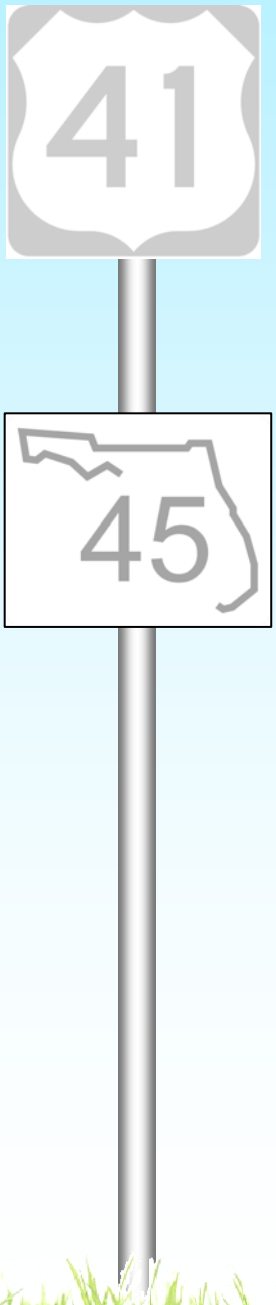
US 41 (SR 45)

Project Development and Environment (PD&E) Study

From 12th Street to Kracker Avenue

Final Wetland Evaluation and Biological Assessment Report



WPI Segment No: 421140 8; ETDM # 9511
Hillsborough County

Prepared for the
Florida Department of Transportation
District Seven

September 2009

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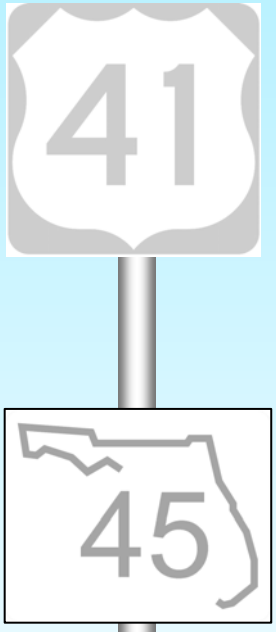

WPI Segment No: 421140 8; ETDM # 9511
Hillsborough County

Prepared for the
Florida Department of Transportation
District Seven

Prepared by
American Consulting Engineers of Florida, LLC

September 2009

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Section 1 – EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT) conducted a Project Development and Environment (PD&E) Study to evaluate alternative improvements for US 41/SR 45 from 12th Street North to Kracker Avenue in southern Hillsborough County (**Figure 2-1)**. The total project length is approximately 6.2 miles. Study objectives included 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 were identified which will improve safety and meet future transportation demand.

In accordance with the FDOT's PD&E Manual, a *Wetland Evaluation and Biological Assessment Report* (WEBAR) was prepared for this PD&E Study. Wetlands and surface waters were identified using the U.S. Army Corps of Engineer's *Manual for Identifying and Delineating Jurisdictional Wetlands*, 1987, and the Florida Department of Environmental Protection's *The Florida Wetland Delineation Manual*, 1995 (Chapter 62-340, F.A.C.).

Methodologies for identifying wetlands and surface waters included aerial interpretation, 2006 National Wetlands Inventory (NWI) data, Natural Resource Conservation Service (NRCS) soil surveys, and field observation (ground truthing). Wetlands were evaluated for size, quality, contiguity with other wetlands and surface waters, community structure, adjacent land uses, hydrologic function, and ability to support wildlife.

A total of 48 wetlands and surface waters were identified along the project corridor. Most of the proposed project's impacts will occur within other surface waters (OSW's), which are mainly ditches used to convey stormwater runoff or were once used for agricultural purposes. A total of 0.48 acres of wetland and 2.80 acres of OSW are anticipated to be impacted due to the construction of the proposed project. Wetland impacts due to the construction of this proposed project are anticipated to be mitigated

pursuant to § 373.4137, F.S., or by the creation, enhancement, or preservation of wetlands within the project's watershed.

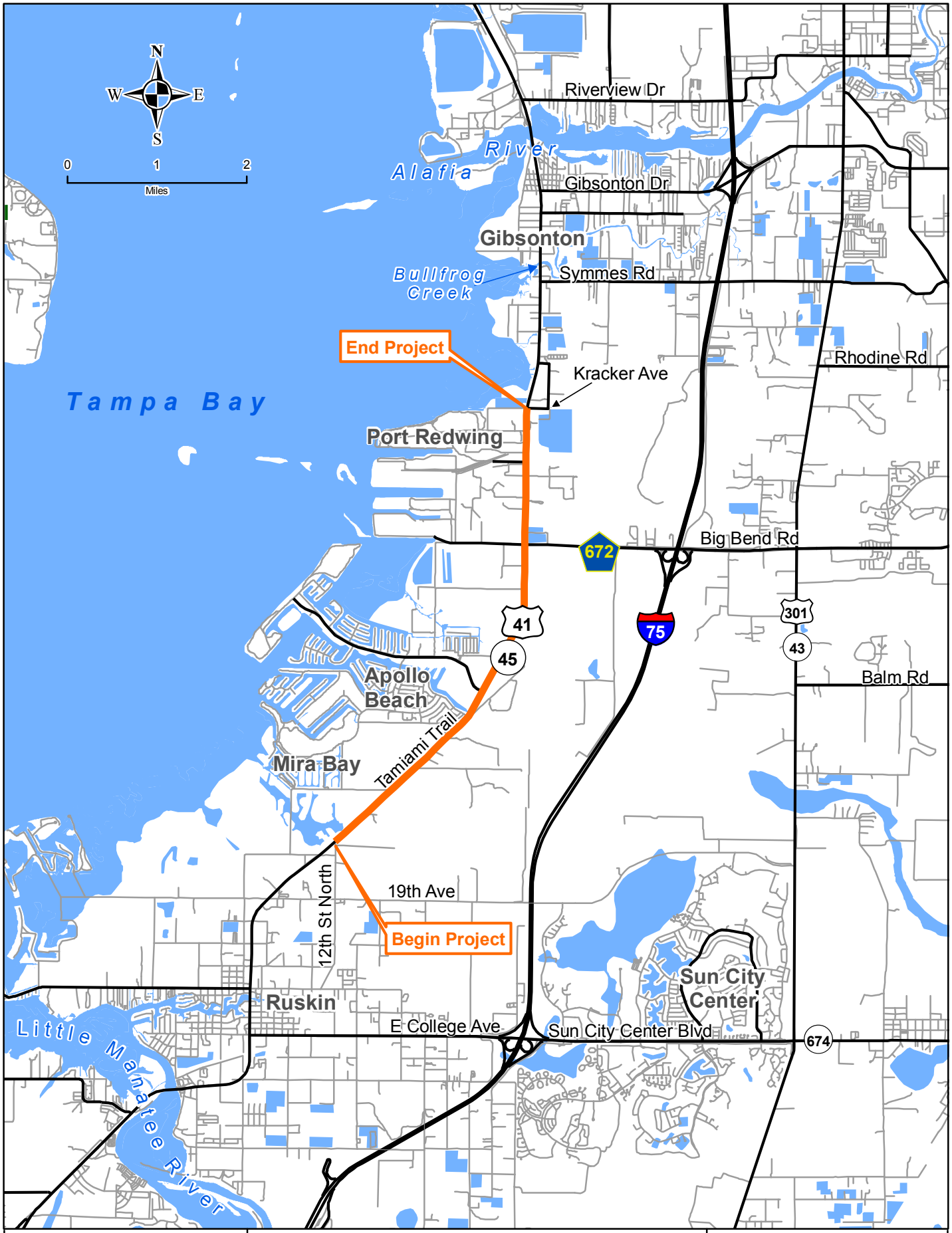
The Uniform Mitigation Assessment Method (UMAM) was conducted to assess wetland functions and values for the representative wetlands within the study corridor. The final rating is expressed numerically with a number between 0 and 1, with 1 representing the highest quality wetland, and 0 reflecting the lowest quality wetland. Representative UMAMs were conducted for many of the wetlands/surface waters since they were similar in type and vegetative cover. The delta values ranged from 0.20 to 0.73. The functional loss values ranged from 0.014 to 0.56.

Field observations, literature reviews, and agency database searches were conducted to identify federal- and state-listed species and to identify potential critical habitat for these species in accordance with 50 CFR Part 402 of the Endangered Species Act of 1973, as amended, and Part 2, Chapter 27 of the FDOT's *PD&E Manual: Wildlife and Habitat Impacts*. This project has also been subject to the FDOT's Efficient Transportation Decision Making (ETDM) process (project #9511) for a larger area from 19th Avenue NE to Gibsonton Drive (ETDM #5180). The proposed roadway improvements are not anticipated to adversely impact any federal- or state-listed species or their critical habitat. Impacts to federally-listed species are as follows: the proposed roadway improvements will not affect the bald eagle, but may affect the wood stork, eastern indigo snake and the American alligator. Impacts to state-listed species are as follows: the proposed roadway improvements will not affect the peregrine falcon, gopher tortoise, Florida pine snake or the Florida long-tailed weasel, but may affect the snowy egret, white ibis, little blue heron, tricolored heron, and Florida sandhill crane. Impacts to critical habitat for any federal-listed or state-listed species will be addressed during the design phase of this project.

Section 2 – INTRODUCTION

2.1 Project Description

The Florida Department of Transportation (FDOT) conducted a Project Development and Environment (PD&E) Study to evaluate alternative improvements to US 41 (SR 45). This project involves a 6.2 mile segment of US 41 from 12th Street extending north to Kracker Avenue in Hillsborough County (**Figure 2-1**). The highway is to be improved from an existing, four-lane rural facility to an urban and suburban six-lane divided facility. There are no bridge structures located within this segment of US 41; however, bridge culvert widening or replacement is anticipated over Wildcat Creek and Newmans Branch. The proposed improvements will include construction of stormwater management facilities and various intersection improvements, in addition to bicycle and pedestrian facilities. The study area is located in Township 31, Range 19, and Sections 2, 3, 10, 11, 14, 15, 22, 27, 28, 32 and 33.



US 41 (SR 45) PD&E Study

from 12th Street to Kracker Avenue
Hillsborough County, FL
WPI Segment No. 421140-8

Project Location Map

Source: FGDL

Figure 2-1

Purpose and Need

The purpose of the proposed project is to provide a higher capacity and safer facility to better meet future transportation demand in this rapidly developing area of Hillsborough County. US 41 runs parallel to and west of I-75. US 41 is a major north-south urban principal arterial that connects numerous communities along the west coast of Florida, including Ruskin, Apollo Beach and Gibsonton. This anticipated traffic growth and existing high levels of congestion create a need to analyze the corridor for necessary improvements to ensure this facility does not continue to deteriorate resulting in unacceptable levels of service. The PD&E Study will also include the consideration of a No-Build Alternative.

US 41 is functionally classified as an "urban principal arterial – other". While US 41 is not on the Strategic Intermodal System (SIS), a short (0.92 miles) segment of US 41 between Pembroke Road and Big Bend Road (CR 672) is part of a SIS connector, which connects the Port of Tampa to I-75, both of which are SIS facilities. The Strategic Intermodal System (SIS) is a statewide network of highways, railways, waterways and transportation hubs that handle the bulk of Florida's passenger and freight traffic. This project is included in the Hillsborough County Metropolitan Planning Organization's (MPO) Year 2025 Long-Range Transportation Plan (LRTP) as an unfunded need. The West Central Florida MPO Chair's Coordinating Committee (CCC) has classified US 41 as a "regional road" and as an "unfunded need" on the "regionally significant road network" in west central Florida. This corridor is also designated as an emergency evacuation route.

A longer segment of US 41 was evaluated in the Programming Screen of the Efficient Transportation Decision Making (ETDM) process (project #5180) in 2008, for a larger area along US 41 from 19th Avenue NE to Gibsonton Drive. This process established the Class of Action as a State Environmental Report (SEIR).

2.2 Purpose of Report

The purpose of this Wetland Evaluation and Endangered Species Biological Assessment Report (WEBAR) is to document existing wetland resources and to evaluate potential impacts to wetlands and other surface waters (OSW) as a result of construction of the proposed project. This report also includes an evaluation of options for avoidance and minimization of wetland impacts, and discusses options for mitigation of wetlands due to unavoidable impacts.

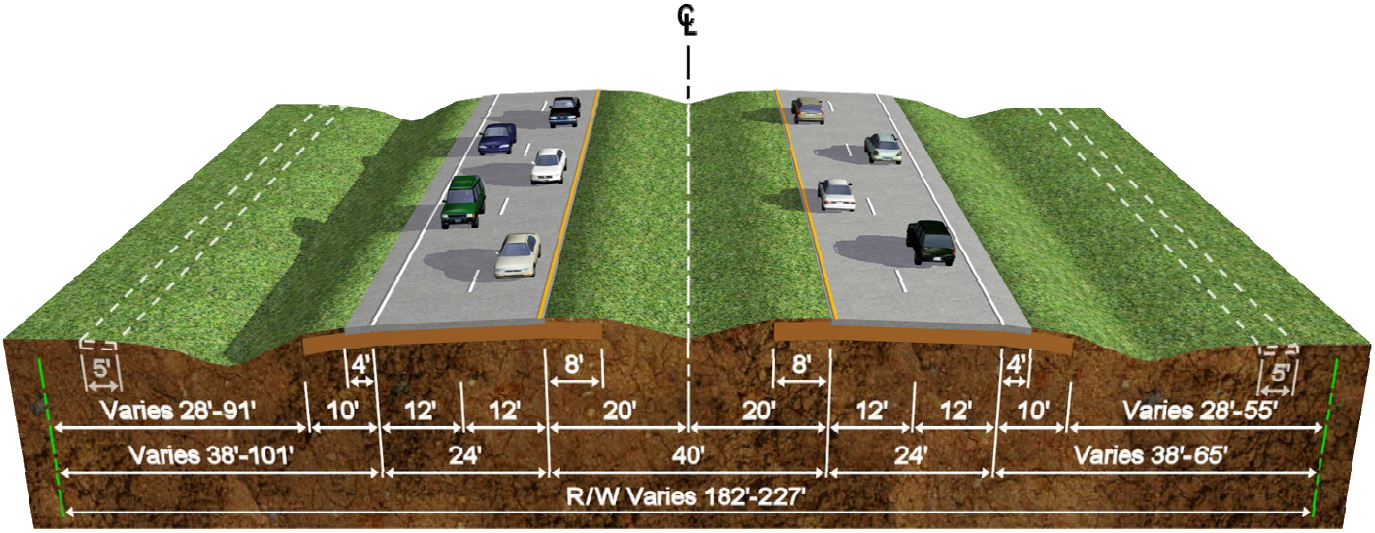
This report also addresses potential impacts to threatened and endangered species and any critical habitat that may support these species. It discusses alternatives to avoid and minimize impacts to these species and provides a brief narrative of the listed species and their critical habitats.

2.3 Existing Facility and Proposed Improvements

US 41 currently has a 4-lane divided rural typical section (**Figure 2-2**). The existing roadway has 11.5 to 12.0 ft travel lanes, 4-ft paved inside and outside shoulders, and a 40-ft grassed median. The posted speed limit is 55 miles per hour (mph) except for a short segment on either side of Big Bend Road, which is posted at 45 mph. The existing right-of-way typically varies from 182 ft to 227 ft.

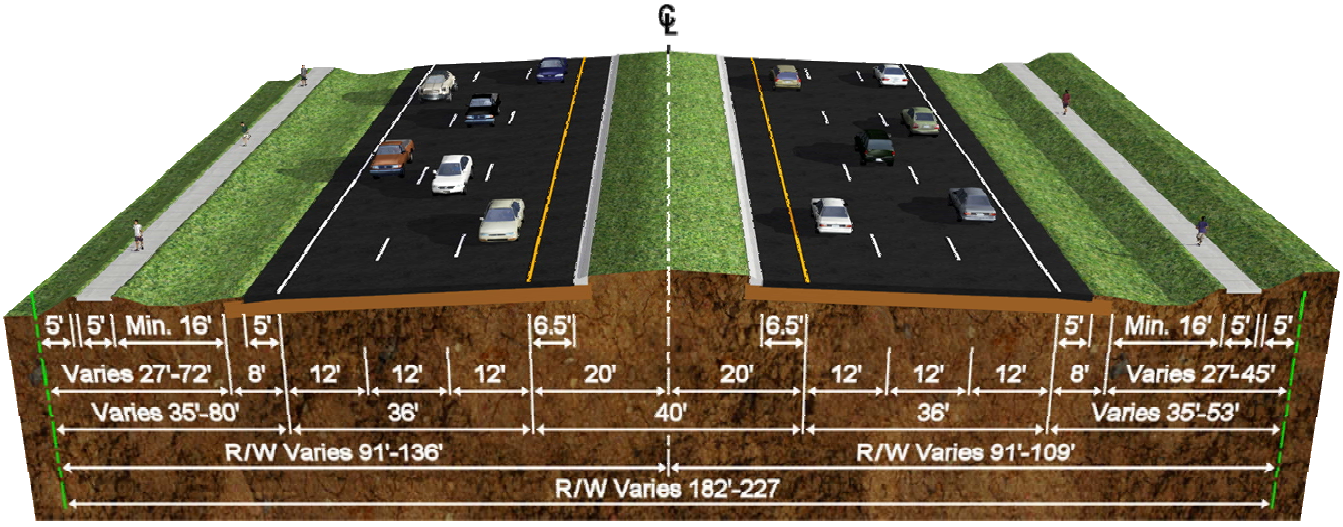
Expected improvements include widening to six lanes as well as intersection improvements and construction of stormwater management facilities and bicycle and pedestrian facilities. In addition to six basic lanes, auxiliary lanes are also proposed in the vicinity of Apollo Beach Boulevard and Big Bend Road (CR 672). Preliminary recommended roadway typical sections are shown in **Figure 2-2**. A "No-Build" Alternative will also be considered. The proposed project is not funded in FDOT's current 5-year work program.

