NATURAL RESOURCES EVALUATION
ADDENDUM

US 41 (SR 45) PD&E Study

From Kracker Ave to South of Causeway Blvd (SR 676)

WPI No. 430056-1

ETDM Project No. 5180

Hillsborough County, Florida

January 2026

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated May 26, 2022, and executed by the Federal Highway Administration and FDOT.

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Prepared for:

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Acronyms

BMP	Best Management Practice
CE	Categorical Exclusions
CFA	Core Foraging Area
CWA	Clean Water Act
DL	Delisted
EFH	Essential Fish Habitat
ERP	Environmental Resource Permit
ESA	Endangered Species Act
ETDM	Efficient Transportation Decision Making
EXPN	Non-Essential Experimental Population
FAC	Florida Administrative Code
FDACS	Florida Department of Agriculture and Consumer Services
FDACS-DPI	Florida Department of Agriculture and Consumer Services - Division of Plant Industry
FDOT	Florida Department of Transportation
FDEP	Florida Department of Environmental Protection
FLUCCS	Florida Land Use and Cover Classification System
FNAI	Florida Natural Areas Inventory
FMP	Fishery Management Plan
FPC	Floodplain Compensation
FPE	Federally Proposed as Endangered
FPT	Federally Proposed as Threatened
F.S.	Florida Statutes
FT	Federally Threatened
FWC	Florida Fish and Wildlife Conservation Commission
FWRI	Fish and Wildlife Research Institute
HAPCs	Habitat Areas of Particular Concern
IPaC	Information for Planning and Consultation
LULC	Land Use/Land Cover
MANLAA	May Affect, Not Likely to Adversely Affect
MSA	Magnuson–Stevens Fishery Conservation and Management Act
NAEA	No Adverse Effect Anticipated
ND	Not discussed
NHD	National Hydrography Dataset
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service

NRE	Natural Resources Evaluation
NWI	National Wetland Inventory
OEM	Office of Environmental Management
OSW	Other surface water
PD&E	Project Development & Environment
PSSR	Programming Screen Summary Report
SAV	Submerged Aquatic Vegetation
SE	State Endangered
§10	Section 10 of the Rivers and Harbors Act of 1899
§401	Section 401 of the Clean Water Act 33 U.S.C. § 1344
§402	Section 402 of the Clean Water Act 33 U.S.C. § 1344
§404	Section 404 of the Clean Water Act 33 U.S.C. § 1344
SEIR	State Environmental Impact Report
SFH	Suitable Foraging Habitat (Wood Stork)
SGCN	State of Florida Species of Greatest Conservation Need
SMF	Stormwater Management Facility
spp	Species, as references multiple species same genus
SR	State Roads
SSC	Species of Special Concern
ST	State Threatened
SW	Surface water
SWFWMD	Southwest Florida Water Management District
SWPPP	Stormwater Pollution Prevention Plan
UMAM	Uniform Mitigation Assessment Method
US 41	US Highway 41
USACE	US Army Corps of Engineers
USC	United States Code
USCG	US Coast Guard
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WEBAR	Wetland Evaluation and Biological Assessment Report
WPID	Work Project Identification

Section 1 Introduction

1.1 Project Description

The Florida Department of Transportation (FDOT) conducted a Project Development and Environment (PD&E) study to evaluate the widening of approximately 7.0 miles of US 41 from Kracker Avenue to south of Causeway Boulevard (State Road 676, SR 676) in Hillsborough County (Figure 1-1). A State Environmental Impact Report (SEIR) was prepared and approved by FDOT on January 12, 2017. The FDOT is pursuing federal eligibility for this project since approval of the SEIR. This will result in updated and additional analyses, as well as the preparation of a Type 2 Categorical Exclusion (CE).

This project consists of improving an existing four-lane divided rural and urban roadway to a six-lane divided roadway. Bridges over Bullfrog Creek and the Alafia River will be replaced. Planned improvements include construction of Stormwater Management (SMF) and Floodplain Compensation (FPC) facilities (collectively pond sites), as well as various intersection improvements and multimodal facilities (trail, pedestrian, bicycle, and transit accommodations). The project length is approximately 7.0 miles.

1.2 Purpose & Need

1.2.1 Purpose

The purpose of the proposed project is to accommodate existing and future traffic capacity on US 41 due to transportation demand as a result of growth within the project limits and surrounding areas. This project also aims to enhance regional connectivity in southern Hillsborough County and the Tampa Bay Region and improve safety for vehicles, pedestrians, and bicyclists along US 41. US 41 is part of the Florida Intrastate Highway System (FIHS) and plays a significant role in connecting southern Hillsborough County to the Tampa Bay region.

1.2.2 Need

The project is needed to provide regional connectivity for the traveling public and intermodal facilities, improve safety, and accommodate existing and projected future traffic, which demonstrates the level of service (LOS) deficiencies in this corridor as a result of transportation demand.

Emergency Evacuation

US 41 is listed as an evacuation route by the Hillsborough County Emergency Management and is shown on the Florida Division of Emergency Management's evacuation route network. US 41 provides access to I-75 via interchanges with east-west connections on Gibsonton Drive, Big Bend Road (CR 672), and SR 60, which is close in proximity to the study limits.

Roadway Deficiencies

Pavement deficiencies were also noted in the 2016 Preliminary Engineering Report. While not structurally deficient, the bridges over both Bullfrog Creek and the Alafia River are classified as functionally obsolete due to substandard-width shoulders. In addition, the sidewalks on the bridges are very narrow and there are no provisions for bicyclists on the bridges.

Safety

With the additional capacity provided in the corridor by the widening of US 41 from four to six lanes, roadway congestion will be reduced, which will decrease potential conflicts with other vehicles and potentially increase safety. An analysis of traffic crash data for years 2008 through 2012 revealed that the overall average crash rate within the study limits was lower than the statewide average crash rate for similar type facilities.

1.3 Addendum Purpose

FDOT has prepared this *Natural Resources Evaluation (NRE) Addendum* to document and evaluate proposed changes which may impact findings from the 2017 Wetland Evaluation and Biological Assessment Report (WEBAR). The prior report did not evaluate impacts of specific SMF and FPC sites, as these sites were not analyzed under the PD&E study. There have also been minor updates to the roadway concepts along the US 41 mainline. This *NRE Addendum* analyzes updates to the roadway concepts and evaluates the impacts of SMF and FPC sites on natural resources within the project study area. This *NRE Addendum* provides updates to identified protected species impacts based on their current listing status, both federal and state, as well as new listed species making note of species delisted status since the 2017 WEBAR was approved. The project study area is a 500-ft buffer from the centerline of US 41, from Kracker Ave to south of Causeway Blvd, and includes a 500 ft buffer around the SMF and FPC sites.

Findings from the approved 2017 WEBAR are included to compare to the impacts proposed in the current conceptual design. Section 7 consultation concurrence for the determinations presented in the 2017 WEBAR was received on September 1, 2015, from the United States Fish and Wildlife Services (USFWS). National Marine Fisheries Service (NMFS) provided feedback regarding project actions on August 6, 2015. Coordination from Florida Fish and Wildlife Conservation Commission (FWC) was also received on August 11, 2015 (Appendix A).

