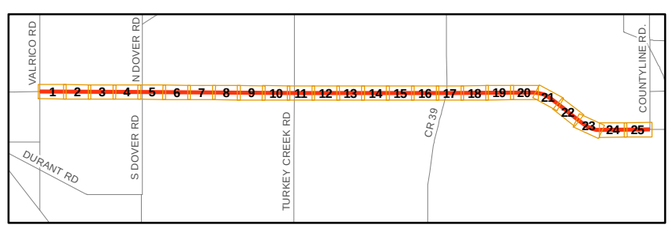
Sheet 15 of 25

Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

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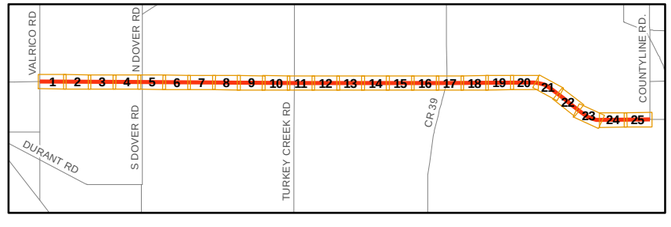
FDOT

Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

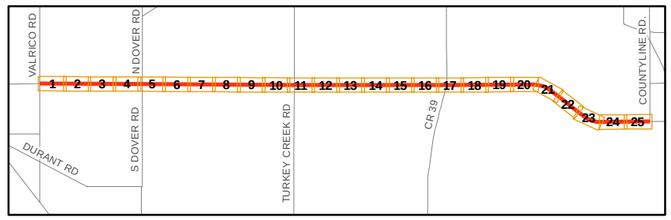
Sheet 17 of 25

Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

Sheet 18 of 25

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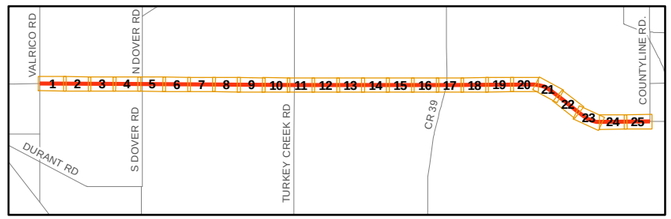
Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

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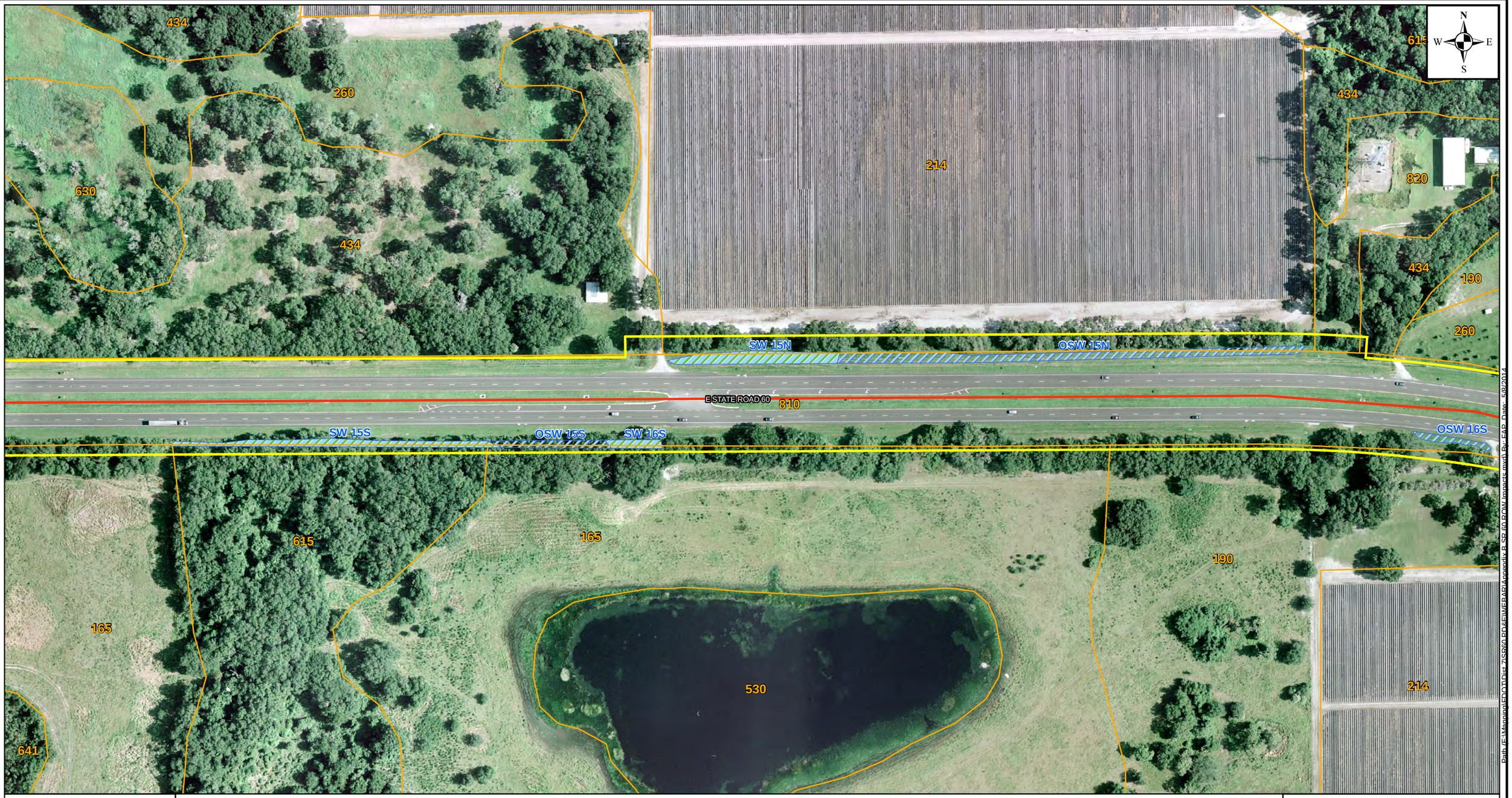
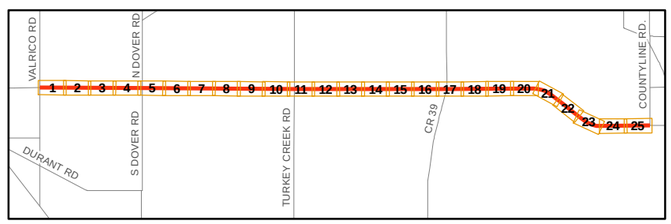


Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

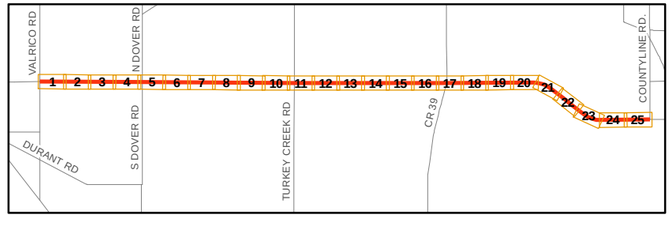
Sheet 20 of 25

Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

Sheet 21 of 25

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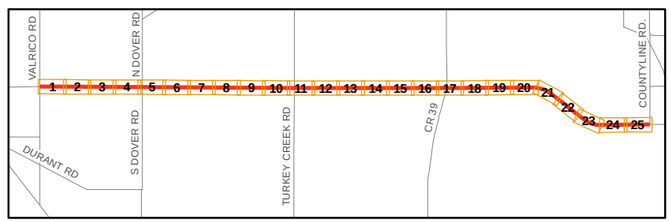
Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