US 41 Existing Typical Section



(Existing 5-ft sidewalks are intermittent)

US 41 Proposed Suburban Typical Section

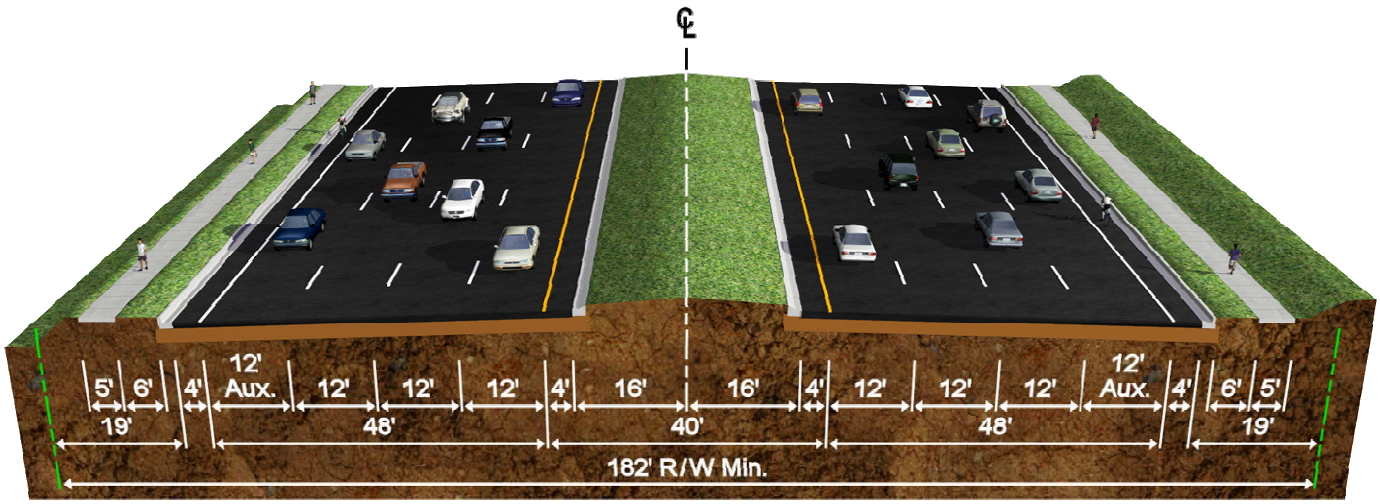


6-Lane Suburban

Design Speed = 50 MPH

Rev. 7/30/09

US 41 (SR 45) PD&E Study From 12th Street to Kracker Avenue Hillsborough County, Florida WPI Segment No. 421140-8	**US 41 Existing and Proposed Build Alternative Typical Sections**	**Figure 2-2** **Sheet 1 of 2**

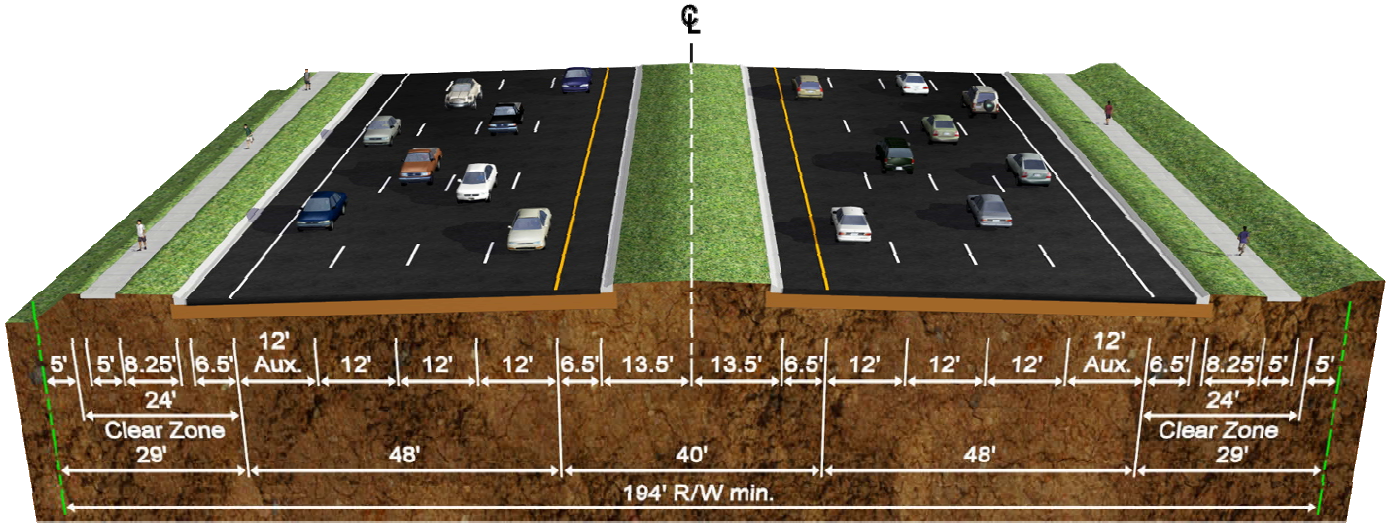


6-Lane Urban with Auxiliary Lanes*

Design Speed = 45 MPH

*This typical section applies to two segments:

1. From Flamingo Drive to approximately 1000 ft north of Apollo Beach Blvd
2. Approximately 1000 ft south of Big Bend Road to Big Bend Road



6-Lane High-Speed Urban with Auxiliary Lanes**

Design Speed = 50 MPH

**This typical section applies to US 41 from Big Bend Road to Pembroke Road, which is part of a Strategic Intermodal System (SIS) connector route which connects the Port of Tampa to I-75.

Rev. 2/27/09

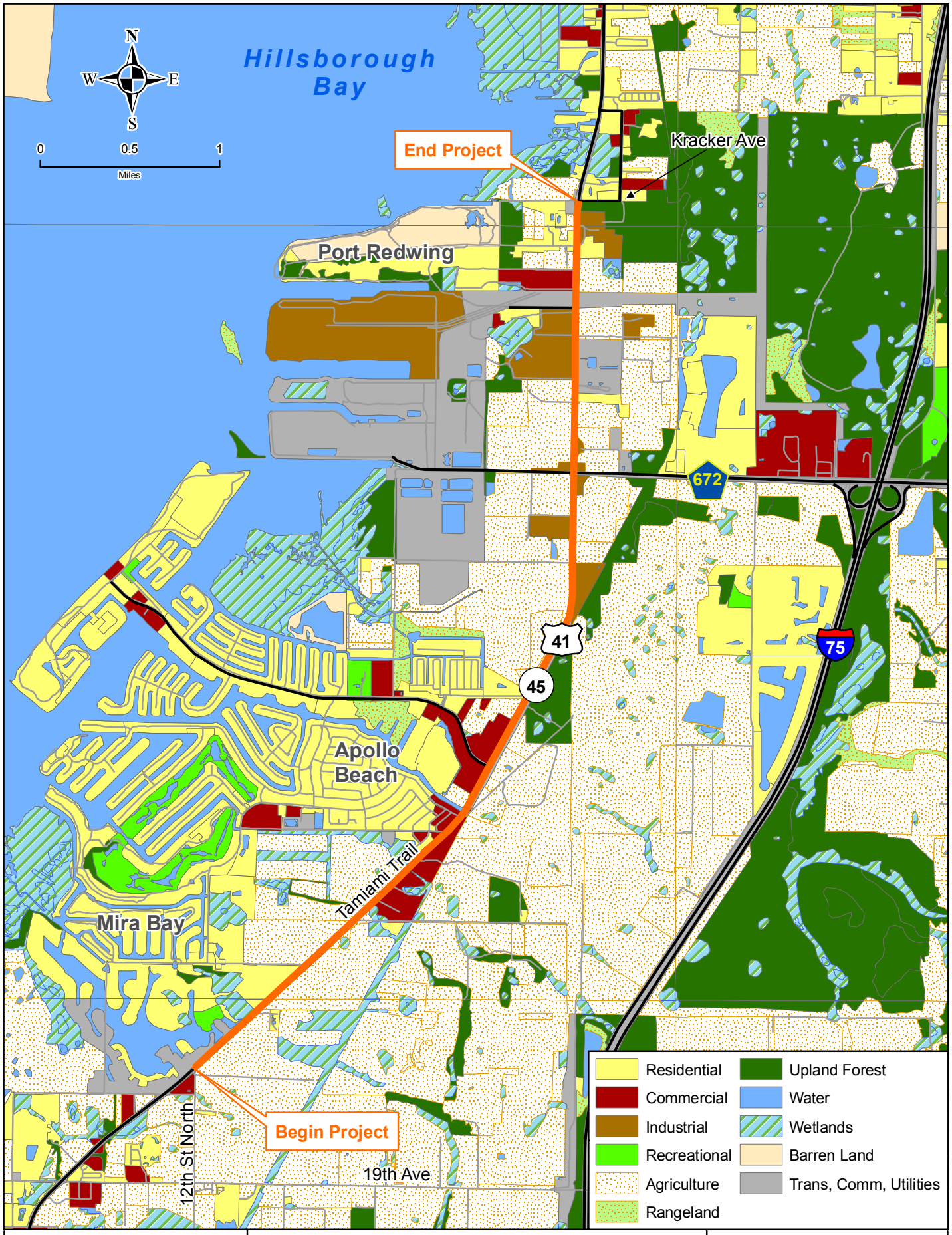
US 41 (SR 45) PD&E Study From 12th Street to Kracker Avenue Hillsborough County, Florida WPI Segment No. 421140-8	**US 41 Proposed Build Alternative Typical Sections**	**Figure 2-2** **Sheet 2 of 2**

Section 3 – LAND USE

3.1 Existing Land Use

The study corridor, located in south Gibsonton, Apollo Beach and north Ruskin is primarily agricultural with commercial, residential and industrial areas. The industrial areas are located mainly in the northern portion of the study limits. The Florida Land Use, Cover and Forms Classification System (FLUCCS) from the Southwest Florida Water Management District (SWFWMD), together with aerial photographs and wetland data from the National Wetland Inventory (NWI), were utilized to determine current land use and habitat types within the corridor. These land uses and habitat types were subsequently ground-truthed for verification during field visits. **Figure 3-1** shows the existing land use within the corridor. Due to the large areas of agricultural land, commercial development, industrial sites and newer residential development, there is very little natural landscape found along the project corridor.

According to the 2004 existing FLUCCS land use data, the land use codes found along the corridor include: Residential medium density (120); Residential high density (130); Commercial and services (140); Industrial (150); Recreational (180); Cropland and pastureland (210); Row crops (214); Nurseries and vineyards (240); Hardwood conifer mixed (434); Pine flatwoods (411); Reservoirs (530); Wetland forested mixed (630); and Utilities (830).



US 41 (SR 45) PD&E Study

from 12th Street to Kracker Avenue
Hillsborough County, FL
WPI Segment No. 421140-8

Existing Land Use Map

Source: FGDL, SWFWMD

Figure 3-1

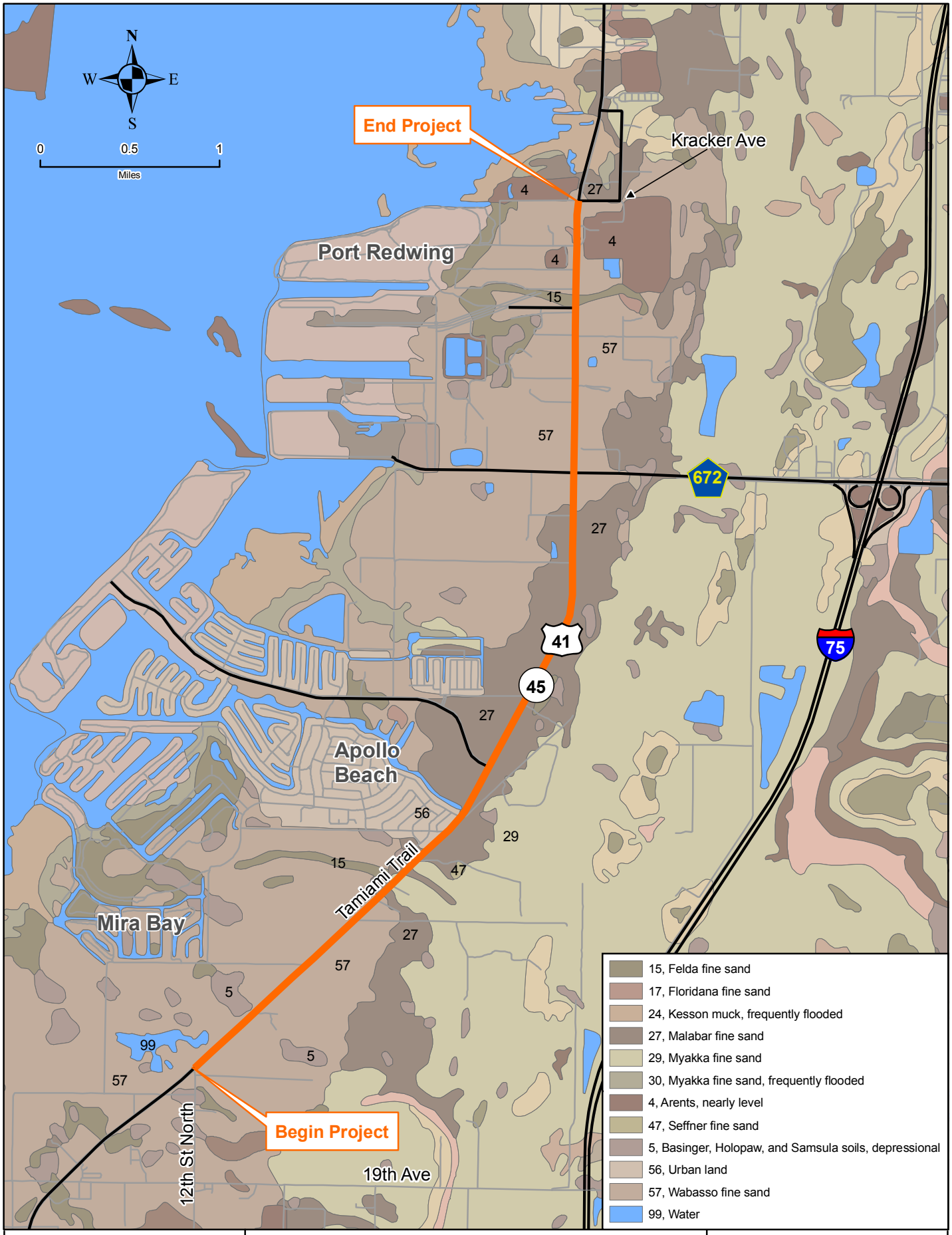
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

3.2 Soils

The Soil Survey for Hillsborough County, Florida provides general descriptions of subsurface conditions of the county. Hillsborough County is located in the Floridian section of the Atlantic Coastal Plain. The project is located in the Coastal Lowlands, which are low, nearly level plains that lie next to the coast. The Soil Survey for Hillsborough County indicates that there are multiple soil types that exist within and/or adjacent to the corridor. These soil types and their identification numbers are as follows: Arents, nearly level (4); Basinger, Halopaw, and Samsula soils, depressional (5); Felda fine sand (15); Floridana fine sand (17); Kesson muck, frequently flooded (24); Malabar fine sand (27); Myakka fine sand (29); Myakka fine sand, frequently flooded (30); Seffner fine sand (47); Urban land (56); Wabasso fine sand (57); and water (99). These soils are shown in **Figure 3-2**.

Approximately 40-45 percent of the soils along the project corridor are classified as hydric soils according to soil classifications found in the Soil Survey of Hillsborough County, Florida. The dominant hydric soil found along the project corridor is Malabar fine sand (29) and accounts for approximately 40-42 percent of the soil within the project corridor. Another prominent soil found within the project corridor includes Wabasso fine sand (57), which is not classified as hydric soil. This soil accounts for approximately 50-52 percent of the soil along the project corridor. A more detailed description of the prominent soils is given below.

- **Malabar fine sand** – Nearly level, poorly drained soil in low-lying sloughs and shallow depressions on the flatwoods. Slopes are 0 to 2 percent. In most years, the seasonal high water table fluctuates from the soil surface to a depth of about 10 for 2-6 months in the year. Natural vegetation found within this soil consists of cabbage palm, longleaf pine, and slash pine. The understory consists of broomsedge, bluestem, inkberry, maidencane, saw palmetto, and wax myrtle.