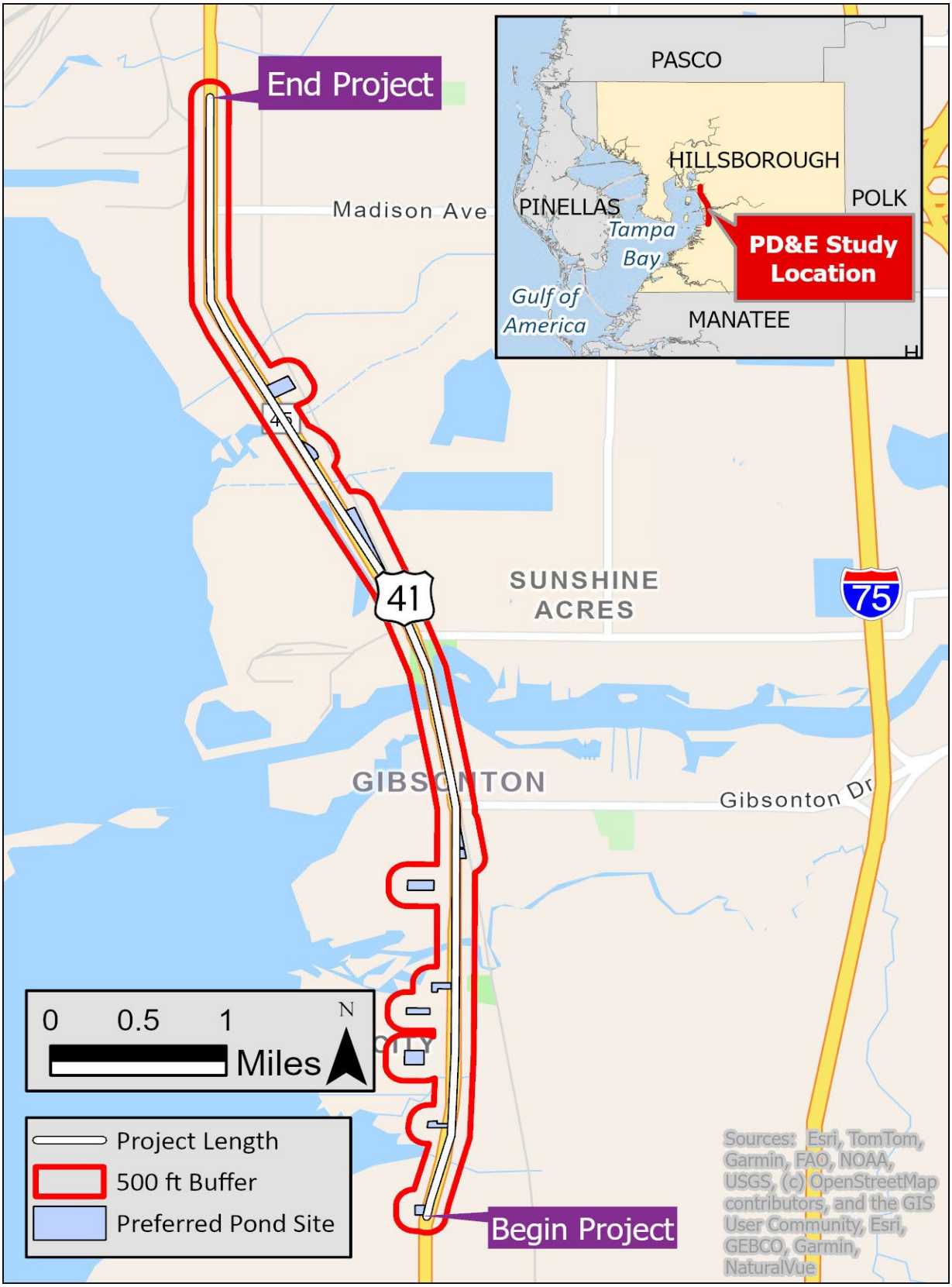

Figure 1-1 Project Location Map

Section 2 Existing Environmental Conditions

2.1 Existing Land Use Land Cover

The project study area is a 500-ft buffer surrounding the project alignment and preferred pond sites. The 2017 WEBAR used the Southwest Florida Water Management District (SWFWMD) 2010 Land Use Land Cover (LULC) data to evaluate impacts. This *NRE Addendum* uses the SWFWMD 2020 LULC data for analyses. Some of the differences in LULC reported are due to changes in land use mapping between 2010 and 2020. The land uses are categorized according to the FDOT's Florida Land Use, Cover and Forms Classification System (FLUCCS, 1999) descriptions. The primary land use impacted by the roadway corridor is industrial, accounting for approximately 19% of the affected area. A roughly one-mile segment of the corridor traverses mosaic mining operations, representing about 11% of the land use within the corridor.

At the northern terminus, there is an industrial area associated with port facilities. Natural areas affected include both forested and wetland environments. The impacted forested areas have limited native shrub and herbaceous vegetation layers, with pronounced ecological edge effects. Approximately 65% of the project study area is developed (FLUCCS Urban & Built-up, Transportation, Communication and Utilities). Natural communities (FLUCCS upland forests, waters, and wetlands) found within the project study area are scattered along the length, making up 34% of the LULC (forests, water, and wetlands). A 2020 LULC map can be found in Appendix B. Table 2-1 shows the land use acreages as mapped by SWFWMD within the project study area as well as the relative percent cover of each land use type.

Table 2-1 Existing Land Use Land Cover

FLUCCS	Description	Acreage	Percent Cover
1100	Residential low density < 2 dwelling units per acre	7.78	0.74%
1200	Residential med density 2 to 5 dwelling units per acre	168.34	15.97%
1300	Residential high density	29.32	2.78%
1400	Commercial and services	142.58	13.52%
1500	Industrial	74.48	7.06%
1600	Extractive	120.55	11.43%
1700	Institutional	1.51	0.14%
1800	Recreational	7.97	0.76%
1900	Open land	7.16	0.68%
2500	Specialty farms	1.88	0.18%
2600	Other open lands	12.56	1.19%
4110	Pine flatwoods	73.81	7.00%
4340	Upland hardwood - coniferous mix	47.59	4.51%
5100	Streams and waterways	10.72	1.02%

FLUCCS	Description	Acreage	Percent Cover
5200	Lakes	1.38	0.13%
5300	Reservoirs	1.72	0.16%
5400	Bays and estuaries	42.99	4.08%
6120	Mangrove swamps	37.92	3.60%
6150	Stream and lake swamps (bottomland)	9.02	0.86%
6300	Wetland forested mixed	36.45	3.46%
6410	Freshwater marshes	2.69	0.26%
6420	Saltwater marshes	69.65	6.61%
6430	Wet prairies	19.50	1.85%
6440	Emergent aquatic vegetation	0.71	0.07%
8100	Transportation	115.13	10.92%
8300	Utilities	11.02	1.05%
	TOTAL	**1054.43**	**100.00%**

2.2 Future Land Use

Future land use data from the Hillsborough County 2025 Future Land Use Unincorporated County-Wide Map, effective February 28, 2024, was reviewed. The predominant future land uses surrounding the project study area are industrial and residential. There are also areas designated for commercial development, suburban mixed use, and natural preservation (Appendix C).

2.3 Soils

Due to the expanded project study area, there are additional soil types within the project study area as compared to that reported in the 2017 WEBAR. The dominant soil types are the same: Myakka fine sand (29), Pinellas fine sand (38), and Malabar fine sand (27). A soils map can be found in Appendix D. Table 2-2 presents the acreages and relative percent cover of each soil type within the project study area.

Table 2-2 Existing Soils (NRCS descriptors)

Map Unit Symbol	Description	Acreage	Percent Cover
4	Arents, nearly level	25.57	2.43%
5	Basinger, Holopaw, and Samsula soils, depressional*	11.15	1.06%
15	Felda fine sand, 0 to 2 percent slopes*	24.77	2.35%
17	Floridana fine sand, 0 to 2 percent slopes	26.76	2.54%
20	Gypsum land	3.72	0.35%
24	Kesson muck, frequently flooded*	73.85	7.00%
27	Malabar fine sand, 0 to 2 percent slopes*	100.29	9.51%
29	Myakka fine sand, 0 to 2 percent slopes*	401.87	38.11%
30	Myakka fine sand, frequently flooded*	62.39	5.92%

Map Unit Symbol	Description	Acreage	Percent Cover
32	Myakka-urban land complex	5.99	0.57%
38	Pinellas fine sand, 0 to 2 percent slopes*	177.62	16.85%
39	Arents, very steep	14.21	1.35%
44	St. Augustine fine sand, 0 to 2 percent slopes*	10.47	0.99%
46	St. Johns fine sand*	14.2	1.35%
57	Wabasso fine sand, 0 to 2 percent slopes*	33.35	3.16%
60	Winder fine sand, frequently flooded*	0.06	0.01%
61	Zolfo find sand, 0 to 2 percent slopes	0.9	0.09%
99	Water	65.71	6.23%
100	Waters of the Gulf	1.55	0.15%
	TOTAL	1054.43	100.00%

**Hydric rating designated by the Hydric Soils of Florida Handbook (Fourth Edition)*

2.4 Project Study Area Wetlands, Surface Waters, and Other Surface Waters

Due to the expanded project study area now including the preferred pond sites with the 500-ft buffer, there is additional wetlands and surface water area within the project study area. **Table 2-3** presents the wetlands and surface waters as mapped by SWFWMD according to FLUCCS Codes. **Table 2-4** organizes FLUCCS into summary categories of wetlands, surface waters, and other surface waters.