Sheet 22 of 25

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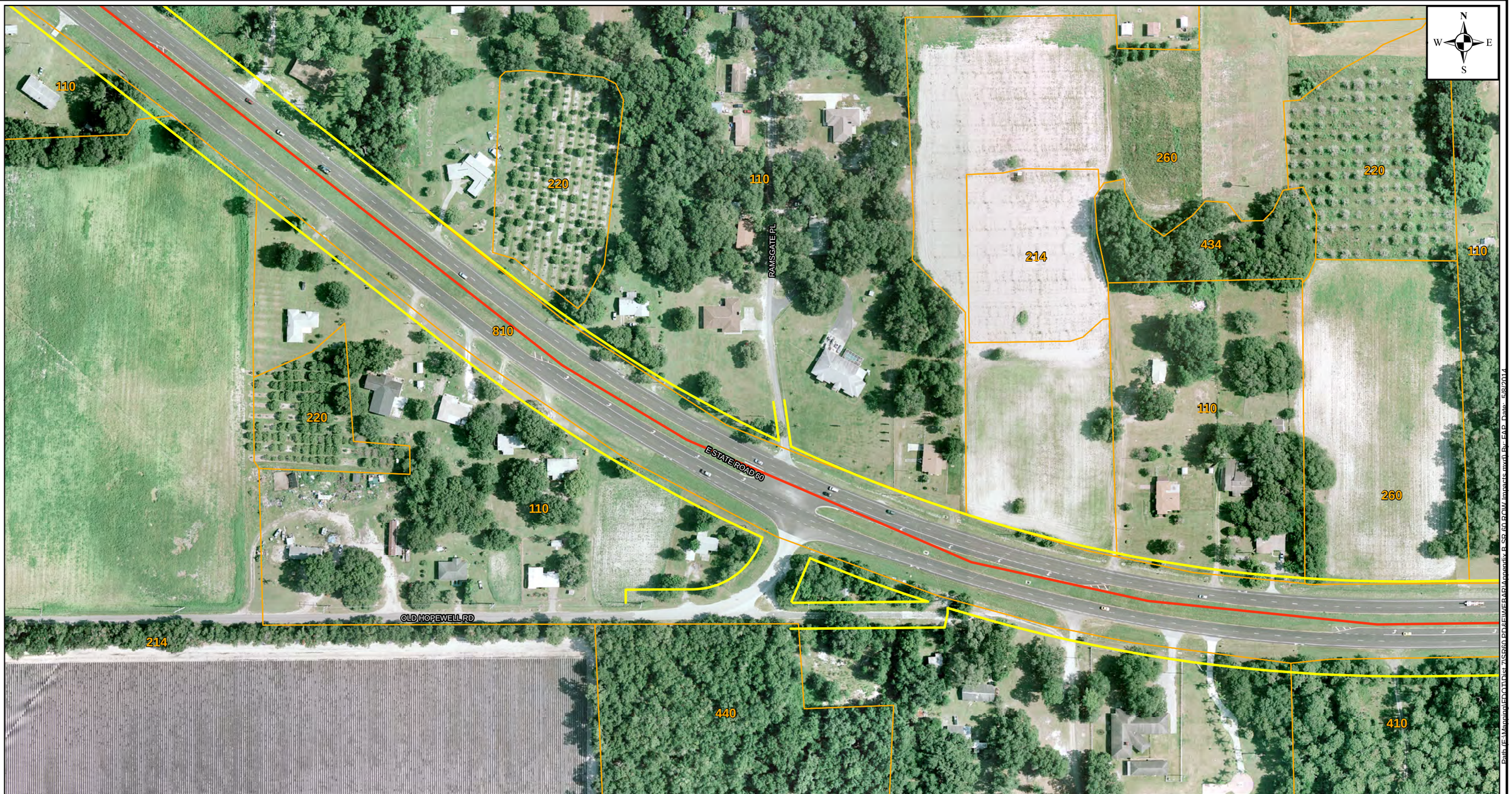
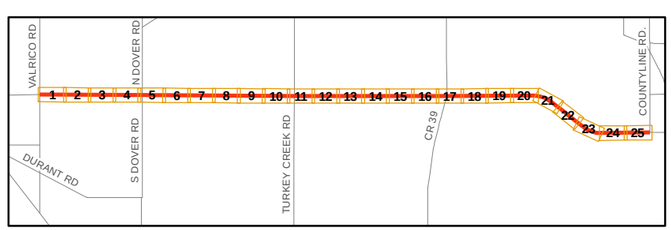


Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

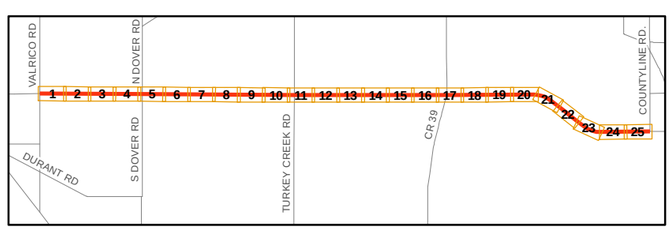
Sheet 23 of 25

Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

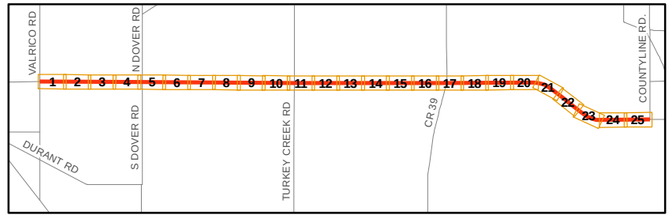
Sheet 24 of 25

Legend

- Project Corridor
- Right-of-way (ROW)
- Land Use

Potential ROW Impacts

- Other Surface Water
- Surface Water
- Wetland



SR 60 PD&E Study
From Valrico Road to the Polk County Line
Hillsborough County, Florida

0 200 400 Feet

Appendix B

Delineated Wetlands

Sheet 25 of 25

APPENDIX C

Representative Wetland Photographs

SR 60 PD&E (District 7) Representative photo facing north
Little Alafia River North of SR 60 (FLUCFCS - 615 /NWI – PFO 1/3)

SR 60 PD&E (District 7) Representative photo facing northeast
Little Alafia River North of SR 60 (FLUCFCS - 615 /NWI - PFO 1/3)

SR 60 PD&E (District 7) Representative photo facing south
Little Alafia River South of SR 60 (FLUCFCS - 615 /NWI - PFO 1/3)

SR 60 PD&E (District 7) Representative photo facing south
Turkey Creek South of SR 60 (FLUCFCS - 615 /NWI - PFO 1/3)