US 41 (SR 45) PD&E Study

from 12th Street to Kracker Avenue
Hillsborough County, FL
WPI Segment No. 421140-8

NRCS Soils Map

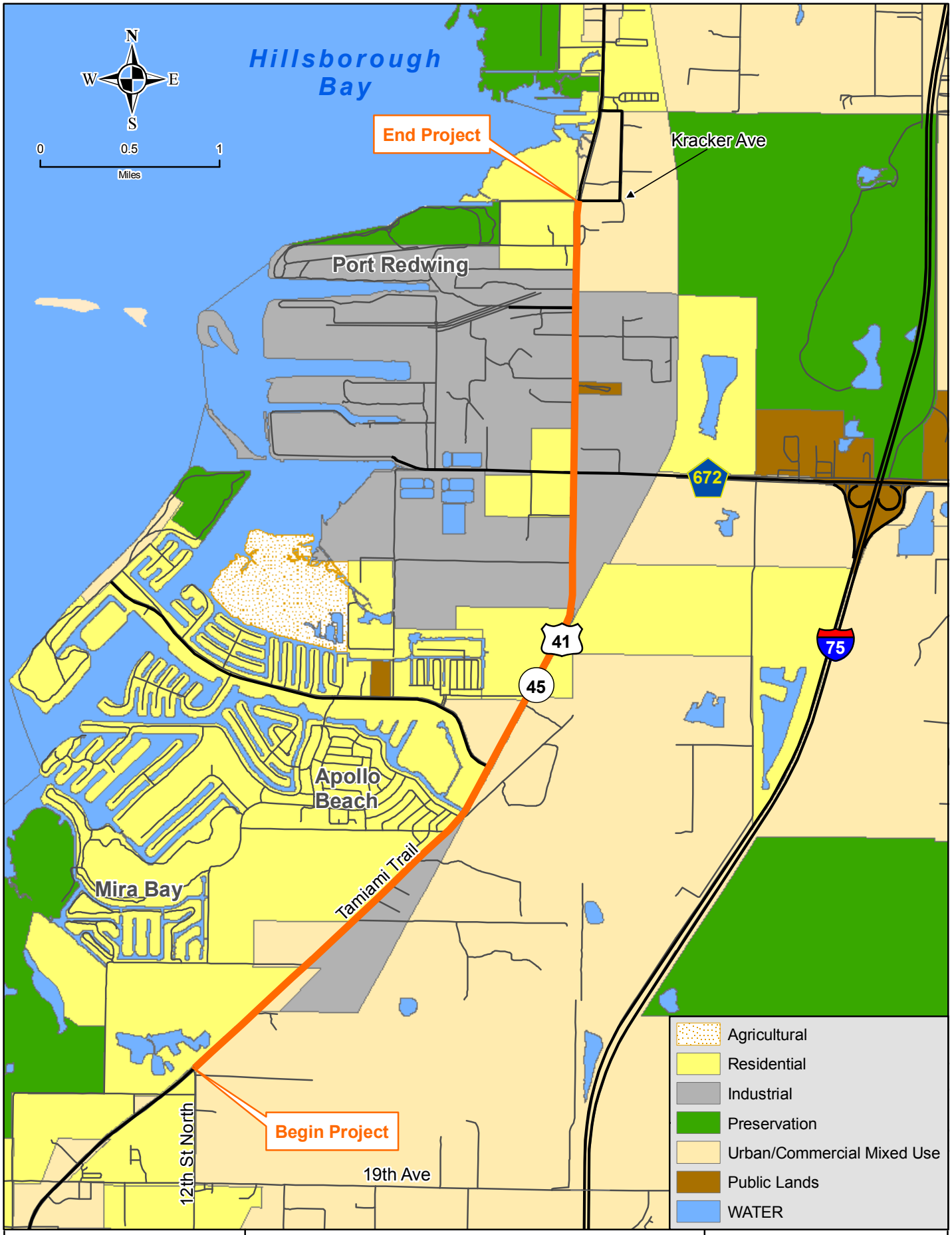
Source: FGDL, NRCS

Figure 3-2

- **Wabasso fine sand** – Nearly level, poorly drained soil on plains on flatwoods. Slopes are 0 to 2 percent. On average, the seasonal high water table fluctuates from the soil surface to a depth of 10 inches for 2 months and recedes to a depth of 40 inches during prolonged dry periods. The natural vegetation consists of longleaf pine and slash pine. The understory includes lopsided indiangrass, gallberry, saw palmetto, pineland threeawn, and wax myrtle.

3.3 Future Land Use

According to the Hillsborough County Future Land Use Map (2015), the entire project corridor is transitioning from a dominantly agricultural area with some residential and commercial development to a predominantly residential and commercial/mixed urban area with some industrial and natural preservation lands (**Figure 3-3**). This transformation is currently taking place as many of the existing agricultural areas along this stretch of US 41/SR 45 are being converted to residential subdivisions and retail/office development. Numerous Developments of Regional Impact (DRIs) are approved along or near the project corridor and include the following: Big Bend Terminal, Southbend, Apollo Beach, Wolf Creek Branch, Harbor Bay, and South Shore Corporate Park. These DRIs are illustrated in **Figure 3-4**. These approved DRIs will play a major role in the conversion of this area from its existing land uses to predominantly residential and commercial/urban mixed land uses.



US 41 (SR 45) PD&E Study

from 12th Street to Kracker Avenue
Hillsborough County, FL
WPI Segment No. 421140-8

Future Land Use Map 2015

Source: FGDL, SWFWMD

FIGURE 3-3

US 41 (SR 45) PD&E Study

from 12th Street to Kracker Avenue
Hillsborough County, FL
WPI Segment No. 421140-8

Developments of Regional Impact (DRI) Map

Source: FGDL

FIGURE 3-4

Section 4 – WETLANDS

4.1 Methodology

The proposed project has been evaluated for potential impacts to wetlands. Preliminary wetland evaluations were based on information from the U.S. Geological Survey (USGS) topographic maps; Soil Survey of Hillsborough County; 2006 National Wetlands Inventory (NWI) data; aerial photography; and GIS data from Florida Natural Areas Inventory (FNAI), SWFWMD, Hillsborough County, and the Florida Geographic Database Library (FGDL). **Figure 4-1** illustrates the location of wetlands and surface waters within the project corridor.

Project scientists identified numerous ditches and swales that run parallel to or intersect the project corridor. Many of these ditches are either used for stormwater treatment or are part of the agricultural activities found along the corridor. There are a few pocket wetlands located along the corridor that contain species such as Brazilian pepper (Schinus terebinthifolius), Carolina willow (Salix caroliniana), cattails (Typha spp.), and ludwigias (Ludwigia spp.). Wetlands were delineated using the U.S. Army Corps of Engineer's (USACE) Manual for Identifying and Delineating Jurisdictional Wetlands, 1987, and the Florida Department of Environmental Protection's (FDEP) The Florida Wetland Delineation Manual, 1995 (Chapter 62-340, F.A.C.).

Wetlands are classified using the United States Fish and Wildlife Sevice's (USFWS) Classification of Wetlands and Deepwater Habitats Classification (Cowardin et. al. 1979) methodology and the FLUCCS codes (FDOT, 1999). A breakdown of the other surface waters classifications are shown in **Table 4-1**. A breakdown of the wetland classifications are shown in Table 4-2. Other surface waters include roadside ditches, and stormwater ponds. Wetlands and potential wetland impacts were assessed using the Uniform Mitigation Assessment Method (UMAM), Chapter 62-345, Florida Administrative Code (F.A.C.). UMAM assessments were conducted by grouping similar wetlands and completing UMAMs for groups of wetlands/surface waters.

NORTH

BRIGHTON SHORE DRIVE

VILLEMAIRE ROAD

MANNS HARBOUR DRIVE

COVESOUND WAY

MIRA BAY

MATCH LINE

155 160 165 170 175 180

182 200 182

2 2 3 3

41

DUNKEL MOTOR SERVICES

CALVARY EVANGELICAL LUTHERAN CHURCH

27TH AVE NE

BEGIN PD&E STUDY

121H STREET NORTHEAST

WO I

HARBOUR ISLES

MOON SHELL DRIVE

SANDY SHELL DRIVE

LEGEND

- FEMA 100 YEAR FLOOD PLAIN
- WETLAND OR OTHER SURFACE WATERS BOUNDARY
- POTENTIALLY CONTAMINATED SITE
- POTENTIAL POND SITE
- REMOVE MEDIAN OPENING
- POTENTIAL DIRECTIONAL MEDIAN OPENING
- PROPOSED ROADWAY
- 3 → NUMBER OF LANES
- FUTURE ROAD CONSTRUCTED BY OTHERS
- PROPOSED EDGE OF PAVEMENT
- PROPERTY LINES
- EXISTING ROW
- PROPOSED ROW TO BE ACQUIRED

0 50 200
Feet

DATE OF AERIAL: DECEMBER, 2006

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Jeffrey S. Novotny, P.E. No. 51083

FIGURE 4-1
WETLAND LOCATION MAP

FPID 421140-8-22-01

SHEET NO. 1 of 12

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MIRA BAY

GOLF AND SEA BOULEVARD

NORTH

MANNS HARBOUR DRIVE

MIRABAY BOULEVARD

FUTURE SHOPPING PLAZA

W02

W04

MATCH LINE

185 190 195 200 205 210

182

41

W05

HARBOUR ISLES

W03

SPINDLE SHELL WAY

M & I BANK

ANIMAL HOSPITAL

THE MARKETPLACE AT APOLLO BEACH

HAMMOCK VIEW LANE

LEGEND

- FEMA 100 YEAR FLOOD PLAIN
- WETLAND OR OTHER SURFACE WATERS BOUNDARY
- POTENTIALLY CONTAMINATED SITE
- POTENTIAL POND SITE
- REMOVE MEDIAN OPENING
- POTENTIAL DIRECTIONAL MEDIAN OPENING
- PROPOSED ROADWAY
- 3 → NUMBER OF LANES
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0 50 200

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FIGURE 4-1
WETLAND LOCATION MAP

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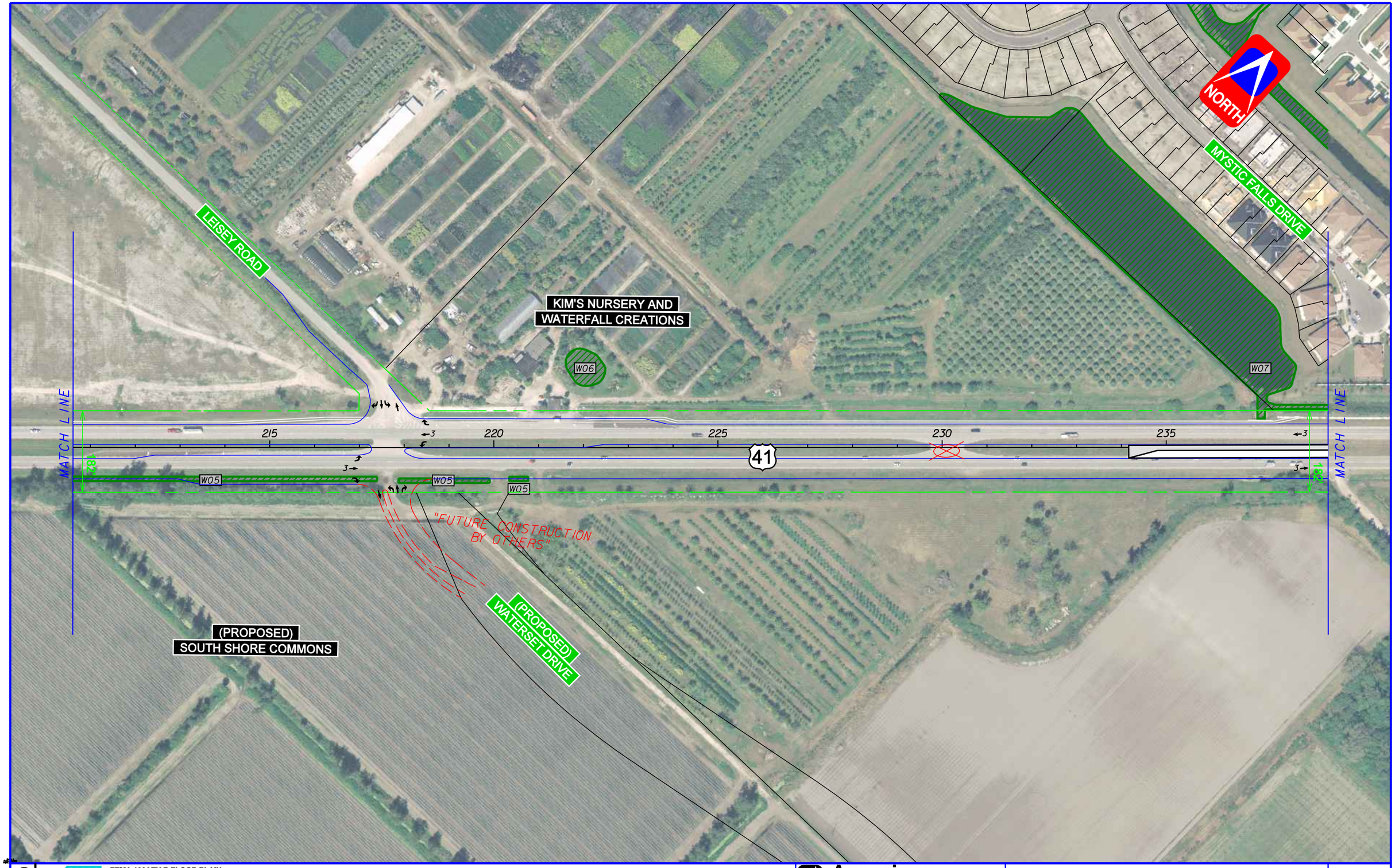

LEGEND

- FEMA 100 YEAR FLOOD PLAIN
- WETLAND OR OTHER SURFACE WATERS BOUNDARY
- POTENTIALLY CONTAMINATED SITE
- POTENTIAL POND SITE
- REMOVE MEDIAN OPENING
- POTENTIAL DIRECTIONAL MEDIAN OPENING
- PROPOSED ROADWAY
- 3 → NUMBER OF LANES
- FUTURE ROAD CONSTRUCTED BY OTHERS
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0 50 200
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FIGURE 4-1
WETLAND LOCATION MAP

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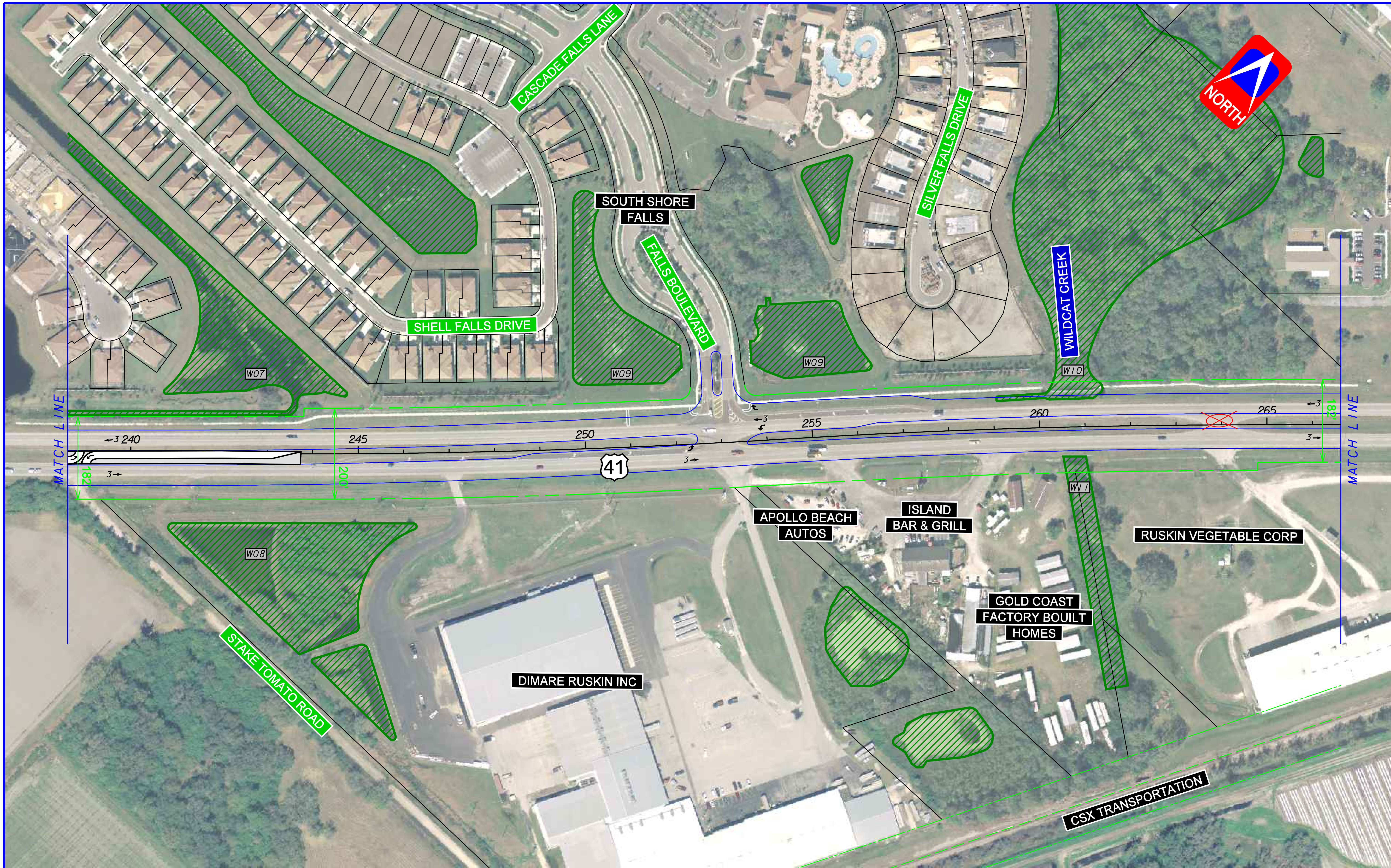

LEGEND

FEMA 100 YEAR FLOOD PLAIN	REMOVE MEDIAN OPENING
WETLAND OR OTHER SURFACE WATERS BOUNDARY	POTENTIAL DIRECTIONAL MEDIAN OPENING
POTENTIALLY CONTAMINATED SITE	PROPOSED ROADWAY
POTENTIAL POND SITE	3 → NUMBER OF LANES

FUTURE ROAD CONSTRUCTED BY OTHERS
PROPOSED EDGE OF PAVEMENT
PROPERTY LINES
EXISTING ROW
PROPOSED ROW TO BE ACQUIRED

0 50 200
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FIGURE 4-1
WETLAND LOCATION MAP

FPID 421140-8-22-01

SHEET NO.
4 of 12

LEGEND

- FEMA 100 YEAR FLOOD PLAIN
- WETLAND OR OTHER SURFACE WATERS BOUNDARY
- POTENTIALLY CONTAMINATED SITE
- POTENTIAL POND SITE
- REMOVE MEDIAN OPENING
- POTENTIAL DIRECTIONAL MEDIAN OPENING
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FIGURE 4-1
WETLAND LOCATION MAP