Table 2-3 Project Study Area Wetlands and Surface Waters by FLUCCS code

FLUCCS	Description	Acreage
5100	Streams and waterways	10.72
5200	Lakes	1.38
5300	Reservoirs	1.72
5400	Bays and Estuaries	42.99
6120	Mangrove swamps	37.92
6150	Stream and lake swamps (bottomland)	9.02
6300	Wetland forested mixed	36.45
6410	Freshwater marshes	2.69
6420	Saltwater marshes	69.65
6430	Wet prairies	19.50
6440	Emergent aquatic vegetation	0.71
	TOTAL	232.75

Table 2-4 Project Study Area Wetlands, Surface Waters, and Other Surface Waters

Type	Acreage
Wetlands	175.94
Surface Waters and Other Surface Waters	56.81
TOTAL	232.75

Section 3 Protected Species and Habitat

The project study area was assessed for the presence of suitable habitat for federal and state protected species in accordance with *50 CFR Part 402 of the ESA of 1973*, as amended, *Chapter 5B-40: Preservation of Native Flora* of *Florida*, *FAC, Chapter 68A-27: Rules Relating to Endangered or Threatened Species*, and the FDOT *PD&E Manual*.

Agency coordination during the 2017 WEBAR resulted in several comments from wildlife agencies regarding future project phases and actions. NMFS requested that Section 7 consultation be initiated once design details are available, especially regarding impacts resulting from pile driving. FWC requested the addition of the rivulus (*Kryptolebias marmoratus)*, Florida pine snake (*Pituophis melanoleucus mugitus)*, and Florida mouse (*Podomys floridanus*) to the species assessment. At the time of the 2017 WEBAR, these species were listed as Species of Special Concern under the state of Florida. The rivulus and Florida mouse were delisted on January 11, 2017, and are therefore not included in the species impact analysis. FWC agreed with the remainder of the species determinations and project commitments discussed in the 2017 WEBAR. The USFWS concurred with the species determinations discussed in the 2017 WEBAR.

3.1 Methodology and Assessment

As noted prior, a WEBAR was completed in January 2017 for the project, as defined at that time. Methodologies used in the WEBAR remain for this updated *NRE Addendum.* Protected floral and faunal species were observed during the October 2013 field reviews performed for the 2017 WEBAR. Three listed faunal species (brown pelican, *Pelecanus occidentalis*; osprey, *Pandion haliaetus*; both of which no longer have specific species protection; and, wood stork, *Mycteria americana*) were observed and one listed floral species (erect prickly pear, *Opuntia stricta*) was observed in habitats abutting or within the 2017 project study area.

This *NRE Addendum* evaluates changes since the 2017 WEBAR including evaluations of habitats within the 2025 project study area based upon the current (2025) USFWS and FWC protected species lists. Updated literature reviews, agency database searches, and preliminary field reviews of habitat were conducted to identify the potential for protected species occurring within the 2025 project study area. The 2025 project study area will be referred to as the project study area throughout the rest of this report. Thirty-six plant and wildlife species were identified in the 2017 WEBAR that are still protected. The brown pelican, osprey, white ibis, snowy egret, and gopher frog have since been delisted and are not specifically discussed in regard to listing status. An additional 24 species were evaluated as part of this 2025 *NRE Addendum.*

3.2 Field Review Findings

Field reviews were conducted in November 2024. These consisted of vehicular and pedestrian surveys through vegetated areas to determine habitat potential to support protected species. Species observations and historical occurrences are presented in Appendix E.

3.3 Species Evaluation

A USFWS Information for Planning and Consultation (IPaC) Official Species List was obtained for the project study area (Appendix F). The FWC recognizes and applies federal designations for federally listed species. The State of Florida designation specifically cites the federal designation, for example FE for federally endangered. The list of state protected species with the potential to exist within the project study area was developed using the Florida Natural Areas Inventory (FNAI) Biodiversity Matrix. There are no FWC designated Critical Wildlife Areas within the project study area. This project is within the limits of the USFWS critical habitat for the west Indian Manatee (*Trichechus manatus*).

The following items have been updated to the current versions: the 2017 USFWS *Eastern Indigo Snake Programmatic Effect Determination Key* (Appendix G), the 2024 *Standard Protection Measures for the Eastern Indigo Snake* (Appendix H), the 2017 USFWS *Wood Stork Key for Central and North Peninsular Florida* (Appendix I), and the 2025 Wood Stork Colony map (Appendix J). The *NMFS Sea Turtle and Smalltooth Sawfish Construction Conditions* have been updated to the *NMFS's Southeast Region's Protected Species Construction Conditions* (Appendix K).

Table 3-1 presents status and determination information for currently protected faunal species and for those species delisted since the 2017 WEBAR. The species status and effect determinations for currently protected floral species are presented in Table 3-2.

Table 3-1 Comparative Overview of Species Protections and Effect Determinations Under 2017 WEBAR and 2025 NRE Addendum

Species	Common Name	State Status (FWC)	Federal Status (USFWS)	2017 WEBAR Effect Determination	2025 NRE Addendum Effect Determination
FISHES					
Acipenser oxyrhynchus desoto	Gulf sturgeon	FT	FT	MANLAA	MANLAA
Microphis brachyurus	Opossum pipefish	--	SSC	ND	MANLAA
Mobula birostris	Giant manta ray	FT	FT	ND	MANLAA
Pristis pectinata	Smalltooth sawfish	FE	FE	MANLAA	MANLAA
AMPHIBIANS					
Lithobates capito	Gopher Frog	--	--	MANLAA	DL
REPTILES					
Alligator mississippiensis‡	American alligator	FT(S/A)	FT(S/A)	NE	--
Caretta caretta	Loggerhead sea turtle	FT	FT	MANLAA	MANLAA
Chelonia mydas	Green sea turtle	FE	FE	MANLAA	MANLAA
Crocodylus acutus	American crocodile	FT	FT	ND	MANLAA
Dermochelys coriacea	Leatherback sea turtle	FE	FE	MANLAA	NE
Drymarchon couperi	Eastern indigo snake	FT	FT	MANLAA	MANLAA
Eretmochelys imbricata	Hawksbill sea turtle	FE	FE	ND	NE
Gopherus polyphemus	Gopher tortoise	ST	--	MANLAA	NAEA
Lepidochelys kempii	Kemp's Ridley sea turtle	FE	FE	MANLAA	MANLAA
Pituophis melanoleucus	Florida pine snake	ST	--	ND	NEA
INSECTS					
Danaus plexippus	Monarch butterfly	--	FPT	ND	--
MAMMALS					
Perimyotis subflavus	Tricolored bat	SGCN	FPE	ND	--
Trichechus manatus	West Indian manatee	FT	FT	MANLAA	MANLAA
Ursus americanus floridanus	Florida black bear	--	--	ND	--
BIRDS					
Antigone canadensis pratensis	Florida sandhill crane†	ST	--	ND	NAEA
Aphelocoma coerulescens	Florida scrub-jay	FT	FT	NE	NE
Athene cunicularia floridana	Florida burrowing owl	ST	--	ND	NEA
Calidris canutus rufa	Rufa red knot	FT	FT	ND	MANLAA

Species	Common Name	State Status (FWC)	Federal Status (USFWS)	2017 WEBAR Effect Determination	2025 NRE Addendum Effect Determination
Caracara plancus audubonii	Audubon's crested caracara	FT	FT	ND	MANLAA
Charadrius melodus	Piping Plover	FT	FT	NE	NE
Charadrius nivosus	Snowy plover	ST	--	MANLAA	NAEA
Egretta caerulea	Little blue heron†	ST	--	MANLAA	NAEA
Egretta refescens	Reddish egret	ST	--	MANLAA	NAEA
Egretta thula	Snowy egret	--	--	MANLAA	DL
Egretta tricolor	Tricolored heron	ST	--	MANLAA	NAEA
Eudocimus albus	White ibis	--	--	MANLAA	DL
Grus americana	Whooping crane	--	EXPN	ND	--
Haematopus palliatus	American oystercatcher	ST	--	MANLAA	NAEA
Haliaeetus leucocephalus[1]	Bald eagle	--	--	NE	NE
Laterallus jamaicensis ssp. Jamaicensis	Eastern black rail	FT	FT	ND	NE
Mycteria americana	Wood stork	ST	FT	MANLAA	MANLAA
Pandion haliaetus	Osprey	--	--	MANLAA	DL
Pelecanus occidentalis	Brown Pelican	--	--	MANLAA	DL
Platea ajaja	Roseate spoonbill	ST	--	MANLAA	NAEA
Rostrhamus sociabilis	Everglade Snail Kite	FE	FE	ND	MANLAA
Rynchops niger	Black skimmer	ST	--	MANLAA	NAEA
Sternula antillarum	Least tern	ST	--	MANLAA	NAEA