SR 60 PD&E (District 7) Representative photo north
English Creek North of SR 60 (FLUCFCS - 615 /NWI – PFO 1/2)

SR 60 PD&E (District 7) Representative photo south
English Creek South of SR 60 (FLUCFCS - 615 /NWI – PFO 1/2)

SR 60 PD&E (District 7) Representative photo facing southwest
Surface Water 9S Ditch south of SR 60 (FLUCFCS – 641x /NWI - PEMx)

SR 60 PD&E (District 7) Representative photo facing southwest
Surface Water 10S Ditch south of SR 60 (FLUCFCS – 641x /NWI PEMx)

SR 60 PD&E (District 7) Representative photo facing north
Surface Water 1S Ditch south of SR 60 (FLUCFCS - 641x /NWI - PEMx)

SR 60 PD&E (District 7) Representative photo facing north
Surface Water 1S Ditch south of SR 60 (FLUCFCS - 641x /NWI - PEMx)

SR 60 PD&E (District 7) Representative photo facing southeast
Surface Water Pond south of SR 60 (FLUCFCS - 641x /NWI - PEMx)

SR 60 PD&E (District 7) Representative photo facing north
Other Surface Water (OSW) Ditch south of SR 60 (non-wetland)

APPENDIX D

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
SR-60 PD&E		AA 1 Floodplain Crossings

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
615	Stream and Lake Swamps	Impact	2.76 acres

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Hillsborough River	Turkey Creek, English Creek and the Little Alafia River	N/A

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

Several stream and lake swamps are located along the project corridor and are generally located directly adjacent to or within the floodplain of riverine and creek systems (Turkey Creek, English Creek and the Little Alafia River).

Assessment area description

Assessment area consists of that portion of the forested wetlands immediately adajent to the existing roadway and beneath existing bridges. These are the lower quality edges of otherwise high quality sytems. Two community types are represented within these floodplains, Palustrine Forested with Broad-Leaved Deciduous & Broad-Leaved Evergreen and Palustrine Forested with Broad-Leaved Deciduous & Needle-Leaved Deciduous. Hydrologic conditions within these wetland areas generally consist of saturated soils to intermittent and seasonal flooding. These

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Medard Park and the Alafia South Prong Greenway Natural Corridors.	Not unique. Roadside edges of forested floodplains.

Functions	Mitigation for previous permit/other historic use
Fish and wildlife habitat, flood control. Recreationl activities (boating, fishing, etc.)	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
River otter, striped skunk, little blue heron, snowy egret, black racer, aquatic turtles, American alligator	State listed Gopher tortoise burrows have been observed adjacent to wetland area; American alligator; wetland dependent birds

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

Additional relevant factors:

Assessment conducted by:	Assessment date(s):

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

Site/Project Name	Application Number	Assessment Area Name or Number
SR 60 PD&E		AA 1 - Floodplain Crossings
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	M. Stack	Apr-13

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

.500(6)(a) Location and Landscape Support w/o pres or current: 6 — with: 0	The AA is the proposed impact area along the outer edge of the forested creek/floodplain crossings on SR 60. These outer fringes have been impacted by road construction, run-off, trash accumulation and invasion by nuisance and exotic vegetation. These areas are contiguous with relatively high quality forested floodplains of riverine systems.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current: 6 — with: 0	AA has been impacted by road, bridge and culvert construction. Flow is maintained but restricted somewhat compared to historic conditions. WQ has been affected due to runoff from road and adjacent development.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current: 3 — with: 0	AA is dominated by weedy, invasive and exotic species typical of impacted roadside wetlands. Canopy has been cleared and edges are mowed.

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 = n/a
Adjusted mitigation delta = n/a

For impact assessment areas	
FL = delta x acres =	1.045

Delta = [with-current]
0.50

If mitigation
Time lag (t-factor) = n/a
Risk factor = n/a

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
SR-60 PD&E		AA 2 - Ditches

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
641x	Freshwater Marsh-Excavated	Impact	6.31 acres

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Hillsbourough River	Turkey Creek, English Creek and the Little Alafia River	N/A

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

These features are associated with the stormwater management facilities currently in place to serve SR 60 and adjacent roadways. They ultimately discharge to aobve waterbodies.

Assessment area description

AA consists of surface waters along the existing SR 60 corridor that support emergent wetland vegetation; eighteen manmade ditches and one stormwater pond. These features have been cut into hydric soils and are considered wetlands. Water regimes generally consist of intermittent and seasonal flooding. These can be classified by Palustrine Emergent with Persistent Vegetation. These diitches are dominated by herbaceous species but some also have a low density of shrubby species.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Medard Park and the Alafia South Prong Greenway Natural Corridors.	N/A. Consist of roadside ditches.

Functions	Mitigation for previous permit/other historic use
Stormwater management functions for SR 60 and adjacent roadways; some forage function for wading bird species.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Primarily forage for wading bird species; also small mammals and reptiles.	Listed wetalnd dependent avian species.

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

Additional relevant factors:

Assessment conducted by:	Assessment date(s):

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

Site/Project Name	Application Number	Assessment Area Name or Number
SR 60 PD&E		AA2 Ditches
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	M. Stack	Apr-13

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

.500(6)(a) Location and Landscape Support w/o pres or current: 2 — with: 0	The AA is roadside ditches excavated from hydric soils. These are surrounded by agricultural areas and low density development. Some connect directly to adjacent creek and floodplain systems, but are generally of low quality.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current: 3 — with: 0	Ditches are hydrated via roadway run off and are designed for treatment and conveyance. Hydrology is sufficent to support wetland vegetation, but WQ is low.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current: 2 — with: 0	AA is dominated by weedy, invasive and exotic species typical of roadside ditches. Many are regularly mowed and maintained.

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

If preservation as mitigation,
Preservation adjustment factor = n/a
Adjusted mitigation delta = n/a

For impact assessment areas	
FL = delta x acres =	0.4526667

Delta = [with-current]
0.23

If mitigation
Time lag (t-factor) = n/a
Risk factor = n/a

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

APPENDIX E

ETDM Programming Screen Summary Report

submitted with the ERP application.

If this project will require the acquisition of new right-of-way areas, the current rule for eminent domain noticing is 40D-1.603(9), FAC and requires the applicant to provide the noticing to the affected property owners. Additionally, any issued permit may include special conditions prohibiting construction until the FDOT provides evidence of ownership and control.

For ETDM #4131 - SR-60, the District has assigned a pre-application file (PA# 398954) for the purpose of tracking its participation in the ETDM review of this project. File PA# 398954 is maintained at the Tampa Service Office of the SWFWMD. Please refer to this pre-application file whenever contacting District regulatory staff regarding this project.
CLC Commitments and Recommendations:

Wetlands

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 05/24/2012 by FDOT District 7

Comments:
USACE DOE: Moderate
FDEP DOE: Moderate
SWFWMD DOE: Moderate
USEPA DOE: Minimal
USFWS DOE: Minimal
NMFS DOE: Minimal
FDOT Recommended DOE: Moderate

The Florida Department of Transportation (FDOT) has evaluated comments from the US Army Corps of Engineers (USACE), the Florida Department of Environmental Protection (FDEP), the Southwest Florida Water Management District (SWFWMD), the US Environmental Protection Agency (USEPA), the US Fish and Wildlife Service (USFWS), and the National Marine Fisheries Service (NMFS) and recommends a Degree of Effect (DOE) of Moderate.