FPID 421140-8-22-01

SHEET NO. 5 of 12

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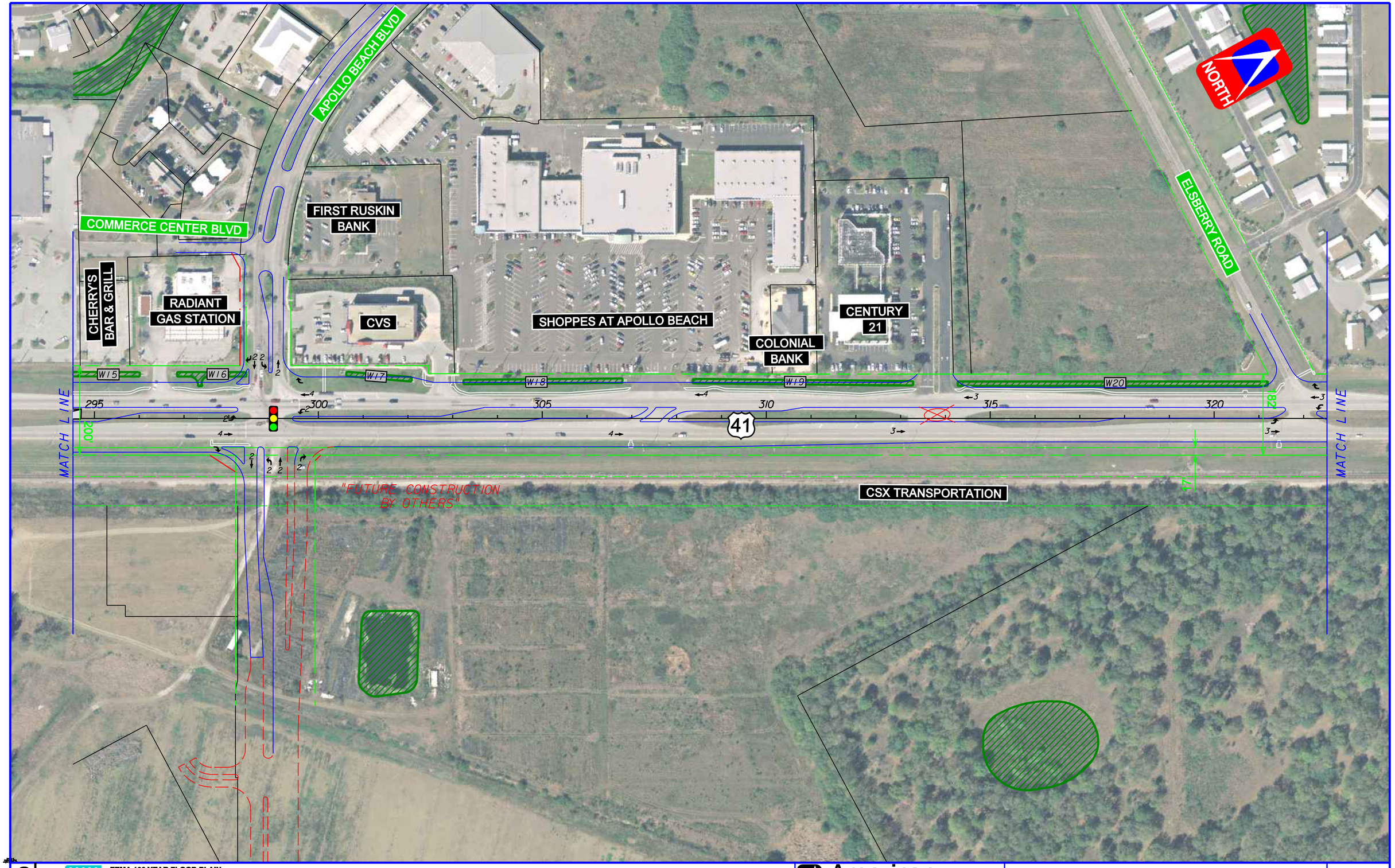

LEGEND

- FEMA 100 YEAR FLOOD PLAIN
- WETLAND OR OTHER SURFACE WATERS BOUNDARY
- POTENTIALLY CONTAMINATED SITE
- POTENTIAL POND SITE
- REMOVE MEDIAN OPENING
- POTENTIAL DIRECTIONAL MEDIAN OPENING
- PROPOSED ROADWAY
- 3 → NUMBER OF LANES
- FUTURE ROAD CONSTRUCTED BY OTHERS
- PROPOSED EDGE OF PAVEMENT
- PROPERTY LINES
- EXISTING ROW
- PROPOSED ROW TO BE ACQUIRED

0 50 200
Feet

DATE OF AERIAL: DECEMBER, 2006

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FIGURE 4-1
WETLAND LOCATION MAP

FPID 421140-8-22-01

SHEET NO. 6 of 12

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LEGEND

- FEMA 100 YEAR FLOOD PLAIN
- WETLAND OR OTHER SURFACE WATERS BOUNDARY
- POTENTIALLY CONTAMINATED SITE
- POTENTIAL POND SITE
- REMOVE MEDIAN OPENING
- POTENTIAL DIRECTIONAL MEDIAN OPENING
- PROPOSED ROADWAY
- 3 NUMBER OF LANES
- FUTURE ROAD CONSTRUCTED BY OTHERS
- PROPOSED EDGE OF PAVEMENT
- PROPERTY LINES
- EXISTING ROW
- PROPOSED ROW TO BE ACQUIRED

0 50 200
Feet

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FIGURE 4-1
WETLAND LOCATION MAP

FPID 421140-8-22-01

SHEET NO. 7 of 12

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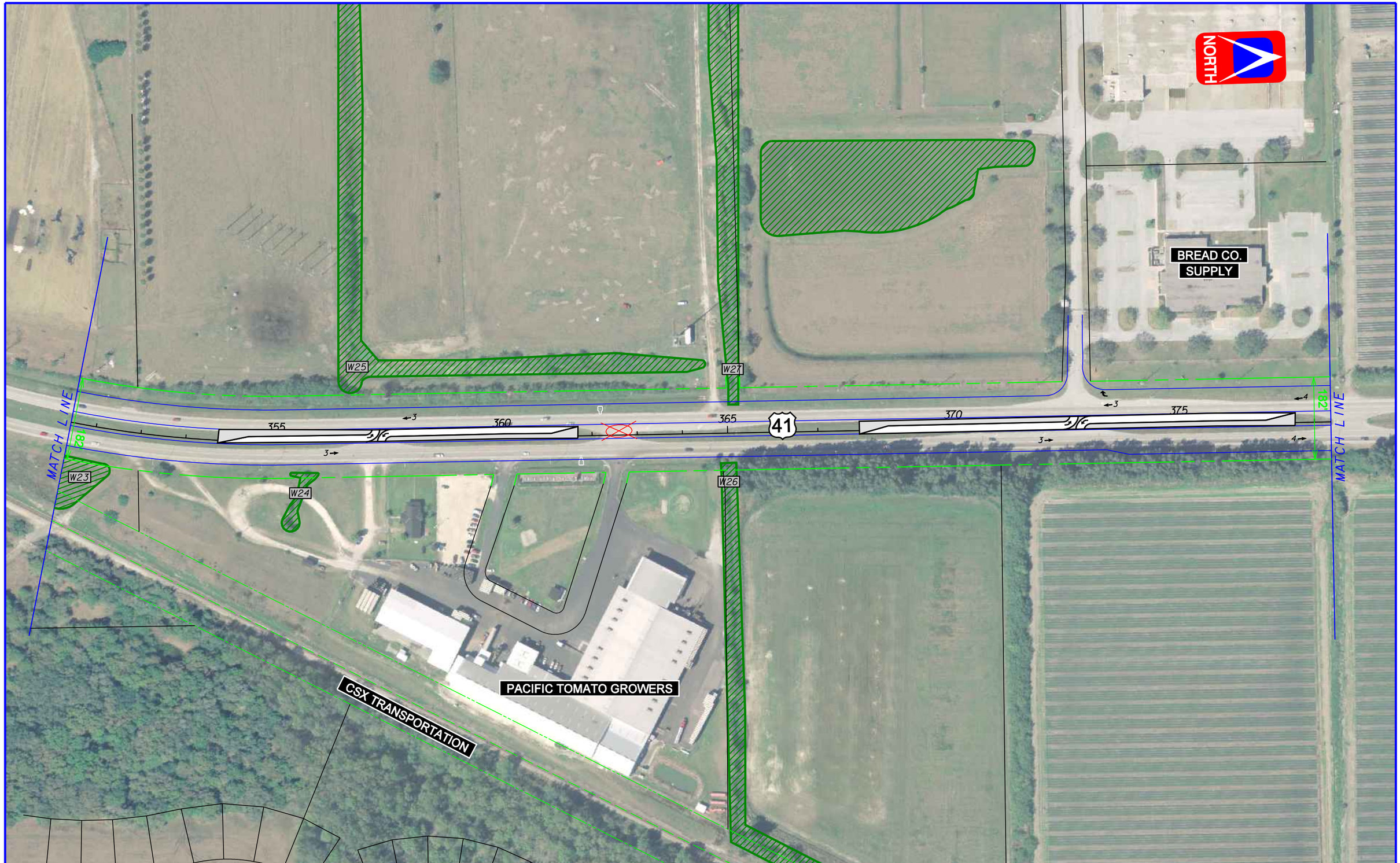

LEGEND

- FEMA 100 YEAR FLOOD PLAIN
- WETLAND OR OTHER SURFACE WATERS BOUNDARY
- POTENTIALLY CONTAMINATED SITE
- POTENTIAL POND SITE
- REMOVE MEDIAN OPENING
- POTENTIAL DIRECTIONAL MEDIAN OPENING
- PROPOSED ROADWAY
- 3 → NUMBER OF LANES
- FUTURE ROAD CONSTRUCTED BY OTHERS
- PROPOSED EDGE OF PAVEMENT
- PROPERTY LINES
- EXISTING ROW
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0 50 200
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FIGURE 4-1
WETLAND LOCATION MAP

FPID 421140-8-22-01

SHEET NO. 8 of 12

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LEGEND

- FEMA 100 YEAR FLOOD PLAIN
- WETLAND OR OTHER SURFACE WATERS BOUNDARY
- POTENTIALLY CONTAMINATED SITE
- POTENTIAL POND SITE
- REMOVE MEDIAN OPENING
- POTENTIAL DIRECTIONAL MEDIAN OPENING
- PROPOSED ROADWAY
- 3 → NUMBER OF LANES
- FUTURE ROAD CONSTRUCTED BY OTHERS
- PROPOSED EDGE OF PAVEMENT
- PROPERTY LINES
- EXISTING ROW
- PROPOSED ROW TO BE ACQUIRED

0 50 200
Feet

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FIGURE 4-1
WETLAND LOCATION MAP

FPID 421140-8-22-01

SHEET NO. 9 of 12

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NORTH

NATIONAL GYPSUM CO.

W36

W39

MATCH LINE

200

410

415

420

41

425

430

194

W35

W38

W37

W40

SOUTH COUNTY SOLID WASTE MANAGEMENT

POWELL ROAD

MARONDA INTEGRATED PRODUCTION SYSTEMS

LEGEND

- FEMA 100 YEAR FLOOD PLAIN
- WETLAND OR OTHER SURFACE WATERS BOUNDARY
- POTENTIALLY CONTAMINATED SITE
- POTENTIAL POND SITE
- REMOVE MEDIAN OPENING
- POTENTIAL DIRECTIONAL MEDIAN OPENING
- PROPOSED ROADWAY
- 3 → NUMBER OF LANES
- FUTURE ROAD CONSTRUCTED BY OTHERS
- PROPOSED EDGE OF PAVEMENT
- PROPERTY LINES
- EXISTING ROW
- PROPOSED ROW TO BE ACQUIRED

0 50 200

Feet

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FIGURE 4-1
WETLAND LOCATION MAP

FPID 421140-8-22-01

SHEET NO. 10 of 12

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LEGEND

- FEMA 100 YEAR FLOOD PLAIN
- WETLAND OR OTHER SURFACE WATERS BOUNDARY
- POTENTIALLY CONTAMINATED SITE
- POTENTIAL POND SITE
- REMOVE MEDIAN OPENING
- POTENTIAL DIRECTIONAL MEDIAN OPENING
- PROPOSED ROADWAY
- 3 → NUMBER OF LANES
- FUTURE ROAD CONSTRUCTED BY OTHERS
- PROPOSED EDGE OF PAVEMENT
- PROPERTY LINES
- EXISTING ROW
- PROPOSED ROW TO BE ACQUIRED

0 50 200
Feet

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FIGURE 4-1
WETLAND LOCATION MAP

FPID 421140-8-22-01

SHEET NO. 11 of 12

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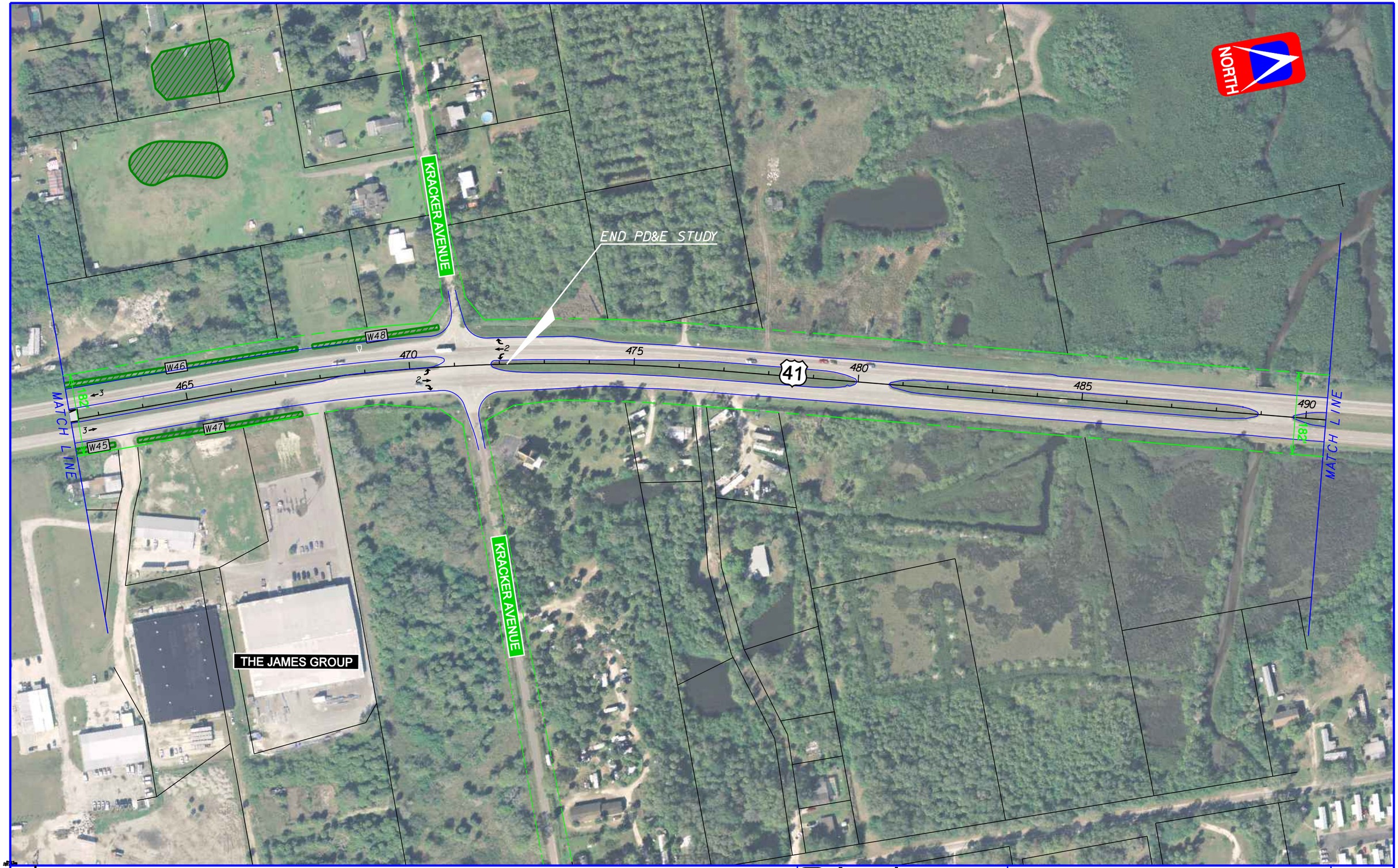

LEGEND

- FEMA 100 YEAR FLOOD PLAIN
- WETLAND OR OTHER SURFACE WATERS BOUNDARY
- POTENTIALLY CONTAMINATED SITE
- POTENTIAL POND SITE
- REMOVE MEDIAN OPENING
- POTENTIAL DIRECTIONAL MEDIAN OPENING
- PROPOSED ROADWAY
- 3 → NUMBER OF LANES
- FUTURE ROAD CONSTRUCTED BY OTHERS
- PROPOSED EDGE OF PAVEMENT
- PROPERTY LINES
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FIGURE 4-1
WETLAND LOCATION MAP

FPID 421140-8-22-01

SHEET NO. 12 of 12

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Table 4-1 – Wetland and OSW Classifications and Impact Acreage

Wetland Number	Wetland Type & USFWS Classification	Estimated Impact Acreage	
		Wetland	OSW
W01	Stormwater Facility - PUBHx		--
W02	Stormwater Facility - PUBHx		--
W03	Stormwater Facility - PUBHx		--
W04	Stormwater Facility - PUBHx		0.01
W05	Ditch - PUBCx		0.48
W06	Pond - PUBH		--
W07	Ditch - R2UBHx/Stormwater Facility -		0.01
W08	Freshwater Marsh - PEM1C/Non-forested -	--	
W09	Stormwater Facility - PUBHx		--
W10	Wetland Hardwood Mixed - PFO6C	0.12	
W11	Ditch - PUBCx		0.04
W12	Vegetated Non-forested - PSS6C	0.14	
W13	Canal from Bay - E1OW	0.11	
W14	Ditch - PUBCx		0.12
W15	Ditch - PUBCx		0.11
W16	Ditch - PUBCx		0.04
W17	Ditch - PUBCx		0.03
W18	Ditch - PUBCx		0.08
W19	Ditch - PUBCx		0.11
W20	Ditch - PUBCx		0.16
W21	Ditch/Open Water - POW		0.03
W22	Ditch - PUBCx		0.02
W23	Vegetated Non-forested - PSS6C	0.08	
W24	Depression Wetland - PEM2C	0.01	
W25	Ditch - PUBCx		--
W26	Ditch - PUBCx		0.01
W27	Ditch - PUBCx		0.02
W28	Ditch - PUBCx		0.16
W29	Ditch - PUBCx		0.06
W30	Herbaceous Pocket Wetland - PEM1C	0.02	
W31	Ditch - PUBCx		0.03
W32	Ditch - PUBCx		0.05
W33	Ditch - PUBCx		0.04
W34	Ditch - PUBCx		0.09
W35	Ditch - PUBCx		0.21
W36	Ditch - PUBCx		0.03
W37	Stormwater Facility - PUBHx		--
W38	Ditch - PUBCx		0.23
W39	Ditch - PUBCx		--
W40	Stormwater Facility - PUBHx		--
W41	Ditch - PUBCx		0.06
W42	Ditch - PUBCx		0.02
W43	Ditch - PUBCx		--
W44	Ditch - PUBCx		0.07
W45	Ditch - PUBCx		0.11
W46	Ditch - PUBCx		0.21
W47	Ditch - PUBCx		0.09
W48	Ditch - PUBCx		0.07
	Total	**0.48**	**2.80**

4.2 Wetland Classification

There are 48 wetlands and surface waters located within and adjacent to the project corridor. The wetlands and surface waters were numbered from south to north. The most common types of wetlands/surface waters within the project corridor are ditches used for conveying stormwater runoff and agricultural uses, along with a few isolated shrub pockets and one mangrove ditch/canal that stems from Tampa Bay. The dominant vegetation in many of these wetlands consists of, but is not limited to, Carolina willow (*Salix caroliniana*), Brazilian pepper (*Schinus terebinthifolius*), ludwigia (*Ludwigia spp.*), and cattails (*Typha spp.*). Many of the wetlands have been altered or bisected by the existing roadway. In this instance, a wetland number has been assigned for each portion of the wetland that has been bisected or fragmented by the existing roadway. Many of the surface waters observed along the project corridor also consisted of stormwater ponds and would be classified as other surface waters (OSW). **Table 4-1** provides the USFWS classification for wetlands identified along the study corridor.