MANLAA = May Affect, Not Likely to Adversely Affect, NAEA = No Adverse Effect Anticipated, NEA = No Effect Anticipated, NE = No Effect, FT(S/A)= Federal Threatened due to similarity of appearance to another species, FPT = Federally Proposed as Threatened, FT= Federal Threatened, FPE= Proposed Endangered, FE=Federal Endangered, FPE = Federally Proposed as Endangered, ST=State Threatened , SE=State Endangered, SGCN = State of Florida Species of Greatest Conservation Need, SSC = Species of Special Concern, EXPN= Experimental Population (Non-essential), ND = Not Discussed, DL = Species Delisted (no effect determination required), --=Not Listed

† = Species observed during November 2024 field review, [1] = Bald and Golden Eagle Protection Act; ‡ = Previous USFWS Coordination resulted in no discussion needed for this species

Table 3-2 Floral State and Federal Protected Species Status, Probability of Occurrence, and 2025 Determinations

Species	Common Name	State Status (FDACS)	Federal Status (USFWS)	2025 NRE Probability of Occurrence	2025 NRE Re-Evaluation Effect Determination
Acrostichum aureum	Golden leather fern	ST	--	Low	NEA
Agrimonia incisa	Incised groove-bur	ST	--	Low	NEA
Andropogon arctatus	Pinewoods bluestem	ST	--	Low	NEA
Asclepias curtissii	Curtiss milkweed	SE	--	Low	NEA
Asplenium auritum	Auricled spleenwort	SE	--	Low	NEA
Bonamia grandiflora	Florida bonamia	FT	FT	Low	MANLAA
Calopogon multiflorus	Many-flowered grass-pink	ST	--	Low	NEA
Chionanthus pygmaeus	Pygmy fringe-tree	FE	FE	Low	MANLAA
Centrosema arenicola	Sand butterfly pea	SE	--	Low	NEA
Chrysopsis floridana	Florida goldenaster	ST	--	Low	NEA
Glandularia tampensis	Tampa vervain	SE	--	Low	NEA
Lechea cernua	Nodding pinweed	ST	--	Low	NEA
Lythrum flagellare	Lowland loosestrife	SE	--	Medium	NEA
Matelea floridana	Florida spiny-pod	SE	--	Low	NEA
Opuntia stricta	Erect prickly pear	ST	--	Low	NEA
Pecluma plumula	Plume polybody	SE	--	Low	NEA
Pecluma ptilodon	Comb polybody	SE	--	Low	NEA
Campanula robinsiae	Brooksville bellflower	FE	FE	Low	MANLAA
Pteroglossaspis ecristata	Giant orchid	ST	--	Low	NEA
Rhynchospora megaplumosa	Large-beaked beaksedge	SE	--	Low	NEA
Schwalbea americana	Chaffseed	FE	FE	Low	MANLAA
Tephrosia angustissima	Curtiss' hoary-pea	SE	--	Low	NEA

Species	Common Name	State Status (FDACS)	Federal Status (USFWS)	2025 NRE Probability of Occurrence	2025 NRE Re-Evaluation Effect Determination
Thelypteris serrata	Dentate lattice-vein fern	SE	--	Low	NEA
Triphora amazonica	Broad-leaved nodding-caps	SE	--	Low	NEA
Zephyranthes simpsonii	Redmargin zephyrlily	ST	--	Low	NEA

FE=Federal Endangered, FT= Federal Threatened, SE=State Endangered, ST=State Threatened, -- = Not Listed, ND == Not Discussed, NEA = No Effect Anticipated, MANLAA = May affect, not likely to adversely affect

3.4 Federally Listed Faunal Species

3.4.1 Gulf Sturgeon

The Gulf sturgeon is federally listed as threatened; it is jointly protected by NMFS and USFWS. The USFWS manages the species in freshwater and NMFS manages the species in saltwater. USFWS will have jurisdiction over the Gulf sturgeon for this project. There is critical habitat mapped for the Gulf sturgeon by NOAA Fisheries (marine waters) and USFWS (freshwaters). There is no critical habitat in the project study area. Furthermore, this species was not identified in the 2025 USFWS IPaC Official Species List. The closest mapped critical habitat is the estuary at the mouth of the Suwanee River, in the Big Bend. Rare captures of adult Gulf sturgeon have occurred in Tampa Bay and Charlotte Harbor. No Gulf sturgeon spawning activities have been recorded south of the Suwanee River. Gulf sturgeon adults forage in the Gulf during the winter months at depths from 6 to 100 feet, in areas with high densities of desired forage such as small crabs, grass shrimp, marine lancets, brachiopods (lamp shells, mono-valve shellfish), and marine worms. These species have limited populations in brackish systems that have elevated freshwater levels. The project study area is approximately one mile upriver from estuaries. The water is fresh flowing under the bridges at low tides, which constrains potentials for desired foraging habitat. Gulf sturgeons are not expected to move up any of the rivers or creeks that are within the project study area. There is a low probability of occurrence for the Gulf sturgeon within river, creek, or narrows that the project study area crosses. Because there is a remote possibility of occurrence, the determination for the Gulf sturgeon is May Affect, Not Likely to Adversely Affect (MANLAA). The determination has not changed from the 2017 WEBAR. The FDOT will implement Best Management Practices (BMP), adhere to the *Construction Special Conditions for the Protection of the Gulf Sturgeon* (Appendix L) during construction of the proposed bridges, and coordinate with NMFS on potential impacts associated with any pile driving activities.

3.4.2 Giant Manta Ray

The giant manta ray is federally listed as threatened. The NMFS has not designated critical habitat for this species. Giant manta rays can be found worldwide in tropical, subtropical, and temperate bodies of water. This species can also be found, less commonly, in estuarine waters, oceanic inlets, bays, and intercoastal waterways. Giant manta rays are typically found in waters with temperatures from 66˚F to 72˚F. This species can be found in the Gulf of America, and may wander into Tampa Bay, depending on prey movements. It is highly unlikely that this species will be found within the rivers in the project study area, as giant manta rays are ocean-dwellers. The probability of occurrence is low. The determination for the giant manta ray is May Affect, Not Likely to Adversely Affect (MANLAA).

3.4.3 Smalltooth Sawfish

The smalltooth sawfish is federally listed as endangered. The NMFS has designated critical habitat for the smalltooth sawfish in the Charlotte Harbor Estuary Unit and the Ten Thousand Islands/Everglades Unit. The

project study area is not within the mapped critical habitat. The FWC lists this species as federally endangered. Smalltooth sawfish have occasionally been observed upstream into larger freshwater rivers. This species relies on red mangroves (*Rhizophora mangle L.*) and shallow waters with variable salinity for survival. There are patches of mangroves along the tidal rivers and creeks that cross the project study area. However, there are no recorded observations within the project study area, and there were no observations made during field surveys. The probability of occurrence is low. FDOT will implement BMPs and adhere to the *NMFS's Southeast Region's Protected Species Construction Conditions* (Appendix K) and the *NMFS's Vessel Strike Avoidance Measures* during construction of the project (Appendix M). The determination for the smalltooth sawfish is May Affect, Not Likely to Adversely Affect (MANLAA). The determination has not changed from the 2017 WEBAR. Per previous coordination with NMFS, the FDOT will coordinate with NMFS on potential impacts associated with any pile driving activities during the design phase of this project.

3.4.4 American Crocodile

The American crocodile is listed as federally threatened. The USFWS Critical habitat is >160 miles south of the southern end of this project. The American crocodile lives in coastal areas of south Florida within brackish or saltwater areas. It can be found in saltwater ponds, coves, and creeks through mangrove forests. Crocodiles are occasionally found inland in freshwater and urban areas along the southern Florida coast.

There are no documented historical observations within the project study area. Impacts to marine wetlands and native habitat are expected to be minimal. The probability of occurrence for the American crocodile is low. The determination for the American crocodile is May Affect, Not Likely to Adversely Affect (MANLAA). The American crocodile was not discussed in the 2017 WEBAR.

3.4.5 Sea Turtles

Sea turtles were not identified by the 2025 IPaC. Turtles discussed in the 2017 WEBAR included the green sea turtle (FE), loggerhead (FT), leatherback (FE), the hawksbill (FE), and Kemp's Ridley (FE). There is designated marine critical habitat for the green, loggerhead, leatherback, Kemp's ridley, and hawksbill sea turtles. Only the loggerhead sea turtle has terrestrial critical habitat in Florida. The project study area is not within the designated critical habitat for any of these species. The green sea turtle has critical habitat about one mile downstream of the project study area.