A review of the Geographic Information Systems (GIS) analysis data indicates that the National Wetlands Inventory (NWI) lists 1.8 acres (0.06%) of lacustrine wetlands within the 100-foot buffer distance, 15.4 acres (2.57%) of lacustrine wetlands within the 200-foot buffer distance, and 1.9 acres (0.13%) of lacustrine wetlands and 125.7 acres (8.34%) of palustrine wetlands within the 500-foot buffer distance.

The USACE recommended that pond sites should be located in either developed or degraded uplands. Design configurations that include minimal lane widths, utilization of guardrail or upland retaining walls where embankment would otherwise be needed to achieve adequate slope in wetland areas, reduction of median and shoulder widths to avoid and minimize wetland impacts. The PD&E should also identify the location and proximity of any compensatory mitigation sites that may be located within the project area.

The FDEP noted that the proposed project area traverses a water course and associated wetlands that are hydrologically connected to Edward Medard Park and Reservoir; English Creek and, ultimately, the Alafia River. Information on minimization, installation of stormwater conveyance and treatment swales, mitigation, and cumulative impacts was also included.

The SWFWMD noted that the majority of wetland and surface water systems are located east of Dover Road to County Line Road. SR 60 crosses three named creeks; Turkey Creek, Grassy Creek, and English Creek. Each of these creeks has a forested wetland component associated with them and is still in a natural condition. English Creek is surrounded by the Hillsborough Community College (HCC) English Creek Environmental Study Center which is owned by Hillsborough County Environmental Lands Acquisition and Protection Program (ELAPP) and HCC's Institute of Florida Studies (IFS). According to their website there is an active "seasonally flowing spring".

The SWFWMD also noted that roadside ditches near Sydney-Washer Road and Smith Ryals Road are exhibiting well established wetlands species adjacent to the steep slopes created through the mining activities. Wetlands associated with mining operations are either historical wetlands or created through the reclamation process connected with the phosphate mining permits through the FDEP.

The USEPA noted that any studies for this project should focus on identifying wetland areas to be potentially impacted by the project. The USEPA recommended a delineation of wetlands, functional analysis of wetlands to determine their value and function, an evaluation of stormwater pond sites, avoidance and minimization strategies, and mitigation plans to compensate for adverse impacts. The USEPA recommended that wetlands be avoided when designing the roadway widening project and stormwater treatment areas.

The USFWS noted that the project will cross English Creek which drains into the Alafia River. The USFWS recommended that the roadway drainage system be upgraded to avoid increased run off of contaminants into this creek. In addition, the roadway should span across the wetlands to the maximum extent practicable to allow for the safe passage of wildlife and wetland dependent species under the bridge.

The NMFS recommends that stormwater treatment systems be upgraded to prevent degraded water from reaching estuarine habitats within the Alafia River and in Hillsborough Bay.

The FDOT recommends that the implementing agency assess potential impacts to any existing wetlands and to take measures to minimize any project related impacts to these areas. The FDOT also recommends that the implementing agency prepare a Wetland Evaluation / Biological Assessment Report (WEBAR) which identifies and assesses any existing natural habitats within the project area. This report should then be coordinated with the USFWS and FFWCC.

No comments were received from the Federal Highway Administration.

Degree of Effect: 3 *Moderate* assigned 02/29/2012 by Garett Lips, US Army Corps of Engineers

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:
The project is located adjacent to palustrine wetlands. The EST identified approximately 17 acres within 200 feet of the project and 125 acres within 500 feet of the project. Palustrine wetlands are ecologically utilized by fish and wildlife species, provide filtration of overland runoff, and provide a conduit for water to enter aquifers. Palustrine wetlands are important aquatic resoures that should be protected. Additionally, waters of the United States such as ditches, swales, canals, etc may occur within the project area. These aquatic resources also provide important ecological functions for wading birds, fish, and other wildlife.

Comments on Effects to Resources:
The project could directly and indirectly adversely affect wetlands through filling, dredging, shading, noise, vibration, etc. A complete summary characterization of all wetlands and waters, including acreages, within the projects affected area should be prepared during the PDE. The Corps recommends avoiding all wetlands to the extent practical. Measures should be considered early in the PDE process and carried into design that reduce filling wetlands and waters. The roadway and other proposed features including the following: pond sites should be located in either developed or degraded uplands. The Corps recommends design configurations that include minimal lane widths, utilization of guardrail or upland retaining walls where embankment woould otherwise be needed to achieve adequate slope in wetland areas, reduction of median and shoulder widths to avoid and minimize wetland impacts.

The PDE should also identify the location and proximity of any compensatory mitigation sites that may be located within the project area. Any proposal to impact a Department of the Army authorizied mitigation site would not be supported by the Corps. All mitigation sites must be avoided.

If the project proposes impacts to any Central and Southern Florida flood control faciltiy, a 408 Engineering review must be performed. CSF facilities include any project constructed by the Corps. Projects may include canals, levees, control structures, etc.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 2 *Minimal* assigned 02/16/2012 by Jane Monaghan, US Fish and Wildlife Service

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:
Wetlands provide important habitat for fish and wildlife. The proposed widening of SR 60 will cross English Creek, a palustrine wetlands that feeds into the Alafia River and Hillsborough Bay. Other smaller wetland systems are also present in this corridor.

Comments on Effects to Resources:
According to the Environmental Screening Tool, wetlands are found within the project area. We recommend that these valuable resources be avoided to the greatest extent practicable. If impacts to wetlands are unavoidable, we recommend the FDOT provide mitigation that fully compensates for the loss of wetland resources and functions. This project will cross English Creek which drains into the Alafia River. We recommend that the roadway drainage system be upgraded to avoid increased run off of contaminants (oil, gas, grease, trash) into this creek. In addition, the roadway should span across the wetlands to the maximum extent practicable to allow for the safe passage of wildlife and wetland dependent species under the bridge.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 2 *Minimal* assigned 02/14/2012 by David A. Rydene, National Marine Fisheries Service

Coordination Document: No Selection

Direct Effects

Identified Resources and Level of Importance:
The mouth of the Alafia River and Hillsborough Bay, which contain estuarine habitats used by federally-managed fish species and their prey.

Comments on Effects to Resources:
NOAA's National Marine Fisheries Service (NMFS) has reviewed the information contained in the Environmental Screening Tool for ETDM Project # 4131. The Florida Department of Transportation District Seven proposes widening SR 60 from Valrico Road to County Line Road in Hillsborough County, Florida. The road would be widened from four lanes to six lanes.