Wetlands that have the potential to be impacted by the proposed roadway improvements have been grouped by the USFWS *Wetlands and Deepwater Habitats Classification of the United States.* General descriptions for each of these classifications are provided below.

4.2.1 Palustrine Emergent (PEM1C / PEM2C)

There are three (3) wetlands (W-8, W-24, and W-30) classified as Palustrine emergent wetlands with persistent and/or non-persistent vegetation that are located within or near the project corridor. Typical vegetation found within these wetlands includes pickerelweed (*Pontederia cordata*), rushes (*Juncus spp*.), Carolina willow, and sedges (*Carex spp.*). The water levels within these wetlands are seasonally flooded. Wading birds, amphibians and other wildlife species would be expected to utilize these wetlands.

4.2.2 Palustrine Scrub-Shrub (PSS6C)

There are three (3) wetlands (W-8, W-12, and W-23) classified as Palustrine scrub-shrub wetlands that are located within or near the project corridor. Typical vegetation found

within these wetlands consists of Carolina willow, ludwigia, cattails, Brazilian pepper, salt bush and some pickerelweed. These sites have been altered by the surrounding development and are located along the roadway, allowing less-desirable plant species to invade. Standing water was observed in the wetlands during field reviews indicating some hydrologic function.

4.2.3 Palustrine Forested (PFO6C)

There is one (1) wetland (W-10) classified as a Palusrine forested wetland that is located within the project corridor. W-10 is a part of Wildcat Creek which continues to the west. Typical vegetation found within W-10 consists of pickerelweed, Carolina willow, Brazilian pepper and ludwigia near the road and deciduous forested wetland tree species away from the road. Hydrologic indicators were observed within the wetland indicating good hydrologic function.

4.2.4 Estuarine Subtidal Open Water (E1OW) – Canal from Bay

There is one (1) wetland (W-13) classified as an estuarine subtidal open water wetland that is located within the project corridor. W-13 appears to be a manmade canal that is part of the Apollo Beach development. The canal comes right up to the existing roadway and consists of mangroves and Brazilian pepper along the fringes. There is direct connection to Tampa Bay through this canal. This system is tidally influenced and may provide some habitat for manatees, especially in cooler months. Hydrologic indicators, such as crab burrows, were observed in the system. Water was flowing into the systems from the east during the field review in August 2008.

4.2.5 Palustrine Unconsolidated Bottom (PUBCx) - Ditches

There are thirty-three (33) ditches (W-5, W-7, W-11, W-14 – W-22, W-25 – W-29, W-31 – W-36, W-38, W-39 and W-41 - W-48) located within or near the project corridor. Most, if not all, of the ditches appear to be manmade and are used for either agricultural purposes for the surrounding lands or are used as a source of stormwater runoff/treatment for the existing roadway. Common wetland plant species found within the ditches are cattails, ludwigia, Brazilian pepper, and Carolina willow. A few of the ditches are open

water features that have minimal vegetation within the ditch. These appear to be inundated throughout most of the year. It would be anticipated that the remaining ditches are inundated periodically, especially after rain events. Some of the ditches along the corridor could be classified as other surface waters (OSWs) since they are manmade and excavated from uplands. Although, these ditches provide potential foraging habitat for the wood stork and other wading birds. Therefore, mitigation may be required to offset potential loss of wood stork habitat.

4.2.6 Palustrine Unconsolidated Bottom (PUBHx) – Stormwater Facilities

The remaining wetlands/surface waters (W-1 – W-4, W-6, W-7, W-9, W-37 and W-40) are stormwater management facilities that were constructed for the surrounding developments. Most of these systems are open water bodies with minimal wetland vegetation present. These facilities may provide minimal habitat for some birds, amphibians and other small animals, but would not considered quality habitat for most species. No impacts to the stormwater facilities themselves are anticipated, but there may be some impact to the roadway ditches that appear to be connected to these systems.

4.3 Wetland Impacts

The wetland impacts were assessed out to the right-of-way for US 41/SR 45. A total of 0.48 acres of wetland and 2.80 acres of OSW are anticipated to be impacted due to the construction of the proposed project. The majority of the wetlands that may be impacted consist mainly of excavated ditches along with some freshwater forested, freshwater herbaceous and non-forested vegetated wetlands consisting of species such as Carolina willow, ludwigia, cattails, and Brazilian pepper. Many of the wetlands that have the potential to be impacted by the roadway improvements have either previously been altered by the original construction of US 41/SR 45, were constructed to provide stormwater treatment for the roadway or surrounding development, or were constructed for use for agriculture, and thus are of low quality.

4.4 Functional Analysis

The Uniform Mitigation Assessment Method (UMAM) was used to assess functions and values for the wetlands within the project corridor. The ratings (delta values) are expressed numerically with numbers ranging between 0 and 1, with 1 representing an extremely high quality wetland and 0 reflecting an extremely low quality wetland, or an area that is no longer functioning as a wetland. UMAM assessments were performed for similar groups of wetlands that could potentially be impacted by the proposed roadway improvements. The wetlands were grouped since there are multiple wetlands/ditches that have similar characteristics located along the corridor. The delta values ranged from 0.20 to 0.73. The functional loss of a wetland system is the estimated loss of wetland function by the proposed impacts and is calculated by multiplying the delta value by the impact acreage. Functional loss values for wetlands along the project corridor range from 0.01 to 0.82. Functional loss values are used to determine the amount of mitigation that would be required to offset the loss. Different formulas are used based on the type of proposed mitigation. The UMAM assessments are included in **Appendix B**. A summary of the assessments are shown below in **Table 4-2**.

Table 4-2 – UMAM Summary

Wetland/Surface Water	Impact Acreage	Delta Value	Funtional Loss
PEM1C/PEM2C	0.03	0.47	0.01
PSS6C	0.22	0.60	0.56
PFO6C	0.12	0.60	0.07
E1OW	0.11	0.73	0.08
PUBCx	2.80	0.20	0.56

4.5 Wetland Impact Mitigation

There are no practical avoidance alternatives to the construction of the proposed project within wetland areas. Minimization and avoidance measures for wetland impacts were taken into consideration during this study. All practicable measures to reduce impacts to wetlands will be implemented during design and construction of this project. Temporary construction-related impacts will be minimized by adherence to FDOT's "*Standard Specifications for Road and Bridge Construction*" during the construction phase of this project.

Mitigation for wetland impacts will be required as a result of the proposed roadway improvements. The use of off-site regional mitigation banks, or the transfer of the proper amount of funds for use by the Water Management District, as provided in Florida Statute 373.4137, are viable options for mitigation of wetland impacts for this project. Also, on-site mitigation, either by creation, enhancement, or conservation of wetlands, is another alternative, although the costs for acquisition of additional right-of-way may make this option less feasible for the FDOT.

4.6 Coordination with Permitting Agencies

Coordination with the proper federal and state agencies will be conducted during the design phase of this project. All necessary permits will be acquired. Environmental permits are anticipated to be required from the following agencies:

* U.S. Army Corp of Engineers (ACOE) – Section 404 permit
* Southwest Florida Water Management District (SWFWMD) – ERP Permit
* Florida Department of Environmental Protection (FDEP) – NPDES Permit

Section 5 – WILDLIFE AND HABITAT

5.1 Introduction and Methodology

Suitable habitat for federal- and state-listed species was investigated for presence or absence during field reviews in accordance with 50 CFR Part 402 of the Endangered Species Act of 1973, as amended, and Part 2, Chapter 27 of the FDOT *PD&E Manual: Wildlife and Habitat Impacts*. A literature review and agency database search was conducted to determine the presence and/or absence of federal- and state-listed species and their critical habitat. Agency coordination and field surveys were then conducted in each habitat type in August 2008 to identify any protected species and/or critical or potential habitat within the project corridor. In addition, random surveys were performed along the corridor throughout the duration of the study to obtain data on resident and transient species. Species surveys were conducted during evaluation of wetlands and other critical habitats along the project corridor.

Coordination with the Florida Fish and Wildlife Conservation Commission (FFWCC), the USFWS, and the FNAI was initiated early in the PD&E Study process to obtain comments and elemental occurrence records on listed species within the project corridor.

In June 2008, the project's Advance Notification (AN) package was sent electronically to numerous agencies to initiate early agency coordination. This was done in addition to coordination conducted as part of the ETDM process in which agencies were given an opportunity to comment on the project early in the study process.

According to a GIS database review, multiple strategic habitats for wading birds, as determined by the FFWCC, exist to the west and northwest of the project corridor near the coast of Tampa Bay. The nearest strategic habitat for wading birds is located just over a half-mile to the northwest of the project corridor. The strategic habitats, along with species occurrence data, are illustrated in **Figure 5-1**.

US 41 (SR 45) PD&E Study

12th Street to Kracker Avenue

FPID: 421140-8-22-01

Hillsborough County

Figure 5-1

Strategic Habitat and Conservation Areas

5.2 FEDERAL LISTED SPECIES

No federal threatened or endangered floral species were observed within the project corridor during field reviews conducted in August 2008. Literature and data reviews, along with field observations were conducted to support the absence of these species. Minimal critical habitat is present within the project corridor to support most threatened and endangered faunal species. The ditches and surface waters located along the corridor may provide foraging habitat for the wood stork and other wading birds at times throughout the year.

5.2.1 Wood Stork

The wood stork (*Mycteria americana*) is listed as endangered both federally and in the state of Florida. Wood storks usually nest in inundated forested wetlands, such as cypress domes, hardwood swamps, and even mangrove fringes and forage in the shallow waters of marshes, swamps, ponds, tidal creeks, wet pastures and ditches, mainly searching for fish. The distribution of the wood stork is throughout Florida, but they are much less frequent in the panhandle and the Florida Keys. This species has a Core Foraging Area (CFA) of 15 miles in central Florida. The project corridor has suitable foraging habitat for the wood stork, most of which is located in ditches along the roadway. Many of the ditches are overgrown with Brazilian pepper and Carolina willow and may not provide optimal foraging habitat. The nearest wood stork rookeries (615333 & 615336) are located approximately 3 miles to the northwest and 5 miles to the south of the project corridor, respectively. The entire project area is located within the CFA of these rookeries. Wood stork rookery 615333 is located on an island to the west of the mouth of the Alafia River and wood stork rookery 615336 is located to the east of I-75 along the Little Manatee River.

Since the project is located within the CFA of two wood stork rookeries, all impacts to non-forested wetlands are anticipated to be mitigated for within the CFA of these rookeries or a nearby wood stork rookery. Because wood storks forage over such an extensive area, no colony would be solely dependent on any of the foraging areas within

the project corridor. No nesting areas will be impacted by this proposed project. It is anticipated that the project may affect, but is not likely to adversely affect the wood stork.

5.2.2 Eastern Indigo snake

The Eastern indigo snake (*Drymarchon couperi*) is federally and state listed as threatened. This snake lives in a variety of habitats found within the project corridor including pine flatwoods and hardwood forests. Eastern indigo snakes typically require large tracts of suitable habitat which do not occur along the project corridor. Though no Eastern indigo snakes were observed in the field, the FNAI indicates that they likely exist along the project corridor, although, the last sitings in the area date back to 1972 and earlier. Given the limited number of large tracts of suitable habitat along the corridor, it is anticipated that the project may affect, but is not likely to adversely affect the eastern indigo snake.

5.2.3 American Alligator

The American alligator (*Alligator mississippiensis*) is federally listed as threatened due to its similarity to the American crocodile (*Crocodylus acutus*) and is state listed as a species of special concern. They are found in most permanent bodies of fresh water, such as lakes, rivers, marshes and swamps. Adult alligators range from 6-15 feet in length. Alligators can be differentiated by crocodiles by their broad, rounded snout, and by the fact that alligators usually do not have visible lower teeth when the jaws are closed. Alligators are usually active in the warmer months during spring, summer and early fall. These reptiles nest in the spring and hatch their eggs in the summer. Alligators can be found throughout the state, but are rare in the Florida Keys since there is not as much freshwater habitat.

There are not many permanent water bodies or large wetland systems found along the project corridor. Therefore, minimal suitable habitat for the American alligator is present. Since wetland impacts will be mitigated for pursuant to Part IV, Chapter 373, F.S. and U.S.C. 1344, it is anticipated that the project will not adversely affect the American alligator.

5.2.4 Manatee

The manatee (*Trichechus manatus*) is a large gray aquatic mammal that is listed as endangered both federally and by the state of Florida. Manatees are found throughout most of the state and inhabit coastal waters, rivers, bays and even sometimes lakes. Manatees are usually found in warm water; therefore, in the colder months they travel into rivers, creeks, canals or springs. Wetland 13 (W13) provides habitat for manatees and is a potential area for manatees to go in colder months, although it is unlikely that manatees would inhabit this portion of the canal. Manatee grates may be considered if there are any culverts that exceed 8 inches in diameter and are not greater than 8 feet in diameter.

The Standard Manatee Conditions for In-Water Work may be used during the construction phase of this project. Contractors would be instructed to inspect any turbidity barriers used during construction on a regular basis for entrapment of manatees. Any entrapment or injuries to manatee would be reported immediately to the FFWCC. Due to the minimal habitat for manatees found along the project corridor, it is anticipated that construction of this project will not adversely affect the manatee.

5.3 State Listed Species

No state threatened or endangered floral species were observed within the project corridor. Literature and data reviews, along with field observations were conducted to support the absence of these species. No state listed faunal species were observed along the project corridor during field reviews as well. Potential habitat is available within the study corridor to support the bald eagle, snowy egret, Florida sandhill crane, white ibis, little blue heron, tricolored heron, and gopher tortoise.

5.3.1 Bald Eagle

According to the FNAI tracking list (September 2008) the bald eagle (*Haliaeetus leucocepalus*) is not listed federally or with the state of Florida. The bald eagle prefers habitats near coastal areas, including bays, rivers, lakes, and other open water bodies. These habitats provide food sources such as fish, waterfowl, and wading birds. Eagles

usually nest in tall trees, but have been known to nest in lower-lying trees and even on the ground. The bald eagle is located throughout the state, especially near coastal areas. There were no bald eagles or eagle nests observed within or near the project corridor. According to the FFWCC eagle nest locator, the closet active eagle nest (HL-005) is located approximately 2 miles east of the study corridor which is considerably greater than the 660 foot no activity buffer zone requiring USFWS review.

The project is not expected to impact any existing foraging areas or any potential nesting trees in or adjacent to the corridor. There are no large open water bodies that surround the project corridor that are anticipated to be impacted by the construction of this project. Surveys for bald eagles will also be conducted during the design phase. Further, if bald eagles are discovered during the design phase, the standard construction precautions from the FFWCC will be followed. Therefore, it is anticipated that the project will not adversely affect the bald eagle.

5.3.2 Snowy Egret

The snowy egret (*Egretta thula*) is a wading bird, listed as a species of special concern, which nests in shallow waters of both inland and coastal wetlands, usually in shrubs such as willows or mangroves. This species feeds in flooded wetlands, lakes, streams, manmade ditches and impoundments, and swamps. No snowy egrets were observed during field inspections, but suitable habitat is located within this area.

Mitigation for impacts to wetlands will be assessed during the design phase of this project. Mitigation will be conducted to offset all impacts to wetlands; therefore, it is anticipated that the project will not adversely affect the snowy egret.