No sea turtle nesting habitat exists with the project study area; therefore, coordination with USFWS on this species is not required. Consultation with NMFS will be required for swimming sea turtles. The probability of occurrence for all sea turtles is low. The FDOT will implement BMPs and will adhere to the *NMFS's Southeast Region's Protected Species Construction Conditions* (Appendix K) during construction. The determination for the green, loggerhead, leatherback, and Kemp's Ridley sea turtles is May Affect, Not Likely to Adversely Affect (MANLAA). Consultation with NMFS will be required for these species. The project

will have no effect on the leatherback and hawksbill sea turtles, as these species have specific requirements that do not exist within the project study area. The determination for all sea turtles, except for the leatherback, has not changed from the 2017 WEBAR.

3.4.6 Eastern Indigo Snake

The eastern indigo snake is federally listed as threatened. There is no designated critical habitat for this species. The eastern indigo snake occurs in a wide variety of habitats, including forested uplands and wetlands. These habitats may include wet and dry prairies, longleaf pine (*Pinus palustris*) flatwoods, scrubby flatwoods, floodplain edges, sand ridges, dry glades, tropical hammocks, muckland fields, coastal dunes, and xeric sandhill communities, and along ecotones of wetland ecosystems including mangrove forests. The eastern indigo snake may utilize gopher tortoise burrows, holes, cavities, and other refugia for protection. Patches of low to medium-quality habitat for this species exists within the project study area, connected by pastureland. The eastern indigo snake's probability of occurrence within the project study area is moderate.

To ensure the protection of this species, the FDOT will follow the USFWS *Standard Protection Measures for the Eastern Indigo Snake* (Appendix H) during construction. The revised August 2013 *Addendum to USFWS Concurrence Letter to U.S. Army Corps of Engineers Regarding Use of the Eastern Indigo Snake Programmatic Effect Determination Key* (Appendix G) was used to determine potential impacts on this species. The determination for the eastern indigo snake is May Affect, Not Likely to Adversely Affect (A→B→C→ MANLAA). The determination has not changed from the 2017 WEBAR.

3.4.7 Monarch Butterfly

The monarch butterfly is proposed for a federally threatened listing as of December 2024. There is no proposed critical habitat for the monarch butterfly in Florida. ESA protections will not apply until the effective date of a final rule listing for the monarch butterfly. This species is not listed by the State of Florida. The eastern population of monarch butterflies (east of the Rocky Mountains) ranges from southern Canada to Mexico. Monarch butterflies have a generational migration between the northern and southern ends of the range. Monarch butterfly eggs are laid on milkweed species (*Asclepias spp.*). The caterpillars only forage on milkweed species. Young monarchs will forage on common roadside species of flowers such as thistles, daisies, and clover. Adult monarchs will feed on almost all high nectar flowers. The probability of occurrence is moderate. As the monarch butterfly is not yet officially listed, no determination is made. The monarch butterfly was not discussed in the 2017 WEBAR.

If the listing status of the monarch butterfly is elevated by USFWS to Threatened or Endangered and the Preferred Alternative is located within a consultation area, then during the design and permitting phase of the proposed project, the FDOT commits to reinitiating consultation with the USFWS to determine the

appropriate survey methodology and to address USFWS regulations regarding the protection of the monarch butterfly.

3.4.8 Tricolored Bat

The tricolored bat is proposed to be listed as endangered under the ESA. There is no proposed critical habitat for this species. The State of Florida considers the tricolored bat a Species of Greatest Conservation Need. This state designation is given for native animals with populations that are at risk of, or are, declining in Florida. Tricolored bats in central Florida reduce their activity in winter when temperatures are below 50 degrees Fahrenheit but become active in periods of warmer temperatures. During these periods of low activity, tricolored bats can rest in culverts, under bridges, and tree cavities. During the summer months, this species roosts in Spanish moss (*Tillandsia usneoides*) and dead tree leaves. Prime habitat for the tricolored bat in Florida is deciduous and mixed forests in areas with trees of various heights. Tricolored bats forage over open water, wetlands, prairies and on the edge of forests. The project study area was surveyed for signs of potential bat usage in November 2024. Within the project study area, the trees are in generally healthy condition, showing no signs of insect infestation or disease that would promote breakage or other cavity forming. There may be cavities in individual trees that could serve as roosts. There are live oaks (*Quercus virginiana*) that have significant amounts of Spanish moss which can provide roosting habitat. The bridges over the Alafia River, Bullfrog Creek, Archie Creek, Kitchen Branch, and other unnamed streams and creeks are other areas of potential roosting but showed no signs of use by bats (i.e., no staining, no daytime roosting, no guano, no incidental material, no odors) during the November 2024 field survey. There is no historical documentation of occurrence within the project study area. The probability of occurrence for this species is moderate. The tricolored bat was not discussed in the 2017 WEBAR. The determination for the tricolored bat is May Affect, Not Likely to Adversely Affect (MANLAA). As the timeline for construction is better defined, FDOT will adhere to the applicable commitment below:

- Upon listing of the tricolored bat, FDOT will not conduct tree trimming/clearing activities during the tricolored bat pup season (May 1st to July 15th) and when bats may be in torpor (when temperatures are below 45 degrees Fahrenheit).
- Upon listing of the tricolored bat, if the project contains suitable habitat and FDOT needs to trim or clear trees or perform work on bridges/culverts during the maternity season and/or when the temperature is below 45 degrees Fahrenheit, then FDOT will survey the project area for evidence of the tricolored bat.
    - The Indiana Bat and Northern Long-eared Bat Survey Guidance (USFWS) acoustic survey protocol in the year-round range (mist netting is not being conducted in Florida at this time) will be used for areas with tree trimming/clearing. For bridges and culverts, the Indiana Bat and Northern Long-eared Bat Survey Guidance, Assessing Bridges and Culverts for Bats, will be used.
        - If the surveys result in no tricolored bats detected, FDOT will proceed with the project activities. Negative results from bridge/culvert surveys are valid for 2 years. Negative

results for acoustic surveys are valid for 5 years. However, negative results for either survey may be invalidated if additional tricolored bat survey data is submitted to FWS showing presence of the species within the vicinity of the project area. Additional survey work by FDOT, or application of the avoidance and minimization measures noted in the first bullet, may be required if updated detections are reported, and may result in reinitiation of consultation with FWS.

- If the surveys result in positive detections of the tricolored bat, FDOT will implement conservation measures such as: not conducting tree trimming/clearing activities during the tricolored bat pup season (May 1st to July 15th) when pups are not volant and not able to escape disturbance; similarly avoid tree trimming/clearing activities when the temperatures are below 45 degrees Fahrenheit when bats may be in torpor and unresponsive to disturbance.

3.4.9 West Indian manatee

The West Indian manatee is federally listed as threatened. There is designated critical habitat for this species in Tampa Bay, as well as the rivers and creeks that this project crosses. There are also manatee protections zones mapped separately by the State of Florida and Hillsborough County within the project study area (Appendix N). These manatee protection zones have restrictions on in-water activities, for both physical and audible protections. The Alafia River which the project study area crosses is a manatee protection zone mapped by FWC.

There is a high probability of the occurrence of manatees in the rivers and creeks within the project study area. There have been documented manatee carcass recoveries within the project study area. Manatees were not observed during field surveys. Manatees rarely move through creeks or rivulets that go below 4-feet of water during low tide. Manatee protection measures will be implemented during construction, including *Standard Manatee Conditions for In-Water Work* (Appendix O). Restrictions on blasting, monitoring of turbidity barriers, exclusionary grating on culverts, presence of manatee observers during in-water work, a defined or limited construction window, any water-based equipment will require special protection, and prohibition of night-time in-water work will be included in the final construction plans and permits. The determination for the west Indian manatee is May Affect, Not Likely to Adversely Affect (MANLAA). The project will not result in destruction or adverse modification of designated critical habitat for the west Indian manatee. The determination has not changed from the 2017 WEBAR.