NMFS staff conducted a site inspection of the project area on February 13, 2012, to assess potential concerns related to living marine resources within the mouth of the Alafia River and in Hillsborough Bay. The lands adjacent to the proposed project are principally palustrine wetlands, and agricultural and commercial properties, and some residential properties. It does not appear that the project will directly impact any NMFS trust resources. However, the road crosses English Creek (about 0.6 miles west of County Line Road) which empties to the Alafia River. The Alafia River drains to estuarine habitats at the mouth of the Alafia River and in Hillsborough Bay. These estuarine habitats (e.g. seagrass, salt marsh, mangrove) are used by federally-managed fish species and their prey. The existing bridge spanning English Creek has scuppers that empty directly into the creek. Increased use of the road could result in an increase in the amount of sediment, oil and grease, metals, and other pollutants reaching downstream estuarine habitats utilized by marine fishery resources. Therefore, NMFS recommends that stormwater treatment systems be upgraded to prevent degraded water from reaching estuarine habitats within the Alafia River and in Hillsborough Bay. In addition, best management practices should be employed during road construction to prevent siltation of these habitats.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 3 *Moderate* assigned 03/07/2012 by Hank Higginbotham, Southwest Florida Water Management District

Coordination Document: Permit Required
Coordination Document Comments: Review of the proposed project area, in the District's ArcMap GIS, showed existing ERP permits which have been approved for the FDOT and other private individuals. The permit for the rehabilitation of SR 60 from Valrico Road to Clarence Gordon Jr. Road include the District approved wetland and surface lines as they relate to the project area. These wetland lines are binding by the District for all future permits, providing the physical conditions of the property do not change so as to alter the boundaries of the wetland and other surface waters during that period. In addition to the FDOT permits there are wetland lines associated with Turkey Creek and English Creek. These permits may be used for reference if the proposed expansion of the roadway exceeds the limits of the current Right-Of-Way (ROW).

Wetlands associated with the mining operations are either historical wetlands or created through the reclamation process connected with the phosphate mining permits through the Florida Department of Environmental Protection (FDEP). Coordination with FDEP will be required to determine which systems are classified as reclamation and if there are restrictions pertaining to potential impacts to the systems.

The degree of effect is considered "Moderate" due to (1) the acreage of potential wetlands located within the project area which can be delineated as part of the permitting process; (2) the potential to degrade or eliminate several undisturbed wetlands systems in this area; and (3) the potential to impact additional wetlands resulting from the creation of the stormwater management system.

For ETDM #4131 - SR-60, the District has assigned a pre-application file (PA# 398954) for the purpose of tracking its participation in the ETDM review of this project. File PA# 398954 is maintained at the Tampa Service Office of the SWFWMD. Please refer to this pre-application file whenever contacting District regulatory staff regarding this project.

Direct Effects

Identified Resources and Level of Importance:
Along the length of the project there are several wetland systems, both forested and herbaceous. Analysis of the SWFWMD Wetlands 2009 report, from the EST GIS Report run on July 19, 2011, indicates approximately 17.02- acres of wetlands and surface waters lie within a 200 foot buffer of the proposed alignment (~3% of project corridor). The majority of the wetland and surface water systems are located east of Dover Road to County Line Road.

Beginning at Dover Road and traveling the 12.30-miles east toward County Road, SR 60 crosses three named creeks 1) Turkey Creek 2) Grassy Creek and 3) English Creek. Each of these creeks has a forested wetland component associated with them and is still in a natural condition (i.e. no channelized concrete slabs or regular maintenance of the vegetation). Grassy Creek is associated with the wetland systems within Medard Park and the Medard Reservoir, both located south of SR 60 east of Turkey Creek Road.

English Creek, which is a tributary to the Alafia River, is near the eastern terminus and is surrounded by the Hillsborough Community College (HCC) - English Creek Environmental Study Center. The English Creek Environmental Study Center is a 380-acre parcel with bottom land hardwood forests, pinewood flatwoods, and sandhills. This educational study area is owned by Hillsborough County Environmental Lands Acquisition and Protection Program (ELAPP) and HCC's Institute of Florida Studies (IFS). According their website there is an active "seasonally flowing spring" (http://edis.ifas.ufl.edu/fr262).

In addition to the three creeks, there are several roadside ditches, which appear to have been created primarily for water conveyance. Most of the surface water ditches are currently being maintained so wetland vegetation located within their limits is minimal. However, the roadside ditches near Sydney-Washer Road and Smith Ryals Road have been created out of hydric soils resulting from the historical phosphate mining. The roadside ditches in these locations are exhibiting well established wetland species adjacent to the steep slopes created through the mining activities. The mining area, south of SR-60 near County Line Road has several historical wetlands remaining after the phosphate mining activities at this location.
Comments on Effects to Resources:
Expansion of SR-60 roadway from 4 lanes to 6 lanes will most likely require the widening of the current bridges over the 3 creeks. There are forested wetlands associated with each of these creeks and the widening of the roadway, abutments and bridges will result in wetland impacts. These wetland impacts will need to be evaluated utilizing the Uniform Mitigation Assessment Method (UMAM) to determine the functional loss for these impacts. The District will require a delineation of the landward extend of the wetland and surface water features pursuant to Chapter 62-340, F.A.C. Since the site is located in Hillsborough County, the approval of the wetland line can be approved either by the District or by the Environmental Protection Commission of Hillsborough County (EPC).

Expansion of the existing roadway from 4 lanes to 6 lanes will impact the surface water roadside ditches running parallel to SR-60, unless the expansion will be utilizing the median. These surface water ditches are vegetated and may be providing water quality treatment. The roadside ditches near Sydney -Washer Road and Smith Ryals Road are created out of hydric soils and are exhibiting wetland vegetation; therefore, impacts to these ditches will need to have an evaluation utilizing UMAM also.
Depending on the constructed depth of the stormwater ponds, the construction of stormwater facilities adjacent to wetland, particularly forested wetland, could intercept groundwater and surface water that historically has maintained wetland hydroperiods. Such wetlands may be dewatered and alterations to wetland vegetation communities, habitat, and wildlife populations. Stormwater runoff has the potential to introduce pollution into wetlands, causing further degradation.
Additional Comments (optional):
Review of the proposed project area, in the District's ArcMap GIS, showed existing ERP permits which have been approved for the FDOT and other private individuals. The permit for the rehabilitation of SR 60 from Valrico Road to Clarence Gordon Jr. Road include the District approved wetland and surface lines as they relate to the project area. These wetland lines are binding by the District for all future permits, providing the physical conditions of the property do not change so as to alter the boundaries of the wetland and other surface waters during that period. In addition to the FDOT permits there are wetland lines associated with Turkey Creek and English Creek. These permits may be used for reference if the proposed expansion of the roadway exceeds the limits of the current Right-Of-Way (ROW).

Wetlands associated with the mining operations are either historical wetlands or created through the reclamation process connected with the phosphate mining permits through the Florida Department of Environmental Protection (FDEP). Coordination with FDEP will be required to determine which systems are classified as reclamation and if there are restrictions pertaining to potential impacts to the systems.

The degree of effect is considered "Moderate" due to (1) the acreage of potential wetlands located within the project area which can be delineated as part of the permitting process; (2) the potential to degrade or eliminate several undisturbed wetlands systems in this area; and (3) the potential to impact additional wetlands resulting from the creation of the stormwater management system.