5.3.3 Florida Sandhill Crane

The Florida sandhill crane (*Grus Canadensis pratensis*) is a large, long-necked bird that is likely to be found in or near prairies, pasture lands, and freshwater marshes. This species prefers wetlands that consist mainly of pickerelweed (*Pontederia cordata*) and maidencane (*Panicum hemitomon*). They can also be found on golf courses, crop fields,

and other open areas. Sandhill cranes are listed as a threatened species in Florida. Nesting season for the Florida sandhill crane ranges from January to June. No sandhill cranes or their nests were observed in the field. Foraging habitat exists within the project corridor, in areas such as ditches, agricultural fields and the existing wetlands. Mitigation for impacts to wetlands will be assessed during the design phase of this project. Many of the ditches that are proposed to be impacted will be replaced along the corridor. Mitigation will be conducted to offset all impacts to wetlands; therefore, it is anticipated that the project will not adversely affect the Florida sandhill crane.

5.3.4 White Ibis

The white ibis (*Eudocimus albus*) is a species of special concern in Florida that inhabits many types of wetland habitats, such as forested wetlands, wet prairies, freshwater and saltwater marshes, swales, ditches, salt flats and inundated fields. Foraging for this species usually occurs in freshwater habitats, since a high-salt diet can affect the growth rate of offspring. White ibis can be found throughout the state, especially in summer months.

Mitigation for impacts to wetlands will be assessed during the design phase of this project. Many of the ditches that are proposed to be impacted will be replaced along the corridor. Mitigation will be conducted to offset all impacts to wetlands; therefore, it is anticipated that the project will not adversely affect the white ibis.

5.3.5 Little Blue Heron

The little blue heron (*Egretta caerulea*) is a medium-sized wading bird that has its largest nesting colonies within coastal wetland habitats, but prefers to forage in freshwater wetlands, such as lakes, marshes and streams. In freshwater habitats, this species nests in cypress, red maple, willow and cabbage palms. The little blue heron can be found throughout Florida and is listed as a species of special concern. No little blue herons were observed during field visits, but potential habitat does exist along the corridor.

Mitigation for impacts to wetlands will be assessed during the design phase of this

project. Mitigation will be conducted offset all impacts to wetlands; therefore, it is anticipated that the project will not adversely affect the little blue heron.

5.3.6 Tricolored Heron

The tricolored heron (*Egretta tricolor*) is a medium-sized heron that prefers nesting on mangrove islands or in willow-dominated freshwater habitats. Nesting for the tricolored heron usually occurs within areas over standing water or on islands. The tricolored heron forages in flooded wetlands, mangrove and tidal wetlands, and along the edges of lakes and ponds. This species is found throughout Florida and is listed as a species of special concern. There are a few willow-dominated wetlands found along the corridor, but these are small isolated systems that provide minimal habitat.

Mitigation for impacts to wetlands will be assessed during the design phase of this project. Mitigation will be conducted to offset all impacts to wetlands; therefore, it is anticipated that the project will not adversely affect the tricolored heron.

5.3.7 Gopher Tortoise

The gopher tortoise (*Gopherus polyphemus*) is listed as a species of special concern in Florida. Gopher tortoises occur in well-drained to excessively drained sandy soils with an open canopy that provides ample herbaceous vegetation for foraging. The project corridor contains some pockets of suitable conditions for this species. No gopher tortoises or signs of gopher tortoises were observed in the field nor have any occurrences been documented within the corridor. There is a potential for gopher tortoises to inhabit the roadside right-of-way and a few pine stands found along the corridor. Surveys for gopher tortoises are likely to be conducted during the design phase of this project.

Due to the limited amount of habitat and lack of burrows identified in the field, it is anticipated that the project will not adversely affect the gopher tortoise.

5.4 Summary

The project has been evaluated for impacts to federal- and state-protected threatened and endangered species. A literature review was conducted to identify any threatened or endangered species which may inhabit the project area. Since habitat within the right-of-way is not appropriate for most of these species and only suboptimal habitat is present adjacent to the right-of-way, most species are not expected to be impacted. Any impacts to critical habitat that may be inhabited by federal- and state-listed threatened or endangered species will be evaluated again in the design phase of this project. Review of FNAI data and coordination with FFWCC has been conducted to provide support that federal and state protected threatened and endangered species will not be adversely affected by the proposed roadway project.

The proposed roadway improvements are not anticipated to adversely impact any federal- or state-listed species or their critical habitat. Impacts to federal-listed species are as follows: the proposed roadway improvements will not adversely affect the American alligator and manatee, but may affect, but is not likely to adversely affect the wood stork and eastern indigo snake. Impacts to state-listed species are as follows: the proposed roadway improvements will not adversely affect the bald eagle, snowy egret, Florida sandhill crane, white ibis, little blue heron, tricolored heron, and gopher tortoise. Any impacts to critical habitat for any federal- or state-listed species will be addressed during the design phase of this project.

Section 6 - REFERENCES

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Appendix A
Site Photographs

Representative roadside ditch – 8/7/2008

Representative shrub/scrub non-forested wetland – 8/7/2008

Mangrove wetland connected to Bay – 8/7/2008

Mangrove wetland connected to Bay – 8/7/2008

Overgrown ditch running perpendicular to roadway – 8/7/2008

Appendix B
UMAM Assessments

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 PD&E, Hillsborough County		W5, W7, W11, W14, W15, W16 W17, W18, W19, W20, W21, W22, W25, W26, W27, W28 , W29, W31, W32, W33, W34, W35, W36, W38, W39, W41, W42, W43, W44, W45, W46, W47, W48

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
640 - Vegetated Non-Forested Wetlands	PUBCx	Permanent Impact	4.123 acre

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importa
Tampa Bay Drainage	Class III	**N/A**

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

Surface waters (ditches) are located throughout the project. Surface waters are connected to each other as well as other stormwater ponds, wetlands and the Gulf of Mexico. Most direclty border US 41 on both the east and west sides.

Assessment area description

Surface waters bordering the project are ditches that have naturally recruited wetland species. Dominant species include Carolina willow, Brazilian pepper, primrose willow, pickerel weed, cattails, and salt bush. Most of the surface waters have been invaded by the invasice exotic Brazilian pepper. The assessment is largely developed with residential and commercial areas as well as large citrus (???) groves. The CSX railroad borders the roadway through much of the project.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The surface waters are located directly adjacent to US 41 through out the project and drain to other surface waters, wetlands, stormwater ponds and the Gulf of Mexico.	Areas similar to assessment area are relatively common throughout the watershed.

Functions	Mitigation for previous permit/other historic use
Water filtration and conveyance, forage for birds, amphibians and mammals.	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)
Gopher Frog, American Alligator, Eastern Diamondback Rattlesnake, Eastern Indigo Snake, Gopher Tortoise, Florida Pine Snake, Suwannee Cooter, Short-tailed snake, Cooper's Hawk, Roseate Spoonbill, Limpkin, Florida burrowing owl, Great Egret, Short-tailed Hawk, Little Blue Heron, reddish egret, Snowy Egret, Tri-colored Heron, Swallow-tail kite, White Ibis, Merlin, Peregrine Falcon, Kestrel, Sandhill Crane, Bald Eagle, Wood Stork, Night Herons, Osprey, Brown Pelican, Hairy Woodpecker, Glossy Ibis, Fox Squirrell	American Alligator (T and SSC), Eastern Indigo Snake (T), Gopher Tortoise (SSC), Florida Pine Snake (SSC), Short-tailed snake (T), Suwannee cooter (SSC), Roseate Spoonbill (SSC), Limpkin (SSC),Florida burrowing owl (SSC), Little Blue Heron (SSC), reddish egreat (SSC), Snowy Egret (SSC), White Ibis (SSC), Kestrel (T), Sandhill Crane (T), Bald Eagle (T), Wood Stork (E), Brown Pelican (SSC), Osprey (SSC), fox squirrell (SSC)

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

No obvious signs of wildlife utilization were observed along the project corridor during the field reviews.

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
Chris Salicco, Corey Carter, Anna Peterfreund	**7-Aug-08**

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 PD&E, Hillsborough County		W5, W7, W11, W14, W15, W16 W17, W18, W19, W20, W21, W22, W25, W26, W27, W28 , W29, W31, W32, W33, W34, W35, W36, W38, W39, W41, W42, W43, W44, W45, W46, W47, W48
Impact or Mitigation	Assessment conducted by:	Assessment date:
Impact	Chris Salicco, Corey Carter, Anna Peterfreund	**7-Aug-08**

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: **5** / with: **2**	Current Condition - Surface waters are located throughout the project. Surface waters are connected to each other as well as other stormwater ponds, wetlands and the Gulf of Mexico. Most border US 41 on both the east and west sides. Residential and commercial areas border the project as well as large agricutural fields. All surface waters are located close to the Gulf of Mexico and ultimately drain there. The surface waters are ditches and do not offer prime wildlife habitat. The surrounding areas do not provide optimal opportunities for wildlife to utilize the surface waters. Proposed Conditions: The portions of the surface waters described will be filled to support the widening and are anticipated to be replaced, but all existing wildlife function will be lost.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: **5** / with: **5**	Current Conditions: These surface waters border a busy roadway. Surface waters are connected to each other as well as other stormwater ponds, wetlands and the Gulf of Mexico.The hydrology of these systems has been altered by prior development and has allowed for the invasion of nuisance and exotic species, such as cattails and Brazilian pepper. Some of the surface waters contained water during field reviews. Proposed Conditions: The portion of the wetland in question will be filled to support the widening and are anticipated to be replaced in kind.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: **5** / with: **2**	Current Conditions: Dominant species include Carolina willow, Brazilian pepper, primrose willow, pickerel weed, cattails, and salt bush. The hydrology of these systems has been altered by prior development and has allowed for the invasion of nuisance and exotic species, such as cattails and Brazilian pepper. The proposed roadway improvements will have an impact to the overall surface water systems. The surface waters can provide foraging habitat for birds and some mammals as well nesting habitat for amphibians. Overall, the system appears to be functioning, with some nuissance species starting to invade. Proposed Conditions: The portions of the surface waters described will be filled to support the widening and are anticipated to be replaced, but all existing community structure will be lost.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.50	**0.30**

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

For impact assessment areas
FL = delta x acres = 0.82

Delta = [with-current]
-0.20

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

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 PD&E, Hillsborough County		W8, W12, W23

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
641 - Freshwater Marsh; 631 - Wetland scrub	PSS6C	Permanent Impact	0.935 acre

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importa
Tampa Bay Drainage	Class III	**N/A**

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

Wetlands are located adjacent to US 41, a busy roadway. W8 and W12 appear to have been part of a larger wetland system but are now either isolated or connected by man made structures. W8 is currently surrounded by roadways and other development. W12 is bordered by US 41, the CSX railroad and other development. W23 is surrounded by US 41, the CSX railroad, a large utility clearing.

Assessment area description

Wetlands are dominated by Carolina willow, primrose willow, pickerel weed, cattails, and salt bush. The assessment is largely developed with residential and commercial areas as well as large citrus (???) groves. The CSX railroad borders the roadway through much of the project.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The wetlands are located in a developed area with residential and commercial areas as well as large citrus (???) groves. The CSX railroad borders the roadway through much of the project.The wetlands are located directly adjacent to US 41.	Areas similar to assessment area are relatively common throughout the watershed.

Functions	Mitigation for previous permit/other historic use
Water filtration and conveyance, forage for birds, amphibians, reptiles, and mammals. Many birds can seek shelter and nest in the trees.	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)
Gopher Frog, American Alligator, Eastern Diamondback Rattlesnake, Eastern Indigo Snake, Gopher Tortoise, Florida Pine Snake, Suwannee Cooter, Short-tailed snake, Cooper's Hawk, Roseate Spoonbill, Limpkin, Florida burrowing owl, Great Egret, Short-tailed Hawk, Little Blue Heron, reddish egret, Snowy Egret, Tri-colored Heron, Swallow-tail kite, White Ibis, Merlin, Peregrine Falcon, Kestrel, Sandhill Crane, Bald Eagle, Wood Stork, Night Herons, Osprey, Brown Pelican, Hairy Woodpecker, Glossy Ibis, Fox Squirrell	American Alligator (T and SSC), Eastern Indigo Snake (T), Gopher Tortoise (SSC), Florida Pine Snake (SSC), Short-tailed snake (T), Suwannee cooter (SSC), Roseate Spoonbill (SSC), Limpkin (SSC),Florida burrowing owl (SSC), Little Blue Heron (SSC), reddish egreat (SSC), Snowy Egret (SSC), White Ibis (SSC), Kestrel (T), Sandhill Crane (T), Bald Eagle (T), Wood Stork (E), Brown Pelican (SSC), Osprey (SSC), fox squirrell (SSC)

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

No obvious signs of wildlife utilization were observed along the project corridor during the field reviews.

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
Chris Salicco, Corey Carter, Anna Peterfreund	**7-Aug-08**

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 PD&E, Hillsborough County		W8, W12, W23
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Chris Salicco, Corey Carter, Anna Peterfreund	**7-Aug-08**

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

Optimal (10)	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface 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**	Current Condition - The wetlands are located in a developed area with residential and commercial areas as well as large agricultural fields. The CSX railroad borders the roadway through much of the project.The wetlands are located directly adjacent to US 41. Larger wetland systems exist to the south. All wetlands are located to near the Gulf of Mexico where they ultimately drain. The surrounding areas are developed and do not provide optimal opportunities for wildlife to utilize this wetland.The wetlands provide for water filtration, foraging habitat for birds, amphibians, reptiles, and mammals. Many birds can seek shelter and nest in the trees. Proposed Conditions: The portions of the wetlands within the assessment area will be filled and all wildlife function will be lost.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current: **6** with: **0**	Current Conditions: The wetlands appear that they were part of a larger wetland system in the past, but are now either isolated or connected through man made structures. The vegetation did not show signs of hydrologic stress and few nuisance or invasive exotics exist. This wetland receives most of it water from adjacent roadway runoff. Proposed Conditions: The portion of the wetlands in question will be filled and the water environment lost.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current: **6** with: **0**	Current Conditions: Wetlands are dominated by Carolina willow, primrose willow, pickerel weed, cattails, and salt bush. The assessment is largely developed with residential and commercial areas as well as large agricultural fields. The CSX railroad borders the roadway through much of the project. Overall, the system appears to be functioning, with some nuissance species starting to invade into the wetland. Proposed Conditions: The portions of the wetlands described will be filled and all existing community structure will be lost.

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

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

For impact assessment areas
FL = delta x acres = 0.56

Delta = [with-current]
-0.60

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

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 PD&E, Hillsborough County		W24, W30

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
641 - Freshwater marsh	PEM1C/PEM2C	Permanent Impact	0.029 acre

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Tampa Bay Drainage	Class III	N/A

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

Wetlands W24 and W30 are small isolated wetlands located south of US 41. W24 is located within the Pacific Tomato Growers offices. An unimproved roadway crosses the wetland (??). W30 is also surrounded by a gas station and Big Bend Road.

Assessment area description

The wetlands are dominated by primrose willow, cattails, and Brazilain pepper. Quality of the wetlands is low.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Located south of US 41. W24 is located within the Pacific Tomato Growers offices. W30 is surrounded by a gas station and Big Bend Road.	Areas similar to assessment area are relatively common throughout the watershed.

Functions	Mitigation for previous permit/other historic use
Limited water filtration. Limited forage and habitat for birds, amphibians, and mammals due to small size and location.	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)
Gopher Frog, American Alligator, Eastern Diamondback Rattlesnake, Eastern Indigo Snake, Gopher Tortoise, Florida Pine Snake, Suwannee Cooter, Short-tailed snake, Cooper's Hawk, Roseate Spoonbill, Limpkin, Florida burrowing owl, Great Egret, Short-tailed Hawk, Little Blue Heron, reddish egret, Snowy Egret, Tri-colored Heron, Swallow-tail kite, White Ibis, Merlin, Peregrine Falcon, Kestrel, Sandhill Crane, Bald Eagle, Wood Stork, Night Herons, Osprey, Brown Pelican, Hairy Woodpecker, Glossy Ibis, Fox Squirrell	American Alligator (T and SSC), Eastern Indigo Snake (T), Gopher Tortoise (SSC), Florida Pine Snake (SSC), Short-tailed snake (T), Suwannee cooter (SSC), Roseate Spoonbill (SSC), Limpkin (SSC),Florida burrowing owl (SSC), Little Blue Heron (SSC), reddish egreat (SSC), Snowy Egret (SSC), White Ibis (SSC), Kestrel (T), Sandhill Crane (T), Bald Eagle (T), Wood Stork (E), Brown Pelican (SSC), Osprey (SSC), fox squirrell (SSC)

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

No obvious signs of wildlife utilization were observed along the project corridor during the field reviews.

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
Chris Salicco, Corey Carter, Anna Peterfreund	7-Aug-08

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 PD&E, Hillsborough County		W24, W30
Impact or Mitigation	Assessment conducted by:	Assessment date:
Impact	Chris Salicco, Corey Carter, Anna Peterfreund	7-Aug-08

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	Current Condition - Both wetlands are located south of US 41. W24 is located within the Pacific Tomato Growers property. W30 is surrounded by a gas station and Big Bend Road. Overall, the wetland areas are of moderate to low quality, mainly because of their location and small size. Habitat exists for minimal wildlife utilization. Wetlands are isolated from other wetlands. Proposed Conditions: The portion of the wetland in question will be filled to support the widening. This portion of the weltands will lose all support of wildlife function.	**4**	**0**
.500(6)(b)Water Environment (n/a for uplands)	Current Conditions: There is no hydrologic connection to surrounding wetlands or surface waters. Both wetlands show signs of hydrologic stress from surrounding development with nuisance species and invasive exotic species. The wetlands receive most of their water from adjacent roadway runoff. Proposed Conditions: The portion of the wetland in question will be filled to support the widening. This portion of the weltand will lose its water environment.	**5**	**0**
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Current Conditions: Vegetation within the impact area consists of cattails, primrose willow and Brazilian pepper. Surrounding land management practices have affected the wetlands. Mowing and other disturbances near the roadway decrease the quality of the wetland at the impact site slightly. The isolation of the wetlands and small size offer minimal function for flood storage, nutrient filtration, and wildlife utilization. Proposed Conditions: The portion of the wetland in question will be filled to support the widening and all community structure will be lost.	**5**	**0**

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.47	**0**

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

For impact assessment areas
FL = delta x acres = 0.014

Delta = [with-current]
-0.47

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

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

Form 62-345.900(2), F.A.C. [effective date]

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 PD&E, Hillsborough County		W10

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
617 - Mixed Wetlands Hardwoods	PFO6C	Permanent Impact	0.122 acre

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Tampa Bay Drainage	Class III	N/A

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

W10 is part of a larger wetland system to the north. W10 is connected to this wetland system and to W11 to the south of US 41 via a culvert. A residential subdivision exists to the west of W10. To the south is US 41, several commercial businesses as well as the Ruskin Vegetable Corp.