3.4.10 Florida Scrub-Jay

The Florida scrub-jay is federally listed as threatened. There is no designated critical habitat for this species. The project study area is within the USFWS mapped consultation area. USFWS has a recovery plan for the Florida scrub jay. This recovery plan designates the need for preservation and restoration of habitat. The Florida scrub-jay is restricted to often small and isolated patches of sand pine scrub, xeric oak scrub, and scrubby oak-flatwoods in peninsular Florida. This species prefers scrub habitats with oak tree sizes up to 10 feet. However, Florida scrub jays have been observed using mature (grand) live oaks along roadways, fence

rows, and similar landscape positions, when these grand trees are isolated from a forest complex. This species was not observed during field surveys and there are no documented occurrences within the project study area. The probability of occurrence is low. There is dense Brazilian pepper (*Schinus terebinthifolia*) and significant human disturbance within the limited remaining undeveloped upland habitat in the project study area. These factors make the undeveloped areas unsuitable for the Florida scrub jay.

Suitable habitat does not exist within the project study area. The determination for the Florida scrub-jay is no effect. The determination has not changed from the 2017 WEBAR.

3.4.11 Rufa Red Knot

The rufa red knot is federally listed as threatened. There is designated critical habitat for the rufa red knot as of April 2023, which only exists in New Jersey. The project study area is within the USFWS consultation area for this species. This species can be found wintering and migrating along the Atlantic and Gulf coasts of Florida, using the Atlantic Flyway. Coastal habitats used include muddy and sandy coastal areas, estuaries' fringes, tidal flats, and inlets. There are patches of suitable habitat within one mile of the project study area. This species was not observed during field surveys and there are no documented occurrences within the project study area. The probability of occurrence for this species is low. Therefore, the determination for the rufa red knot is May Affect, Not Likely to Adversely Affect (MANLAA). The rufa red knot was not discussed in the 2017 WEBAR.

3.4.12 Audubon's Crested Caracara

Audubon's crested caracara is federally listed as threatened. There is no designated critical habitat for this species. The project study area is within the USFWS' created caracara consultation area. Section 7 ESA Consultation will be required for this species. This species inhabits large wet and dry prairies and pastures in south-central Florida. Crested caracaras prefer nesting in cabbage palms, though they have been reported to nest in other tree species. No crested caracaras have been documented in the project study area (FNAI 2023). The project study area is significant distance from documented observations and nests. There is low quality habitat available within the project study area. Any suitable habitat within the project study area will not be impacted by construction activities. This species was not observed during field surveys and there are no documented occurrences within the project study area. The potential for the occurrence of the caracara within the project study area is considered low. The determination for the Audubon's crested caracara is May Affect, Not Likely to Adversely Affect (MANLAA). The Audubon's crested caracara was not discussed in the 2017 WEBAR.

3.4.13 Piping Plover

The piping plover is federally listed as threatened. There is designated critical habitat for this species. The project study area is not within the designated critical habitat. This species does not breed in Florida. Individuals from the three breeding populations winter in Florida at sites along the Gulf and Atlantic coasts.

Piping plover wintering habitat includes beaches, mudflats, sandflats, as well as spoil islands and sand or algal flats in protected bays. Suitable habitat does not exist within the project study area. This species was not observed during field surveys and there are no documented occurrences within the project study area. The probability of occurrence is none. The determination for the piping plover is no effect. The determination has not changed from the 2017 WEBAR.

3.4.14 Eastern Black Rail

The eastern black rail is federally listed as threatened. There is no designated critical habitat for this species. Eastern black rails can be found in salt and brackish marshes, as well as densely vegetated upper tidal marshes along the Gulf coast from Florida to Texas. This species has been occasionally observed in inland marshes of the Florida peninsula, though prevalence is largely uninvestigated. There is no suitable habitat within the project study area. This species was not observed during field surveys and there are no documented occurrences within the project study area. Given the lack of suitable habitat, the probability of occurrence is none. This determination for the eastern black rail is no effect. The eastern black rail was not discussed in the 2017 WEBAR.

3.4.15 Wood Stork

The wood stork is federally listed as threatened. The project study area is within the Core Foraging Area (CFA) of three wood stork colonies (**Appendix J**). Wood storks utilize freshwater and estuarine habitats for nesting, foraging, and roosting. Wood storks are typically colonial nesters and construct their nests in medium to tall trees located within inundated forested wetlands including cypress swamps, mixed hardwood swamps, mangroves, and sloughs. Wetlands and surface waters within a CFA can be considered Suitable Foraging Habitat (SFH) for wood storks. As defined by the USFWS, SFH includes wetlands and surface waters which have areas of relatively calm water, uncluttered by dense thickets of aquatic vegetation, and have permanent or seasonal water depth between 2 and 15 inches, with fish 0.50 to 6 inches in size. Wetlands types and surface waters that can meet the criteria of SFH typically include herbaceous wetlands, ditches/swales, pond edges, and canals berms. Potential SFH for wood storks exists within and adjacent to the project study area. Wood storks were observed within the project study area; the probability of occurrence is high. Any impacts to SFH will be quantified during the design phase and mitigated at a Service-approved wetland mitigation bank or wood stork conservation bank. The USFWS *Wood Stork Key for Central and North Peninsular Florida* was completed for this project (**Appendix I**), resulting in a determination of not likely to adversely affect (*A>B>C>D>E NLAA*). Thus, the determination for the wood stork is May Affect, Not Likely to Adversely Affect (**MANLAA**). The determination has not changed from the 2017 WEBAR.

3.4.16 Everglade Snail Kite

The Everglade snail kite is federally listed as endangered. There is designated critical habitat for this species. The project study area is not within the designated critical habitat. The current known distribution is east

of Hillsborough County. Additionally, the Everglades snail kite consultation area is about 17-miles away. This species inhabits shallow freshwater marshes and shallow grassy shorelines of lakes. Suitable habitat is not present within project study area. Everglade snail kites primarily forage on apple snails (*Ampullariidae spp*.). Field surveys did not result in the identification of apple snails, nor apple snail eggs, within the project study area. No Everglade snail kites were observed during field surveys and there are no documented occurrences within the project study area. The probability of occurrence is low. The determination for the Everglade snail kite is May Affect, Not Likely to Adversely Affect (MANLAA). The Everglade snail kite was not discussed in the 2017 WEBAR.

3.5 State-Listed Faunal Species

3.5.1 Gopher Frog

Since the 2017 WEBAR, the gopher frog has been delisted in Florida but remains part of the Imperiled Species Management Plan. This species is no longer discussed due to the delisting.

3.5.2 Gopher Tortoise

Since the 2017 WEBAR, the USFWS has not listed the eastern distinct population of the gopher tortoise. However, the gopher tortoise is state-listed as threatened by FWC. This species utilizes dry upland habitats including sandhills, scrub, and dry pine flatwoods. It also uses disturbed habitats such as pasture, old fields, and road shoulders. Such habitat is present along the project corridor; therefore, this species has a moderate potential to be present along the project study area. No gopher tortoises were observed during field surveys and there are no historical occurrences within the project study area. The project study area will be re-surveyed for potential gopher tortoise burrows and individual occurrences during the final permitting process. The 2017 WEBAR determination for this species was MANLAA. Updated to current state protected species guidelines, the effect determination for the gopher tortoise is no adverse effect anticipated.

3.5.3 Florida Pine Snake

The Florida pine snake is state listed as threatened. FWC identifies Hillsborough County as having potential Florida pine snake habitat. The species' primary habitat is scrub and open longleaf pine communities. This habitat does not exist within the project study area. No Florida pine snakes were observed during field surveys and there are no documented occurrences within the project study area. The probability of occurrence is none. There is no effect anticipated on the Florida pine snake. The Florida pine snake was not discussed in the 2017 WEBAR.

3.5.4 Florida Sandhill Crane

The Florida sandhill crane is state listed as threatened. Two subspecies of sandhill crane occur in Florida, a non-migratory year-round breeding resident and the migratory greater sandhill crane (*Antigone canadensis tabida*). These subspecies interbreed and cannot be differentiated. Florida sandhill cranes nest in freshwater wetlands that have shallow waters. This species builds ground nests out of grass and small sticks to hold the eggs just above water, so the surrounding waters may discourage predators. Florida sandhill cranes avoid dense vegetation, including shrub layers and tall herbaceous species such as maidencane (*Panicum hemitomon*), cattail (*Typha spp.*), and other species similar in density and height. This species forages in a wide range of habitats, including prairies, herbaceous marshes, lawns, and parking lots. Florida sandhill cranes have a very high tolerance for human activity, often walking across busy roads during rush hours and through big box retail parking lots. However, there is no desirable nesting habitat within the project study area. No sandhill cranes were observed during field surveys and there are no historical occurrences within the project study area. The probability of occurrence for Florida sandhill cranes is moderate. Avoidance and minimization measures will be made during the design phase in accordance with the FWC *Florida Sandhill Crane Conservation Measures and Permitting Guidelines*. Unavoidable wetland impacts will be mitigated pursuant to state and federal regulations. Additionally, the upland habitats that are proposed for impact which may provide foraging habitat are not unique or limited at either a regional or a local level. If nests are observed during future project phases, the FDOT will coordinate further with the FWC. There is no adverse effect anticipated for the Florida sandhill crane.