For ETDM #4131 - SR-60, the District has assigned a pre-application file (PA# 398954) for the purpose of tracking its participation in the ETDM review of this project. File PA# 398954 is maintained at the Tampa Service Office of the SWFWMD. Please refer to this pre-application file whenever contacting District regulatory staff regarding this project.
CLC Commitments and Recommendations:

Degree of Effect: 2 *Minimal* assigned 03/15/2012 by Madolyn Dominy, US Environmental Protection Agency

Coordination Document: No Selection

Direct Effects
Identified Resources and Level of Importance:
Resources: Wetlands, wetlands habitat, water quality

Level of Importance: These resources are of a high level of importance in the State of Florida and within the project area. A minimal degree of effect is being assigned to this issue for the proposed project.
Comments on Effects to Resources:
A review of GIS analysis data (National Wetlands Inventory) in the EST for wetlands indicates that there are palustrine wetlands present along the proposed roadway project. There are approximately 15 acres of primarily palustrine wetlands within the 200-foot buffer distance and 125 within the 500-foot buffer distance.

The degree of direct wetlands impacts associated with the project will be dependent upon how much right-of-way will be needed in addition to stormwater treatment ponds and/or areas. Potential impacts include, but are not limited to, loss of wetlands function, loss of wildlife habitat, degradation of water quality in wetlands, and reduction in flood storage and capacity. Another issue of concern is increased stormwater runoff and the increase of pollutants into surface waters and wetlands as a result of the project and other point and nonpoint sources.

The PD&E study should focus on identifying wetlands areas to be potentially impacted by the project. The PD&E study should include a delineation of wetlands; functional analysis of wetlands to determine their value and function; an evaluation of stormwater pond sites to determine their impact on wetlands; avoidance and minimization strategies for wetlands; and mitigation plans to compensate for adverse impacts. It is recommended that wetlands be avoided when designing the roadway widening project and stormwater treatment areas.

Indirect and cumulative effects on wetlands should be evaluated to identify and quantify incremental and cumulative impacts on natural resources (wetlands) as a result of past, present, and reasonably foreseeable actions, including the proposed project and other land use actions.
Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 3 *Moderate* assigned 03/16/2012 by Lauren P. Milligan, FL Department of Environmental Protection

Coordination Document: Permit Required

Direct Effects
Identified Resources and Level of Importance:
The proposed project area traverses a water course and associated wetlands that are hydrologically connected to Edward Medard Park and Reservoir, English Creek and, ultimately, the Alafia River. The EST indicates that there are 125.7 acres of palustrine wetlands and 1.9 acres of lacustrine wetlands within the 500-foot buffer zone of the project.
Comments on Effects to Resources:
An Environmental Resource Permit (ERP) will be required from the Southwest Florida Water Management District - the ERP applicant will be required to eliminate or reduce the proposed wetland resource impacts of highway construction to the greatest extent practicable:
- Minimization should emphasize avoidance-oriented corridor alignments, wetland fill reductions via pile bridging and steep/vertically retained side slopes, and median width reductions within safety limits.
- Wetlands should not be displaced by the installation of stormwater conveyance and treatment swales; compensatory treatment in adjacent uplands is the preferred alternative.
- After avoidance and minimization have been exhausted, mitigation must be proposed to offset the adverse impacts of the project to existing wetland functions and values. Significant attention is given to forested wetland systems, which are difficult to mitigate.
- The cumulative impacts of concurrent and future transportation improvement projects in the vicinity of the subject project should also be addressed.
Additional Comments (optional):

CLC Commitments and Recommendations:

Wildlife and Habitat

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 05/24/2012 by FDOT District 7

Comments:
USFWS DOE: Moderate
FFWCC DOE: Moderate

SWFWMD DOE: Minimal
FDOT Recommended DOE: Moderate

The Florida Department of Transportation (FDOT) has evaluated comments from the US Fish and Wildlife Service (USFWS), the Florida Fish and Wildlife Conservation Commission (FFWCC), and the Southwest Florida Water Management District (SWFWMD) and recommends a Degree of Effect of Moderate.

A review of the Geographic Information Systems (GIS) analysis data indicates that there are two Caracara Consultation Areas, two Florida Managed Areas, two Scrub Jay Consultation Areas, two Snail Kite Consultation Areas, 10 Woodstork Core Foraging Areas, and one Greenways Ecological Priority Linkage are within the 100-foot buffer distance.

The USFWS noted that the proposed project could impact Core Foraging Area (CFA) of at least nine active nesting colonies of the endangered wood stork. USFWS recommends that any lost foraging habitat resulting from the project be replaced with CFA of the affected nesting colony. Moreover, wetlands provided mitigation should adequately replace the wetland functions lost as a result of the action. The USFWS does not consider the preservation of wetlands, by itself, as adequate compensation for impacts to wood stork foraging habitat, because the habitat lost is not replaced. Accordingly, the wetland mitigation plan proposed should include a restoration, enhancement, or creation component.

USFWS noted that the nest locator on the FFWCC website should be checked for documented bald eagles nests and examination of the proposed impact areas from the air is recommended. Also, survey should be done according to guidelines found on the USFWS website if suitable Florida Scrub-Jay habitat is present. If suitable Eastern Indigo Snake habitat is present and/or gopher tortoise burrows are found on site, the Eastern indigo snake effect determination key and new survey protocols should be utilized and possibly implemented.

The FFWCC noted the following species may occur along the project area: gopher tortoise, gopher frog, American alligator, Eastern indigo snake, Florida pine snake, short-tailed snake, Sherman's Fox Squirrel, Florida mouse, little blue heron, tricolored heron, white ibis, wood stork, limpkin, snowy egret, Southeastern American kestrel, roseate spoonbill, Florida burrowing owl, and the Florida Sandhill crane. There is FWC Strategic Habitat Conservation Areas (SHCA) for Cooper's hawk and swallow-tailed kite within 500 foot buffer distance. Primary wildlife issues associated with this project include: the potential direct loss of valuable wetlands and upland wildlife habitat; potential adverse effects to a moderate number of species listed by the Federal Endangered Species Act as Endangered and Threatened, or the State of Florida as Threatened or Species of Special concern; increased roadkills due to high traffic levels and vehicle speed; and potential water quality degradation as a result of additional stormwater runoff from the expanded roadway surface drainage into adjacent wetlands, streams, and lakes, including Medard Reservoir. The cleared median on SR 60 appears to be sufficient to fit the required additional lanes without the direct loss of other habitat. Confining construction activities to the existing cleared median as much as possible could reduce potential direct impacts to fish and wildlife resources.

SWFWMD noted that site is listed as a USFWS Ecological Service Area for the following Federally Listed Species: Piping Plover, Florida Scrub Jay, Wood Stork, Red-Cockaded Woodpecker, Eastern Indigo Snake, and the Florida Golden Aster. The expansion of SR 60, with the filling of roadside ditches, also has the potential to have a detrimental effect on the foraging birds within the vicinity of the project.

The FDOT recommends that the implementing agency prepare a Wetland Evaluation / Biological Assessment Report (WEBAR) which identifies and assesses any existing natural habitats within the project area. This report should then be coordinated with the USFWS and FFWCC.

No comments were received from the Federal Highway Administration (FHWA).