Assessment area description

The assessment area is best described as palustrine deciduous forested (PFO6). Dominant vegetation includes Carolina willow, Brazilian pepper, primrose willow, and pickerel weed. The assessment area acts largely like a ditch but is connected to larger forested wetland.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
W10 is located north of US 41 and several businesses, and east of a residential subdivision. A forested wetland exists to the east and north of the assessment area.	Areas similar to assessment area are relatively common throughout the watershed.

Functions	Mitigation for previous permit/other historic use
Water filtration and conveyance, forage for birds and mammals. Many birds can seek shelter and nest in the trees.	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)
Gopher Frog, American Alligator, Eastern Diamondback Rattlesnake, Eastern Indigo Snake, Gopher Tortoise, Florida Pine Snake, Suwannee Cooter, Short-tailed snake, Cooper's Hawk, Roseate Spoonbill, Limpkin, Florida burrowing owl, Great Egret, Short-tailed Hawk, Little Blue Heron, reddish egret, Snowy Egret, Tri-colored Heron, Swallow-tail kite, White Ibis, Merlin, Peregrine Falcon, Kestrel, Sandhill Crane, Bald Eagle, Wood Stork, Night Herons, Osprey, Brown Pelican, Hairy Woodpecker, Glossy Ibis, Fox Squirrell	American Alligator (T and SSC), Eastern Indigo Snake (T), Gopher Tortoise (SSC), Florida Pine Snake (SSC), Short-tailed snake (T), Suwannee cooter (SSC), Roseate Spoonbill (SSC), Limpkin (SSC),Florida burrowing owl (SSC), Little Blue Heron (SSC), reddish egreat (SSC), Snowy Egret (SSC), White Ibis (SSC), Kestrel (T), Sandhill Crane (T), Bald Eagle (T), Wood Stork (E), Brown Pelican (SSC), Osprey (SSC), fox squirrell (SSC)

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

No obvious signs of wildlife utilization were observed along the project corridor during the field reviews.

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
Chris Salicco, Corey Carter, Anna Peterfreund	7-Aug-08

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 PD&E, Hillsborough County		W10
Impact or Mitigation	Assessment conducted by:	Assessment date:
Impact	Chris Salicco, Corey Carter, Anna Peterfreund	7-Aug-08

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**	Current Condition - W10 is part of a larger wetland system to the north. W10 is connected to this wetland system and to W11 to the south of US 41 via a culvert. A residential subdivision exists to the west of W10. To the south is US 41, several commercial businesses as well as the Ruskin Vegetable Corp. The surrounding areas are developed and do not provide optimal opportunities for wildlife to utilize this wetland. The wetlands provide for water filtration, foraging habitat for birds, amphibians, reptiles, and mammals. Many birds can seek shelter and nes in the trees. Proposed Conditions: The portion of the wetland in question will be filled to support the widening. This portion of the weltand will lose all support of wildlife function.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: **6**	with: **0**	Current Conditions: W10 is part of a larger wetland system to the north and is connected to W11 to the south via a culvert under US 41. It appears this wetland was larger in the past but the construction of US 41 as well as several businesses has altered this wetland system. The presence of Brazilian pepper suggests the hydrology of the assessment area has been altered by the roadway and prior development. Proposed Conditions: The portion of the wetland in question will be filled to support the widening. This portion of the weltand will lose its water environment.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: **6**	with: **0**	Current Conditions: The assessment area is best described as palustrine deciduous forested (PFO6). Dominant vegetation includes Carolina willow, Brazilian pepper, primrose willow, and pickerel weed near the road, with larger deciduous canopy trees to the west. The assessment area acts largely like a ditch but is connected to larger forested wetland. The development in the area has lead to some of the nuissance species and exotics being found in the wetland, and continued development may continue to make it worse. The wetland can provide habitat to many mammals, birds and amphibians. Proposed Conditions: The portion of the wetland in question will be filled to support the widening and all community structure will be lost.

Score = sum of above scores/30 (if uplands, divide by 20)		
current or w/o pres: **0.60**	with: **0**	

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

For impact assessment areas
FL = delta x acres = 0.07

Delta = [with-current]
-0.60

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

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 PD&E, Hillsborough County		W13

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
612 - Mangrove swamps	E10W	Permanent Impact	0.105 acre

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Tampa Bay Drainage	Class III	N/A

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

W13 is the end of a canal that is directly connected to the Gulf of Mexico. The wetland is bordered by a residential area to the west and businesses to the east. It appears that W13 used to be part of a larger wetland system to the south, including W12.

Assessment area description

The assessment area is described as estuarine, subtidal, open water. The dominant vegetation consists of red and black mangroves, and juncus spp..

Significant nearby features

This wetland is a portion of a canal that is connected to the Gulf of Mexico. It is surrounded by US 41 to the south, residences to the west and businesses to the east. The wetland continues to the north and is surrounded by more residential subdivisions.

Uniqueness (considering the relative rarity in relation to the regional landscape.)

Areas similar to assessment area are relatively common throughout the watershed.

Functions

Water filtration and conveyance. Foraging habitat for birds, reptiles, amphibians, fish and mammals. Nesting habitat for birds and fish.

Mitigation for previous permit/other historic use

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)

Gopher Frog, American Alligator, Eastern Diamondback Rattlesnake, Eastern Indigo Snake, Gopher Tortoise, Florida Pine Snake, Suwannee Cooter, Short-tailed snake, Cooper's Hawk, Roseate Spoonbill, Limpkin, Florida burrowing owl, Great Egret, Short-tailed Hawk, Little Blue Heron, reddish egret, Snowy Egret, Tri-colored Heron, Swallow-tail kite, White Ibis, Merlin, Peregrine Falcon, Kestrel, Sandhill Crane, Bald Eagle, Wood Stork, Night Herons, Osprey, Brown Pelican, Hairy Woodpecker, Glossy Ibis, Fox Squirrell

Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)

American Alligator (T and SSC), Eastern Indigo Snake (T), Gopher Tortoise (SSC), Florida Pine Snake (SSC), Short-tailed snake (T), Suwannee cooter (SSC), Roseate Spoonbill (SSC), Limpkin (SSC),Florida burrowing owl (SSC), Little Blue Heron (SSC), reddish egreat (SSC), Snowy Egret (SSC), White Ibis (SSC), Kestrel (T), Sandhill Crane (T), Bald Eagle (T), Wood Stork (E), Brown Pelican (SSC), Osprey (SSC), fox squirrell (SSC)

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

Crabs and crab burrows were observed in the sand near the culvert adjacent to the roadway.

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
Chris Salicco, Corey Carter, Anna Peterfreund	7-Aug-08

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 PD&E, Hillsborough County		W13
Impact or Mitigation	Assessment conducted by:	Assessment date:
Impact	Chris Salicco, Corey Carter, Anna Peterfreund	7-Aug-08

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**	Current Condition - This wetland is a portion of a canal that is connected to the Gulf of Mexico. It is surrounded by US 41 to the south, residences to the west and businesses to the east. The wetland continues to the north and is surrounded by more residential subdivisions. Functions provided by the wetland include conveyance; foraging habitat for birds, reptiles, amphibians, fish and mammals; and nesting habitat for birds and fish. Mangroves provide excellent habitat for wading birds and fish. Wildlife access may be limited by bordering roadway and development. Wetland is connected to Tampa Bay, other canals and coves. This appears to be a manmade canal for the residential development. Proposed Conditions: The portion of the wetland in question will be filled to support the widening. This portion of the weltand will lose all support of wildlife function.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: **8** / with: **0**	Current Conditions: Hydrology of the wetland appears good based on community structure. The wetland is tidal, receiving water from the Gulf of Mexico. Proposed Conditions: The portion of the wetland in question will be filled to support the widening. This portion of the weltand will lose its water environment.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: **8** / with: **0**	Current Conditions: The dominant vegetation consists of red and black mangroves, and juncus spp. Surrounding land management practices may affect wetlands due to infiltration of pesticides and herbicides from agriculture, residential properties and petroleum-based products from bordering roadways. Mangroves are typically indicative of high quality wetland systems and this wetland has little encroachment of nuisance and exotic species. Proposed Conditions: The portion of the wetland in question will be filled to support the widening and all community structure will be lost.

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.73	**0**

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

For impact assessment areas
FL = delta x acres = 0.08

Delta = [with-current]
-0.73

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

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

Mitigation Determination Formulas
(See Section 62-345.600(3), F.A.C.)

For each impact assessment area:
(FL) Functional Loss = Impact Delta X Impact acres

For each mitigation assessment area:
(RFG) Relative Functional Gain = Mitigation Delta (adjusted for preservation, if applicable)/((t-factor)(risk))

(a) Mitigation Bank Credit Determination

The total potential credits for a mitigation bank is the sum of the credits for each assessment area where assessment area credits equal the RFG times the acres of the assessment area scored

Bank Assessment Area	RFG	X	Acres	=	Credits
a.a.1					
a.a.2					
total					

(b) Mitigation needed to offset impacts, when using a mitigation bank

The number of mitigation bank credits needed, when the bank or regional offsite mitigation area is assessed in accordance with this rule, is equal to the summation of the calculated functional loss for each impact assessment area.

Impact Assessment Area	FL	=	Credits needed
Ditches	0.82		0.82
640-641	0.56		0.56
W24 - W30	0.014		0.014
W10	0.07		0.07
W13	0.08		0.08
total			1.55

(c) Mitigation needed to offset impacts, when not using a bank

To determine the acres of mitigation needed to offset impacts when not using a bank or a regional offsite mitigation area as mitigation, divide functional loss (FL) by relative functional gain (RFG). If there are more than one impact assessment area or more than one mitigation assessment area, the total functional loss and total relative functional gain is determined by summation of the functional loss (FL) and relative functional gain (RFG) for each assessment area.

	FL	/	RFG	=	Acres of Mitigation
Ditches	0.82		0.00		
640-641	0.07		0.00		
W24 - W30	0.014		0.00		
W10	0.08		0.00		
W13	0.08		0.00		
Total	1.07				

Appendix C
Agency Coordination and FDOT Contractor Requirements for T&E Species

American Consulting Engineers of Florida, LLC
2818 Cypress Ridge Blvd, Suite 200
Wesley Chapel, Florida 33544
Tel 813.435.2600 • Fax 813.435.2601
american@ace-fla.com • www.ace-fla.com

September 26, 2008

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

Re: Request for natural resource assessment on the US 41/SR 45 PD&E Project located in Sections 2, 3, 10, 11, 14, 15, 22, 27, 28, & 33 Township 31S, Range 19E of Hillsborough County, Florida.

Dear Environmental Reviewer:

American Consulting Engineers of Florida, LLC (American) is conducting a review for listed species occurrence records, potential natural areas, and other significant ecological resources within the above-referenced corridor study area. The project involves a Project Development and Environment (PD&E) study for US 41/SR 45 in Hillsborough County, from 12 Street North to Kracker Avenue, including a Biological Assessment.

American is requesting an assessment of the flora and fauna of this site and the surrounding area. Included with this request letter is a location map for the roadway study corridor. We are interested in the results of your preliminary survey assessing any known or potentially significant ecological resources on the site that may warrant further study. Ideally, we would like information for at least one mile in any direction of the project limits indicated on the enclosed map.

We look forward to hearing back from you as soon as possible. Thanks in advance for your coordination efforts. If you need any other information or have any questions about this natural resources assessment, please call me at (813) 435-2617 or email at csalicco@ace-fla.com.

Sincerely,
American Consulting Engineers of Florida, LLC

Chris Salicco
Environmental Scientist

cc: file, Larry Weatherby, Jeff Novotny

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American Consulting Engineers of Florida, LLC
2818 Cypress Ridge Blvd, Suite 200
Wesley Chapel, Florida 33544
Tel 813.435.2600 • Fax 813.435.2601
american@ace-fla.com • www.ace-fla.com

September 26, 2008

Christina Williams
Florida Fish and Wildlife Conservation Commission
620 South Meridian St
Mail Station 5B6
Tallahassee, FL 32399-1600

Re: Request for natural resource assessment on the US 41/SR 45 PD&E Project located in Sections 2, 3, 10, 11, 14, 15, 22, 27, 28, & 33 Township 31S, Range 19E of Hillsborough County, Florida

Dear Christina Williams:

American Consulting Engineers of Florida, LLC (American) is conducting a review for listed species occurrence records, critical habitats, and Strategic Habitat Conservation Areas within the above-referenced corridor study area. The project involves a Project Development and Environment (PD&E) study for US 41/SR 45 in Hillsborough County, from 12 Street North to Kracker Avenue, including a Biological Assessment.

American is requesting an assessment of the flora and fauna of this site. Included with this request letter is a location map for the roadway study corridor. We are interested in the results of your preliminary survey assessing any known or potentially significant ecological resources along the project corridor that may warrant further study. Ideally, we would like information for at least one mile in any direction of the highlighted area.

We look forward to hearing back from you as soon as possible. Thanks in advance for your coordination efforts. If you need any other information or have any questions about this natural resources assessment, please call me at (813) 435-2617 or email me at csalicco@ace-fla.com.

Sincerely,
American Consulting Engineers of Florida, LLC

Chris Salicco
Environmental Scientist

cc: file, Larry Weatherby, Jeff Novotny

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American Consulting Engineers of Florida, LLC
2818 Cypress Ridge Blvd, Suite 200
Wesley Chapel, Florida 33544
Tel 813.435.2600 • Fax 813.435.2601
american@ace-fla.com • www.ace-fla.com

September 26, 2008

Mr. Todd Mecklenborg
U.S. Fish and Wildlife Service
600 4th Street South
St. Petersburg, FL 33701

RE: Request for natural resource assessment on the US 41/SR 45 PD&E Project located in Sections 2, 3, 10, 11, 14, 15, 22, 27, 28, & 33 Township 31S, Range 19E of Hillsborough County, Florida

Dear Mr. Mecklenborg:

American Consulting Engineers of Florida, LLC (American) is conducting a review for listed species occurrence records and critical habitats within the above-referenced corridor study area. The project involves a Project Development and Environment (PD&E) study for US 41/SR 45 in Hillsborough County, from 12 Street North to Kracker Avenue, including a Biological Assessment.

American is requesting an assessment of the flora and fauna that are found and may potentially be found along the project corridor. Included with this request letter is a location map for the roadway study corridor. We are interested in the results of your preliminary survey assessing any known or potentially significant ecological resources along the project corridor that may warrant further study. Ideally, we would like information for at least one mile in any direction of the highlighted area.

We look forward to hearing back from you as soon as possible. Thanks in advance for your coordination efforts. If you need any other information or have any questions about this natural resources assessment, please call me at (813) 435-2617 or email me at csalicco@ace-fla.com.

Sincerely,
American Consulting Engineers of Florida, LLC

Chris Salicco
Environmental Scientist

cc: file, Larry Weatherby, Jeff Novotny

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Salicco, Christopher

From: Todd_Mecklenborg@fws.gov
Sent: Friday, October 03, 2008 11:38 AM
To: Salicco, Christopher
Subject: US 41, Hillsborough County

please refer to www.fws.gov/northflorida/,

select Florida Federal Species List .... Hillsborough County,

survey appropriate habitats for species on list and document in report

Todd Mecklenborg, Fish & Wildlife Biologist
U.S. Fish and Wildlife Service
600 Fourth Street South
Saint Petersburg, Florida 33701
(727) 820-3705
www.fws.gov/northfllorida/

U.S. Fish & Wildlife Service

North Florida Field Office

Hillsborough County Federally Listed Species

This information is provided as a guide to project planning, and is not a substitute for site-specific surveys. Such surveys may be needed to assess species' presence or absence, as well as the extent of project effects on listed species and/or designated critical habitat.

The following table lists those federally-listed species known to be present in the county.
Code Key: E = Endangered, T = Threatened, P = Proposed, C = Candidate, CH = Critical Habitat

Category	Species Common Name	Species Scientific Name	Code
Mammals	West Indian (Florida) Manatee	*Trichechus manatus latirostris*	E/CH
Birds	Piping Plover	*Charadrius melodus*	T
	Florida Scrub-jay	*Aphelocoma coeruluscens*	T
	Wood Stork	*Mycteria americana*	E
	Red-cockaded Woodpecker	*Picoides borealis*	E
Fish	Gulf Sturgeon	*Acipenser oxyrhynchus desotoi*	T
Reptiles	Eastern Indigo Snake	*Dymarchon corais couperi*	T
	Green Sea Turtle	*Chelonia mydas*	E
	Leatherback Sea Turtle	*Dermochelys coriacea*	E
	Kemp's ridley Sea Turtle	*Lepidochelys kempii*	E
	Loggerhead Sea Turtle	*Caretta caretta*	T
Amphibians	None		
Mollusks	None		
Crustaceans	None		
Plants	Florida Golden Aster	*Chrysopsis (= Heterotheca) floridana*	E

▶ Home ▶ Species: North Florida County ▶ Species: South Florida County ▶ Species: Panhandle County

For details on State listed species, please go to http://myfwc.com/imperiledspecies//

Send comments on our web site or general questions to North Florida office
If you need special assistance please contact the Public Affairs Officer

Last modified June 28, 2007

USFWS, U. S. Fish and Wildlife Service, FWS, permit reviews, projects, species recovery, Florida, Fish and Wildlife, florida manatee, wildlife, endangered, threatened, endangered species act, ESA, marine mammal protection act, MMPA, eagles, whooping cranes, cranes, florida scrub-jay, scrub jay, jay, scrub, sea turtles, loggerhead, kemps ridley, kemp's ridley sea turtle, olive ridley, olive ridley seaturtle, hawksbill,hawksbill sea turtle, hawks bill, green sea turtle, leatherback, turtle, red-cockaded woodpeckers, woodpeckers, RCW, beach mouse, beach mice, mouse, snake, indigo sanke, recovery, regulation, regulatory, permit reviews, Section Seven, section 7, section 10, habitat, habitat conservation, habitat conservation plan, HCP, incidental take, incidental take permits, reviews, consultation, north florida, nassau, duval, clay, st. johns, saint johns, bradford, putnam, flagler, volusia, seminole, orange, brevard, lake, sumter, hernando, pasco, pinellas, hillsborough, manatee, citrus, levy, dixie, alachua, marion, union, baker, columbia, suwannee, hamilton, madison, taylor, lafayette, gilchrist, tampa, jacksonville, gainesville, crystal river, orlando, st. petersburg, daytona, daytona beach, st. augustine, saint augustine, saint petersburg, orange park, lake city, palatka, Blue Spring, homosassa, springs, boating, resource, natural resources, recreation, property, development, growth, impacts, environment, enviromental, environmental impacts, recovery plans, recovery implementation, safe harbor, habitat, critical habitat, critical habitat designation

FDOT Contractor Requirements for Unexpected Interaction with Certain Protected Species During Work Activities

These Requirements are utilized for all FDOT projects and specifically apply when the project has no other identified mitigation measures or permit conditions related to the species encountered.