3.5.5 Florida burrowing owl

The Florida burrowing owl is state listed as threatened. This species may be found in dry open prairies and cleared areas that offer short groundcover (e.g., agricultural fields, pastures, golf courses, airports, and vacant lots). The owls usually dig their own burrows but are known to use armadillo or gopher tortoise burrows. Wide open herbaceous cover, 6.5 acres of contiguous foraging habitat per pair (USFWS), is required for the Florida burrowing owl. There are 6.5 acres of contiguous open land within the project study area. However, the soils in this location are wet and have a seasonally elevated groundwater table with routine flooding. Therefore, suitable nesting habitat does not exist within the project study area. No Florida burrowing owls were observed during field surveys and there are no documented occurrences within the project study area. The probability of occurrence is low. The determination is no effect anticipated. The Florida burrowing owl was not discussed in the 2017 WEBAR.

3.6 Other Federal Protected Faunal Species

3.6.1 Opossum Pipefish

The Opossum Pipefish is federally identified as a species of concern. The species of concern identification is assigned to those species which NMFS (as the regulating agency) has concerns, whether on status and/or

threats, but lacks sufficient data to officially list under the ESA. The opossum pipefish is identified as a species of concern due to its' population decline throughout the Gulf Coast. This designation does not provide protection. Adult opossum pipefish utilize estuaries and mangrove swamps and will occasionally move into freshwater creeks. This suitable habitat is present within the project study area. No opossum pipefish were observed during field surveys and there are no historical occurrences within the project study area. The probability of occurrence is moderate. There are no expected adverse impacts to opossum pipefish habitats. The opossum pipefish was not discussed in the 2017 WEBAR.

3.6.2 Bald Eagle

The bald eagle is federally protected by the BGEPA (1940), the MBTA (1918), and the State of Florida *Bald Eagle Rule* (68A-16.002 FAC). These protections prohibit the taking, or agitating, of living birds. They also prohibit handling of any part of a bird, feathers, nests, or eggs. Any interactions with bald eagles require a permit. According to the Audubon EagleWatch Program, there are no bald eagle nests within the project study area (May 2025). Furthermore, the project study area does not intersect any 660-ft buffer exclusion zones around existing eagle nests. The closest documented nest is approximately 0.65 miles away from the project study area (**Appendix E**). No new nests were identified during field surveys, but an individual bald eagle was observed in-air near Bullfrog creek. The probability of occurrence is therefore high. Bald eagles utilize rivers, lakes, bays, and coasts for hunting. There are rivers within the project study area that may serve as suitable foraging habitat for this species. The project study area will be re-surveyed for potential bald eagle nests and individual occurrences during the final permitting process. If nests are identified within 660 feet of proposed construction activities, then additional coordination will be held with wildlife agencies. Based on this information, the project will have no effect on the bald eagle. The determination has not changed from the 2017 WEBAR.

3.6.3 Whooping Crane

The whooping crane is a federally designated non-essential experimental population (EXPN), which is defined as a population that has been established within its historical range under Section 10(j) of the federal Endangered Species Act (ESA) to aid in its recovery. The USFWS has determined that a non-essential population is not necessary for the continued existence of the species. Whooping cranes utilize a variety of habitats including coastal marshes and estuaries, inland marshes, lakes, open ponds, shallow bays, salt marsh, pastures and agricultural fields, and sand or tidal flats. The probability of occurrence is none. The population does not use areas this far south in the peninsula. The project will not impact the whooping crane. The whooping crane was not discussed in the 2017 WEBAR.

3.7 Other State Protected Faunal Species

3.7.1 Florida Black Bear

The Florida black bear is identified as an imperiled species by the State of Florida. It was removed from the State Endangered and Threatened Species List on August 23, 2012. However, the Florida black bear is provided protections by the FWC's *Florida Black Bear Conservation Rule* (Rule 68A-1.004, FAC), which makes it illegal to possess, injure, shoot, wound, trap, collect, or sell Florida black bears, or their parts, except as authorized by Commission rule or permit. There are no black bear related reports, mortalities, or capture location occurrences within the project study area, as identified by FWC mapping applications. Additionally, no Florida black bears were observed during field surveys. Suitable habitat for this species includes flatwoods, swamps, scrub oak ridges, and hammocks. There are numerous swamps within the project study area. However, the project study area is well outside primary or secondary black bear range, though it is within the occasional occurrence range. Therefore, the probability of occurrence for the Florida black bear is low. The project will not impact the Florida black bear.

3.7.2 Coastal and Wetland Dependent Birds

Since February 2017, the snowy egret, white ibis, osprey, and brown pelican have been delisted in Florida; these species are no longer in consideration for the project. The coastal and wetland dependent birds that remain are the piping plover, snowy plover, little blue heron, reddish egret, tricolored heron, American oystercatcher, roseate spoonbill, black skimmer, and least tern. A map of the wading bird rookeries near the project study area is available in Appendix P. See Section 3.4.13 for the piping plover discussion. Updated surveys for wetland dependent birds will be conducted prior to construction.

The project is anticipated to impact 10.67 acres of wetlands, 1.58 acres of surface waters, and 0.74 acre of other surface waters. Unavoidable wetland impacts will be mitigated pursuant to state and federal regulations. Impacts to other surface water features will likely be compensated within the project FPC sites. If field surveys prior to construction identify nesting activities, then FDOT will coordinate with FWC to determine appropriate avoidance and minimization measures during construction. Nesting is additionally protected under the MBTA (1918). No coastal and wetland dependent birds were observed during field surveys. Although 10.67 acres of wetland habitat will be impacted by this project, these impacts are not anticipated to result in decreased presence of the identified coastal and wetland dependent birds.

The snowy plover is state listed as threatened. This species is restricted to nesting on dry, sandy beaches where they nest in shallow depressions, usually near some vegetation or debris. They can also be found foraging in tidal flats along inlets and creeks. Suitable nesting habitat is not present within the project study area. The patches of beach that might offer low tide foraging areas are too limited in size and exposure frequency to attract snowy plovers. The probability of occurrence is none. The 2017 WEBAR determination

for this species was MANLAA. The updated effect determination for the snowy plover is no adverse effect anticipated.

The little blue heron is state listed as threatened. This species forages in shallow freshwater, brackish, and saltwater habitats, where they can wade. Occasionally, little blue herons hunt from the overwater branches of open shrubs such as willows (*Salix spp.*). This species prefers to forage in freshwater lakes, marshes, swamps, and streams. It will nest in a variety of woody vegetation types, including cypress (*Taxodium distichum*), willow, red maple (*Acer rubra*), black mangrove (*Avicennia germinans*), and cabbage palm (*Sabal palmetto*). Suitable nesting and foraging habitat are present within the project study area. The probability of occurrence is moderate. The 2017 WEBAR determination for this species was MANLAA. The updated effect determination for the little blue heron is no adverse effect anticipated.

The reddish egret is state listed as threatened. Reddish egrets are almost exclusively coastal. This species typically nests on coastal mangrove islands, or in Brazilian pepper on manmade dredge spoil islands. This egret species will forage in shallow water of varying salinity, but prefers broad, open tidal flats, and shorelines with little vegetation. Suitable foraging and nesting habitat is present within the project study area. The probability of occurrence is moderate. The 2017 WEBAR determination for this species was MANLAA. The updated effect determination for the reddish egret is no adverse effect anticipated.

The tricolored heron is state listed as threatened. This species is more common in coastal environments but will feed in a variety of permanently and seasonally flooded wetlands, mangrove swamps, tidal creeks, ditches, and marsh edges of freshwater ponds and lakes. Nesting colonies occur on mangrove islands or in willow thickets in freshwater but can include woody thickets on islands or over standing water. Suitable nesting and foraging habitat are present within and along the project study area. The probability of occurrence is moderate. The 2017 WEBAR determination for this species was MANLAA. The updated effect determination for the tricolored heron is no adverse effect anticipated.

The American oystercatcher is state listed as threatened. This species requires large areas of beach, sandbar, mud flats, and shellfish beds for foraging; and uses sparsely vegetated, sandy areas for nesting. No suitable nesting habitat is present, but sparse small patches of foraging habitat are present along the marine edges within and adjacent to the project study area. The probability of occurrence is low. The 2017 WEBAR determination for this species was MANLAA. The updated effect determination for the American oystercatcher is no adverse effect anticipated.