Degree of Effect: 2 *Minimal* assigned 03/07/2012 by Hank Higginbotham, Southwest Florida Water Management District

Coordination Document: Permit Required
Coordination Document Comments:SWFWMD has assigned a Degree of Effect (DOE) of "Minimal" based upon the routine nature associated with permitting requirements for the proposed widening construction activity. A survey of Threatened and Endangered Species covering the proposed project area is recommended prior to submitting the permit application as to provide an accurate portrayal of the site.

Direct Effects

Identified Resources and Level of Importance:
Most of the land east of Dover Road is classified as rural with the primary development being related to agricultural activities. The minimal disturbance to the land has a high potential for providing habitat for several species, both upland and wetland dependant. The entire 200 foot buffer fall within the Consultation Areas for three Listed Species: Scrub Jay, Crested Caracara, and Snail Kite, as analyzed on January 4, 2012. The site is listed as a USFWS Ecological Service Area for the following Federally Listed Species: Piping Plover, Florida Scrub-Jay, Wood Stork, Red-Cockaded Woodpecker, Eastern Indigo Snake, and the Florida Golden Aster.

Medard Park and Reservoir, along with the HCC English Creek Educational Study Area, is classified as a FNAI Managed Lands. In addition, Medard Park and Reservoir are owned by the District; therefore, the likelihood this land will be developed is negligible. The current bridge crosses associated with Turkey Creek, Grassy Creek and English are also providing safe wildlife crossing for the fauna species located within this area allowing for the intermingling of species and increasing the diversity of wildlife utilizing the habitats adjacent to the creeks. Overall, the quality of the native upland habitat within the 200-foot buffer is medium to excellent in terms of upland and wetland wildlife species.
Comments on Effects to Resources:
This project has the potential to eliminate the remnants of native upland and wetland habitat known to be used by Listed Species for breeding and foraging. The expansion of SR-60, with the filling of the roadside ditches, also has the potential to have a detrimental effect on the foraging birds within the vicinity of the project.
Additional Comments (optional):
SWFWMD has assigned a Degree of Effect (DOE) of "Minimal" based upon the routine nature associated with permitting requirements for the proposed widening construction activity. A survey of Threatened and Endangered Species covering the proposed project area is recommended prior to submitting the permit application as to provide an accurate portrayal of the site.
CLC Commitments and Recommendations:

Degree of Effect: 3 *Moderate* assigned 03/14/2012 by Scott Sanders, FL Fish and Wildlife Conservation Commission

Coordination Document: To Be Determined: Further Coordination Required
Coordination Document Comments: We recommend that the Project Development and Environment (PD&E) Study address natural resources by including the following measures for conserving fish and wildlife and habitat resources that may occur within and adjacent to the project area. Plant community mapping and wildlife surveys for the occurrence of wildlife species listed by the Federal Endangered Species Act as Endangered or Threatened, or by the State of Florida as Threatened or Species of Special Concern should be performed, both along the Right-of-way and within sites proposed for Drainage Retention Areas. Based on the survey results, a plan should be developed to address direct, indirect, and cumulative effects of the project on wildlife and habitat resources, including listed species. Avoidance, minimization, and mitigation measures should also be formulated and implemented. If gopher tortoises or nests of other ST or SSC species are present within any permanent or temporary construction area, a permit should be obtained from the FWC. Drainage Retention Areas and equipment staging areas should be located in previously disturbed sites to avoid habitat destruction or degradation. Opportunities should also be investigated for providing structures to maintain habitat connectivity. A compensatory mitigation plan should include the replacement of any wetland, upland, or aquatic habitat lost as a result of the project. This could be achieved by purchasing land, or securing conservation easements over lands adjacent to existing public lands, and by habitat restoration. Replacement habitat for mitigation should be type for type, as productive, and equal to or of higher functional value. We recommend land acquisition and restoration of appropriate tracts adjacent to existing public lands near the project area, or tracts placed under conservation easement or located adjacent to large areas of jurisdictional wetlands that currently serve as regional core habitat areas. Please notify us immediately if the design, extent, or footprint of the current project is modified, as we may choose to provide additional comments and/or recommendations.

We appreciate the opportunity to provide input on highway design and the conservation of fish and wildlife resources. Please contact Brian Barnett at (772) 579-9746 or email brian.barnett@MyFWC.com to initiate the process for further overall coordination on this project.

Direct Effects

Identified Resources and Level of Importance:
The Office of Conservation Planning Services of the Florida Fish and Wildlife Conservation Commission (FWC) has coordinated an agency review of ETDM #4131, Hillsborough County, and provides the following comments related to potential effects to fish and wildlife resources on this Programming Phase project.

The Project Description Summary states that this project involves the construction of two additional lanes to the 4-lane SR 60 from Valrico Road to County Line Road, a distance of 12.28 miles. This project was previously reviewed in the Planning Screen in three segments: Valrico Road to Dover Road (ETDM 4131), Dover Road to SR 39 (ETDM 7741), and SR 39 to County Line Road (ETDM 9127).

The project area was evaluated for potential fish, wildlife, and habitat resources within 500 feet of the proposed alignment. Our assessment reveals that the project area goes from an urban/suburban landscape between Valrico Road and Dover Road to a mix of agriculture, rural residential, and natural vegetation from Dover Road west to County Line Road. Man-altered landcover includes High and Low Impact Urban (597.4 acres, 39.65%), Citrus (182.7 acres, 12.13%), Improved Pasture (132.2 acres, 8.77%), Row-Field Crops (56.7 acres, 3.76%), Bare Soil-Clearcut (31.0 acres, 2.06%), Extractive (19.5 acres, 1.29%), and Other Agriculture (15.1 acres, 1.00%). Natural landcover within the assessment area includes Hardwood Swamp (97.0 acres, 6.44%), Hardwood Hammocks and Forests (95.0 acres, 6.31%), Dry Prairies (59.6 acres, 3.95%), Mixed Hardwood-Pine Forests (51.6 acres, 3.42%), Shrub Swamp (45.6 acres, 3.03%), Pinelands (45.2 acres, 3.00%), Grassland (34.8 acres, 2.31%), Shrub and Brushland (24.6 acres, 1.63%), Freshwater Marsh (8.6 acres, 0.57%), Mixed Wetland Forest (6.2 acres, 0.41%), Open Water (3.1 acres, 0.21%), and Cypress Swamp (0.9 acres, 0.06%).

Based on range and preferred habitat type, the following species listed by the Federal Endangered Species Act and the State of Florida as Federally Endangered (FE), Federally Threatened (FT), State-Threatened (ST), or State Species of Special Concern (SSC) may occur along the project area: gopher frog (SSC), American alligator (FT), Eastern indigo snake (FT), Florida pine snake (SSC), short-tailed snake (ST), gopher tortoise (ST), Florida burrowing owl (SSC), Southeastern American kestrel (SSC), Florida sandhill crane (ST), wood stork (FE), limpkin (SSC), little blue heron (SSC), tricolored heron (SSC), snowy egret (SSC), white ibis (SSC), roseate spoonbill (SSC), Florida mouse (SSC), and Sherman's fox squirrel (SSC).