NOTE: These Requirements represent the species most likely to be unexpectedly encountered on FDOT projects. These Requirements *DO NOT* address all Protected Species that are found in Florida. In the event a species is encountered during project activities and that species' protection status is in question, immediately contact the Engineer.

Bald Eagle

Stop work if live Bald Eagles (*Haliaeetus leucocephalus*) are found in the work area. Work may resume after the bird or birds are allowed to leave the area of their own volition.

Report live sightings of Bald Eagles immediately to the District Environmental Administrator or Construction Environmental Coordinator and the Engineer.

If a Bald Eagle is found nesting within 660 feet of the project limits, cease all work in the area until FDOT (Florida Department of Transportation) has coordinated with USFWS (United States Fish and Wildlife Service).

Crested Caracara

Stop work if live Audubon's Crested Caracara (*Caracara cheriway audubonii*) are found in the work area. Work may resume after the bird or birds are allowed to leave the area of their own volition.

Report live sightings of Audubon's Crested Caracara immediately to the District Environmental Administrator or Construction Environmental Coordinator and the Engineer.

If an Audubon's Crested Caracara is found nesting within 1500 feet of the project limits, cease all work in the area until FDOT has coordinated with USFWS

.

Florida Burrowing Owl

Stop work if live Florida Burrowing Owls (*Athene cunicularia floridana*) are found in the work area. Work may resume after the bird or birds are allowed to leave the area of their own volition.

Report live sightings of Florida Burrowing Owls immediately to the District Environmental Administrator or Construction Environmental Coordinator and the Engineer.

If a Florida Burrowing Owl is found nesting within 1000 feet of the project limits, cease all work in the area until FDOT has coordinated with the Florida Fish and Wildlife Conservation Commission (FWC). Take cautionary measures to guard against accidental destruction of the nest. Do not plug the burrow entrance or cause the burrow to collapse, as this would effectively destroy the nest, and requires a permit.

Red-Cockaded Woodpecker

Stop work if live Red-Cockaded Woodpeckers (*Picoides borealis*) are found in the work area. Work may resume after the bird or birds are allowed to leave the area of their own volition.

Report live sightings of Red-Cockaded Woodpeckers immediately to the District Environmental Administrator or Construction Environmental Coordinator and the Engineer.

If a Red-Cockaded Woodpecker is found nesting within 1000 feet of the project limits, cease all work in the area until FDOT has coordinated with USFWS.

Florida Scrub Jay

Stop work if live Florida Scrub Jays (*Aphelocoma coerulescens*) are found in the work area. Work may resume after the bird or birds are allowed to leave the area of their own volition.

Report live sightings of Florida Scrub Jays immediately to the District Environmental Administrator or Construction Environmental Coordinator and the Engineer .

If a Florida Scrub Jay is found nesting within 1000 feet of the project limits, cease all work in the area until FDOT has coordinated with USFWS.

Everglade Snail Kite

Stop work if live Everglade Snail Kites (*Rostrhamus sociabilis plumbeus*) are found in the work area. Work may resume after the bird or birds are allowed to leave the area of their own volition.

Report live sightings of Everglade Snail Kite immediately to the District Environmental Administrator or Construction Environmental Coordinator and the Engineer.

If an Everglade Snail Kite is found nesting within 1000 feet of the project limits, cease all work in the area until FDOT has coordinated with USFWS.

Woodstork

Stop work if live Woodstorks (*Mycteria americana*) are found in the work area. Work may resume after the bird or birds are allowed to leave the area of their own volition.

Report live sightings of Woodstorks immediately to the District Environmental Administrator or Construction Environmental Coordinator and the Engineer.

If a Woodstork is found nesting within 1000 feet of the project limits, cease all work in the area until FDOT has coordinated with USFWS.

Gopher Tortoise

Stop work if live Gopher Tortoises (*Gopherus polyphemus*) are found in the work area. Work may resume after the Gopher Tortoises are allowed to leave the area of their own volition.

Report live sightings of Gopher Tortoises immediately to the District Environmental Administrator or Construction Environmental Coordinator and the Engineer.

If a Gopher Tortoise or burrow is found within an area of construction then the area must have staked silt fence partially encircling the burrow. The silt fence must be 25 feet from the apron of the burrow, and the half-radius configuration must prevent the occupant from entering the construction site, yet allow the tortoise to have access to the surrounding natural areas. Do not plug the burrow entrance or cause the burrow to collapse, as this would effectively destroy the burrow, and requires a permit.

Eastern Indigo Snake

If live Eastern Indigo Snakes (*Drymarchon corais couperi*) are found in the work area, stop all work. Work may resume after the snake or snakes are allowed to leave the area of their own volition.

Report live sightings of Eastern Indigo Snakes to the District Environmental Administrator or Construction Environmental Coordinator and the Engineer.

If a dead Eastern Indigo Snake is found on the project site, freeze the dead snake as soon as possible and immediately notify the District Environmental Administrator or Construction Environmental Coordinator and Construction Project Manager.

West Indian Manatee

If a manatee(s) (*Trichechus manatus*) is/are seen within 300 feet of the active daily construction/dredging operation or vessel movement, implement all appropriate precautions to ensure protection of the manatee. These precautions include:

(a) Do not operate moving equipment closer than 300 feet of a manatee.

(b) Shutdown the operation of any equipment closer than 300 feet to a manatee.

(c) Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, are properly secured, and are regularly monitored to avoid manatee entrapment. Barriers must not block manatee entry to or exit from essential habitat.

(d) All vehicles associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water where the draft of the vessel provides less than a four foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.

(e) Do not resume activities until the manatee(s) have departed the project area of its own volition.

Reporting of Manatee activity, and injury to listed species is required:

(a) Post Manatee Hotline number at on-site telephones to be used for information or help in dealing with manatee problems.

(b) Keep a log detailing sightings, collisions or other contact with Manatees as events occur during construction. When work is completed, forward this data to Florida Department of Environmental Protection, Marine Research Institute, Office of Protected Species Research, 100 Eighth Ave., S.E., St. Petersburg, FL 33701-5095.

(c) Immediately report any collision with and/or injury to a manatee to the "Manatee Hotline" at 1-888-404-FWCC (1-888-404-3922) and to the U.S. Fish and Wildlife Service Vero Beach office.

Post identification posters for easy recognition of listed species.

(a) Post, temporary signs concerning manatees prior to and during all construction/dredging activities. Remove the signs upon completion of the project. Post a sign measuring at least 3 feet by 4 feet which reads Caution: Manatee Area in a location prominently visible to water-related construction crews.

(b) If vessels are associated with the construction, Post a second sign so that it is visible to the vessel operator. The second sign should be at least 8 ½ inches by 11 inches and read: Caution: Manatee Habitat. Idle speed is required if operating a vessel in the construction area. Specific warning sign and design placement is a condition of the Water Management District.

Small Toothed Sawfish

If a small toothed sawfish (*Pristis pectinata*) is seen within 300 feet of the active daily construction/dredging operation or vessel movement, implement all appropriate precautions to ensure protection of the small toothed sawfish.

These precautions include:

(a) do not operate moving equipment closer than 50 feet of a small toothed sawfish.

(b) Shutdown the operation of any equipment closer than 50 feet to a small toothed sawfish.

(c) Siltation or turbidity barriers shall be made of material in which small toothed sawfish cannot become entangled, are properly secured, and are regularly monitored to avoid small toothed sawfish entrapment. Barriers must not block small toothed sawfish entry to or exit from essential habitat.

(d) All vehicles associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water where the draft of the vessel provides less than a four foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.

(e) Do not resume activities until the small toothed sawfish have departed the project area of its own volition.

Reporting of small tooth sawfish activity, or injury to listed species is required:

(a) USFWS (1-561-562-3909), National Marine Fisheries Service at (727) 570-5344 numbers will be available at on-site telephones to be used for information or help in dealing with small tooth sawfish problems.

(b) Keep a log detailing sightings, collisions or other contact with small tooth sawfish as events occur during construction. Forward this information to the nearest regional U.S. Fish and Wildlife Service.

(c) Report any collision and/or injury to a small toothed sawfish to the U.S. Fish and Wildlife Service in Vero Beach (1-561-562-3909) in southern Florida, and National Marine Fisheries Service at (727) 570-5344

Post identification posters for easy recognition of listed species.

(a) Post, temporary signs concerning small tooth sawfish prior to, and during all construction/dredging activities. Remove the signs upon completion of the project.

(b) If vessels are associated with the construction, post a second sign so that it is visible to the vessel operator. The second sign should be at least 8 ½ inches by 11 inches and read: Caution: small tooth sawfish. Idle speed is required if operating a vessel in the construction area. Specific warning sign and design placement is a condition of the Water Management District.

Sea Turtle Species

If marine turtles {including Green Sea Turtles (*Chelonia mydas*), Hawksbill Sea Turtles (*Eretmochelys imbricata*), Kemp's Ridley Sea Turtles (*Lepidochelys kempii*), Leatherback Sea Turtles (*Demochelys coriacea*), and Loggerhead Sea Turtles (*Caretta caretta*)} are seen within 300 feet of the active daily construction/dredging operation or vessel movement, implement all appropriate precautions to ensure protection of the marine turtles.


Green Sea Turtle

These precautions include:

(a) do not operate moving equipment closer than 50 feet of a marine turtle.

(b) Shutdown the operation of any equipment closer than 50 feet to a marine turtle.

(c) Siltation or turbidity barriers shall be made of material in which seaturtles cannot become entangled, are properly secured, and are regularly monitored to avoid small toothed sawfish entrapment. Barriers must not block seaturtle entry to or exit from essential habitat.


Hawksbill Sea Turtle

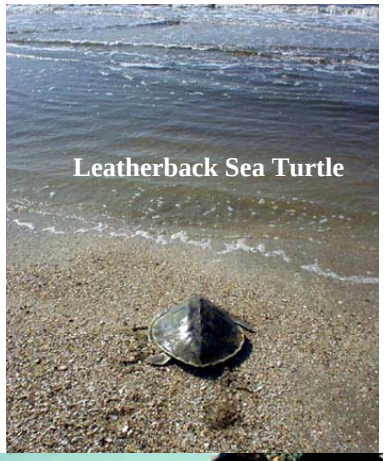
(d) All vehicles associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water where the draft of the vessel provides less than a four foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.

(e) Do not resume activities until the marine turtles have departed the project area of its own volition.


Kemp's Ridley Sea Turtle

Reporting of marine turtles, and injury to listed species is required:

(a) Post Hotline number at on-site telephones to be used for information or help in dealing with marine turtle problems.
(b) Keep a log detailing sightings, collisions or other contact with marine turtles as events occur during construction. When work is completed, forward this data to the nearest U.S. Fish and Wildlife Service regional office.
(c) Report any collision and/or injury to marine turtles to the U.S. Fish and Wildlife Service in Vero Beach (1-561-562-3909) in southern Florida, and National Marine Fisheries Service at (727) 570-5344


Leatherback Sea Turtle

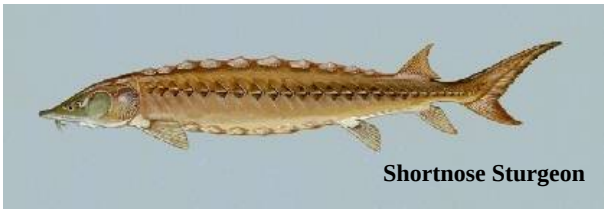
Post identification posters for easy recognition of listed species.

(a) Post, temporary signs concerning marine turtles prior to and during all construction/dredging activities. Remove the signs upon completion of the project. Post a sign measuring at least 3 feet by 4 feet which reads "Caution: Marine Turtles" in a location prominently visible to water-related construction crews.
(b) If vessels are associated with the construction, post a second sign so that it is visible to the vessel operator. The second sign should be at least 8 ½ inches by 11 inches and read: "Caution: Marine Turtle Habitat". Idle speed is required if operating a vessel in the construction area. Specific warning sign and design placement is a condition of the Water Management District.


Loggerhead Sea Turtle

Shortnose and Gulf Sturgeon

If a Shortnose sturgeon (*Acipenser brevirostrum*) or a Gulf sturgeon (*A. oxyrinchus desotoi*) is seen within 300 feet of active construction/dredging operation or vessel movement, implement all appropriate precautions to ensure protection of the sturgeon.


Shortnose Sturgeon

These precautions include:

(a) Use curtains of appropriate dimension to restrict the animal's access to the work area. Pollution booms or turbidity curtains should use tangle resistant or hemp rope when anchoring, or employ surface anchors to prevent entangling sturgeon.


Gulf Sturgeon

(b) Maintain continuous surveillance in order to free animals which may become trapped in silt or turbidity barrier.

(c) Post signs on site warning of the presence of sturgeon, of their endangered status, and precautions needed.

(d) Take care in lowering equipment or material below the water surface and into the stream bed to ensure no harm occurs to any sturgeon which may have entered the construction area undetected.

(e) Following completion of the project, prepare a report summarizing any involvement with sturgeon for NMFS and/or USFWS.

Florida Panther

Stop work if a live Florida panther (*Puma concolor coryi*) is found in the work area. Work may resume after the panther is allowed to leave the area of their own volition.

Report live sightings of the Florida panther immediately to the District Environmental Administrator or Construction Environmental Coordinator and the Engineer.

If a dead panther is observed within the project site or if any collision with and/or injury to a panther occurs they shall be reported within two hours to the FWC through their wildlife alert line (888-404-3922). Immediately notify the District Environmental Administrator or Construction Environmental Coordinator and the Engineer.

Florida Black Bear

Stop work if a live Florida black bear (*Ursus americanus floridanus*) is found in the work area. Work may resume after the bear (s) are allowed to leave the area of their own volition.

Report live sightings of the Florida black bear to the District Environmental Administrator or Construction Environmental Coordinator and the Engineer.

If a dead black bear is observed within the project site or if any collision with and/or injury to a black bear occurs they shall be reported within two hours to the FWC through their wildlife alert line (888-404-3922). Immediately notify the District Environmental Administrator or Construction Environmental Coordinator and the Engineer.

Florida Sandhill Crane

Stop work if a live Florida sandhill crane (*Grus canadensis pratenis*) is found in the work area. Work may resume after the sandhill crane(s) are allowed to leave the area of their own volition.

Report live sightings of Florida Sandhill Cranes immediately to the District Environmental Administrator or Construction Environmental Coordinator and the Engineer.

If an active nest is found within 400 feet of the project limits, cease all work in the area until FDOT has coordinated with the FWC. Immediately notify the District Environmental Administrator or Construction Environmental Coordinator and the Engineer.

Sherman's Fox Squirrel and Big Cypress Fox Squirrel

Stop work if a live Sherman's Fox Squirrel (*Sciurus niger shermani)* or a Big Cypress Fox Squirrel (*Sciurus niger avicennia)* is found in the work area. Work may resume after the fox squirrel(s) are allowed to leave the area of their own volition.

No trees are to be removed that contain active nest(s) being utilized by fox squirrels. If any nests are found and deemed to be active, a buffer of 125 feet will be established around the nest tree(s) and no clearing shall occur within the buffer until the nest becomes inactive.

Sherman's Fox Squirrel

Big Cypress Fox Squirrel

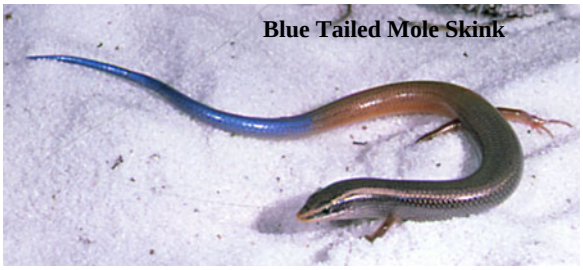
Sand Skink and Blue Tailed Mole Skink

Stop work if a live sand skink (*Neoseps reynoldsi)* or a live blue tailed mole skink (*Eumeces egregius lividus)* is found within the work area or adjacent to the work

Sand Skink

area. Work may resume after the skink(s) are allowed to leave the area of their own volition.

Report live sightings of skinks immediately to the District Environmental Administrator or Construction Environmental Coordinator and the Engineer.



Blue Tailed Mole Skink

American Crocodile

Stop work if a live American crocodile (*Crocodylus actus)* is found within the work area or adjacent to the work area. Work may resume after the crocodile(s) are allowed to leave the area of their own volition.

Report live sightings of crocodiles immediately to the District Environmental Administrator or Construction Environmental Coordinator and the Engineer.

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