The GIS analysis revealed several specific characteristics associated with lands along the project alignment that provide an indication of potential habitat quality or sensitivity that will require field studies to verify the presence or absence of listed wildlife species and the quality of wildlife habitat resources. In the FWC's Integrated Wildlife Habitat Ranking System, 387.8 acres of the assessment area were ranked High, Moderately High, or Medium. There are also 135.8 acres of FWC Strategic Habitat Conservation Areas for Cooper's hawk and swallow-tailed kite within 500 feet of the project. Two areas of public conservation lands are adjacent to this project: English Creek, a 380.5-acre area owned by Hillsborough County and Hillsborough Community College and managed by the College for environmental education; and Edward Medard Park and Reservoir, encompassing 1,291 acres owned by the Southwest Florida Water Management District and managed by Hillsborough County. Medard Reservoir is a FWC Fish Management Area. The project is within U.S. Fish and Wildlife Service Consultation Areas for Crested Caracara, Scrub Jay, and Snail Kite, and is within the core foraging area of ten wood stork colonies.

Primary wildlife issues associated with this project include: the potential direct loss of valuable wetland and upland wildlife habitat; potential adverse effects to a moderate number of species listed by the Federal Endangered Species Act as Endangered or Threatened, or the State of Florida as Threatened or Species of Special Concern; increased roadkills due to higher traffic levels and vehicle speed; and potential water quality degradation as a result of additional stormwater runoff from the expanded roadway surface draining into adjacent wetlands, streams, and lakes, including Medard Reservoir. The cleared median on SR 60 appears to be sufficient to fit the required additional lanes without the direct loss of other habitat. Confining construction activities to the existing cleared median as much as possible could reduce potential direct impacts to fish and wildlife resources.
Comments on Effects to Resources:
Based on the project information provided, we believe that the direct and indirect effects of this project on fish and wildlife resources could be moderate, based on the value of remaining wildlife habitats that are adjacent to the roadway.
Additional Comments (optional):
We recommend that the Project Development and Environment (PD&E) Study address natural resources by including the following measures for conserving fish and wildlife and habitat resources that may occur within and adjacent to the project area. Plant community mapping and wildlife surveys for the occurrence of wildlife species listed by the Federal Endangered Species Act as Endangered or Threatened, or by the State of Florida as Threatened or Species of Special Concern should be performed, both along the Right-of-way and within sites proposed for Drainage Retention Areas. Based on the survey results, a plan should be developed to address direct, indirect, and cumulative effects of the project on wildlife and habitat resources, including listed species. Avoidance, minimization, and mitigation measures should also be formulated and implemented. If gopher tortoises or nests of other ST or SSC species are present within any permanent or temporary construction area, a permit should be obtained from the FWC. Drainage Retention Areas and equipment staging areas should be located in previously disturbed sites to avoid habitat destruction or degradation.

Opportunities should also be investigated for providing structures to maintain habitat connectivity. A compensatory mitigation plan should include the replacement of any wetland, upland, or aquatic habitat lost as a result of the project. This could be achieved by purchasing land, or securing conservation easements over lands adjacent to existing public lands, and by habitat restoration. Replacement habitat for mitigation should be type for type, as productive, and equal to or of higher functional value. We recommend land acquisition and restoration of appropriate tracts adjacent to existing public lands near the project area, or tracts placed under conservation easement or located adjacent to large areas of jurisdictional wetlands that currently serve as regional core habitat areas. Please notify us immediately if the design, extent, or footprint of the current project is modified, as we may choose to provide additional comments and/or recommendations.

We appreciate the opportunity to provide input on highway design and the conservation of fish and wildlife resources. Please contact Brian Barnett at (772) 579-9746 or email brian.barnett@MyFWC.com to initiate the process for further overall coordination on this project.
CLC Commitments and Recommendations:

Degree of Effect: 3 *Moderate* assigned 02/16/2012 by Jane Monaghan, US Fish and Wildlife Service

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects
Identified Resources and Level of Importance:
Federally listed species and the ecosystems upon which they depend.
Comments on Effects to Resources:
Wood Stork (Mycteria americana)

The proposed widening of SR 60 could impact the Core Foraging Areas (CFA) of at least nine active nesting colonies of the endangered wood stork. The Service has determined that the loss of wetlands within a CFA due to an action could result in the loss of foraging habitat for the wood stork. To minimize adverse effects to the wood stork, we recommend that any lost foraging habitat resulting from the project be replaced within the CFA of the affected nesting colony. Moreover, wetlands provided as mitigation should adequately replace the wetland functions lost as a result of the action. The Service does not consider the preservation of wetlands, by itself, as adequate compensation for impacts to wood stork foraging habitat, because the habitat lost is not replaced. Accordingly, any wetland mitigation plan proposed should include a restoration, enhancement, or creation component. In some cases, the Service accepts wetlands compensation located outside the CFA of the affected wood stork nesting colony. Specifically, wetland credits purchased from a "Service Approved" mitigation bank located outside of the CFA would be acceptable to the Service, provided that the impacted wetlands occur within the permitted service area of the bank. To minimize adverse effects to the wood stork and other wetland dependent species, we recommend that impacts to suitable foraging habitat be avoided. Please refer to the North Florida Field Office website for WOST colony locations, definitions and effect determinations for any wetland impacts in Hillsborough County: http://www.fws.gov/northflorida/

Bald Eagles (Haliaeetus leucocephalus)

The nest locator database on the FFWCC (Florida Fish and Wildlife Conservation Commission) website (MyFWC.com/Eagle) should be checked for documented nests. However, new nests may not be in the database and a thorough examination of the proposed impact areas from the air is recommended. Any bald eagle nest within 700 feet of the project should be documented and all future actions should be coordinated with the USFWS Office of Migratory Birds, Eagle permitting section. USFWS office websites can provide further information on the new Eagle Act regulations.

Florida Scrub-Jays (Aphelocoma coerulescens)

This species may be found within rural or urban areas in Hillsborough County. Surveys should be done according to guidelines found on the USFWS website (http://www.fws.gov/northflorida) if suitable habitat is present. There are several areas along this road that may support Florida scrub-jays. Surveys within two years of the construction date are recommended if soils and habitat are present or if this species is documented within the action area. Survey methodology and results should be submitted to the USFWS office for review.

Eastern Indigo Snake (Drymarchon corais couperi)
This species can be found in a wide variety of habitats, including urban settings. If suitable habitat is present and/or gopher tortoise burrows are found on site, the Eastern indigo snake effect determination key and new survey protocols should be utilized and possibly implemented. The Service recommends contacting our office to review the revised conservation guidelines and ensure that the applicant has a full understanding of whether or not they need to implement the new survey protocols. These guidelines can be found on the USFWS website (http://www.fws.gov/northflorida)
Additional Comments (optional):

CLC Commitments and Recommendations:

ETAT Reviews and Coordinator Summary: Cultural

Historic and Archaeological Sites

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 05/24/2012 by FDOT District 7

Comments:
SHPO DOE: Moderate
Seminole Tribe of Florida DOE: Moderate
SWFWMD DOE: Minimal
FDOT Recommended DOE: Moderate

The Florida Department of Transportation (FDOT) has evaluated comments from the Florida Department of State (SHPO), the Seminole Tribe of Florida, and the Southwest Florida Water Management District (SWFWMD) and recommends a Degree of Effect (DOE) of Moderate.