The roseate spoonbill is state listed as threatened. This species primarily nests on coastal mangrove islands or on Brazilian pepper on man-made dredge spoil islands. However, roseate spoonbills occasionally nest in willow heads at freshwater sites. This species forages in shallow water including tidal flats, coastal marshes, freshwater sloughs, and marshes. Suitable nesting and foraging habitat are present within the project study area. The probability of occurrence is moderate. The 2017 WEBAR determination for this species was MANLAA. The updated effect determination for the roseate spoonbill is no adverse effect anticipated.

The black skimmer is state listed as threatened. This species forages in coastal waters, including beaches, bays, estuaries, sandbars, tidal creeks, and some inland waters, such as large lakes and phosphate pits. Nesting occurs primarily on sandy beaches, small coastal islands, and dredge spoil islands. Black skimmers have also been observed occasionally nesting on gravel rooftops. Small sparse patches of foraging habitat are present within the project study area. The probability of occurrence is low. The 2017 WEBAR determination for this species was MANLAA. The updated effect determination for the black skimmer is no adverse effect anticipated.

The least tern is state listed as threatened. This species is primarily found in coastal areas, including beaches, lagoons, bays, and estuaries. Nesting areas have a substrate of well-drained sand or gravel and usually have little vegetation. Suitable nesting and foraging habitat are present within the project study area. The probability of occurrence is moderate. The 2017 WEBAR determination for this species was MANLAA. The updated effect determination for the least tern is no adverse effect anticipated.

3.8 Listed Floral Species

The updated list of protected floral species, including their habitat requirements and effect determinations, is available in Table 3-3. Additional species were identified as part of this 2025 *NRE Addendum*, using the FNAI Biodiversity Matrix. These species are listed in the table that follows. No species were observed during the November 2024 field review. Federal and state species effect determinations are provided in Table 3-3. Species discussions follow the table.

Field surveys to identify whether any of these protected plant species exist within the project extents will be performed during permitting. If protected species are observed coordination with the USFWS, FWC and/or the Florida Department of Agriculture and Consumer Services (FDACS) - Division of Plant Industry (FDACS–DPI) will be initiated to determine any permit requirements.

Table 3-3 Federally Listed and State Listed Floral Species and 2025 Determination

(Note: 2017 WEBAR made no effect determination for plants)

Species	Common Name	State Status (FWC)	Federal Status (USFWS)	Habitat	2025 NRE Addendum Effect Determination
Acrostichum aureum	golden leather fern	ST	--	Coastal hammocks and tidal marshes	NAEA
Andropogon arctatus	pinewoods bluestem	ST	--	Flatwoods	NAEA
Asclepias curtissii	Curtiss's milkweed	SE	--	Central and southern peninsular Florida in scrub	NEA
Asplenium auritum	auricled spleenwort	SE	--	On trunks of large trees in mesic hammocks and strand swamps	NEA
Bonamia grandiflora	Florida bonamia	SE	FT	Openings or disturbed areas in white sand scrub on central Florida ridges, with scrub oaks, sand pine, and lichens.	MANLAA
Calopogon multiflorus	many-flowered grass pink	ST	--	Fire maintained damp pinelands and meadows	NEA
Campanula robinsiae	Brooksville bellflower *(State name: Chinsegut bellflower)*	SE	FE	Wet, grassy slopes and drying pond edges.	MANLAA
Centrosema arenicola	sand butterfly-pea	SE	--	Mixed woodlands and pine thickets	NAEA
Chionanthus pygmaeus	Pygmy fringe-tree	ST	FE	Scrub, sandhills, and xeric hammocks; primarily on the Lake Wales Ridge. May form thickets with evergreen scrub oaks and shrubs.	MANLAA

Species	Common Name	State Status (FWC)	Federal Status (USFWS)	Habitat	2025 NRE Addendum Effect Determination
Lechea cernua	Nodding pinweed	ST	--	Open, unshaded white sands of scrub and scrubby flatwoods. This plant is often associated with Florida rosemary (*Ceratiola ericoides*).	NEA
Lythrum flagellare	Lowland loosestrife	SE	--	Swamps and thickets	NAEA
Matelea floridana	Florida spiny-pod	SE	--	Bluffs and pine-oak-hickory woods	NEA
Opuntia stricta	shell mound prickly pear	ST	--	Shell mounds and coastal areas	NAEA
Polypodium plumula (syn. *Pecluma plumula)*	plume polypody	SE	--	Hammocks	NAEA
Polypodium ptilodon (syn. *Pecluma ptilodon*)	swamp plume polypody	SE	--	Hammocks and swamps	NAEA
Rhynchospora megaplumosa	hairy-spikelet beakrush	SE	--	Scrubby flatwoods	NEA
Schwalbea americana	Chaff-seed	SE	FE	Longleaf pine savannas, sandhills, and flatwoods	MANLAA
Tephrosia angustissima	hoary-pea	SE	--	Coastal strand, beach dunes, pine rockland	NEA
Thelypteris serrata	dentate lattice-vein fern	SE	--	Hammocks, cypress sloughs, swamps	NAEA
Triphora latifolia (syn *amazonica*)	wide-leaved triphora	SE	--	Hardwood hammocks	NEA
Verbena tampensis (syn *Glandular tampensis*)	Tampa vervain	SE	--	Flatwoods and hammocks	NAEA
Zephyranthes simpsonii	Simpson's zephyr-lily	ST	--	Wet pinelands and pastures, wet roadsides	NAEA

FE=Federal Endangered, FT= Federal Threatened, SE=State Endangered, ST=State Threatened, --=Not Listed, NE = No effect, NEA = No Effect Anticipated, NAEA = No Adverse Effect Anticipated

3.8.1 Golden Leather Fern

The golden leather fern is listed by the state of Florida as threatened. This species uses coastal hammocks and tidal marshes. There is suitable habitat within the project study area, in the tidally-influenced saltwater marshes and mixed forested wetlands. Minimal impacts to this species' suitable habitat is anticipated. There is no adverse effect anticipated for the golden leather fern.

3.8.2 Pinewoods Bluestem

The pinewoods bluestem is listed by the state of Florida as threatened. This species can be found in mesic and wet flatwoods, as well as wet prairies, seepage slopes, upland pine, and minorly disturbed wet flatwoods. There is suitable habitat within the project study area, available within the pine flatwoods in the project study area. Minimal impacts to this species' suitable habitat is anticipated. There is no adverse effect anticipated for the pinewoods bluestem.

3.8.3 Curtiss' Milkweed

Curtiss' milkweed is listed by the state of Florida as endangered. This species is endemic to scrub habitat in Florida. There is no suitable habitat within the project study area. There is no effect anticipated for Curtiss' milkweed.

3.8.4 Auricled Spleenwort

The auricled spleenwort is listed by the state of Florida as endangered. This species can be found on trunks of large trees in mesic hammocks and strand swamps. There is no suitable habitat within the project study area. There is no effect anticipated for the auricled spleenwort.

3.8.5 Florida bonamia

The Florida bonamia is listed as federally threatened. It is listed under the state of Florida as endangered. This species exists in openings or disturbed areas in white sand scrub on central Florida ridges, with scrub oaks, sand pine, and lichens. There is sparse suitable habitat within the project study area, available within the open lands, pine flatwoods, and disturbed areas. Minimal impacts to this species' suitable habitat is anticipated. The determination for the Florida bonamia is May Affect, Not Likely to Adversely Affect (MANLAA).

3.8.6 Many-Flowered Grass Pink

The many-flowered grass pink is listed by the state of Florida as threatened. This species can be found in fire maintained damp pinelands and meadows. There is no suitable habitat within the project study area. There is no effect anticipated for the many-flowered grass pink.

3.8.7 Brooksville Bellflower (Chinsegut Bellflower)

The brooksville bellflower (listed in Florida as the chinsegut bellflower) is federally and state listed as endangered. This species can be found in wet, grassy slopes and drying pond edges. There is sparse suitable habitat within the project study area, available within the freshwater marshes and roadside shoulders. Minimal impacts to this species' suitable habitat is anticipated. The determination for the brooksville bellflower is May Affect, Not Likely to Adversely Affect (MANLAA).

3.8.8 Sand Butterfly-Pea

The sand butterfly-pea is listed by the state of Florida as endangered. This species can be found in mixed woodlands and pine thickets. There is suitable habitat within the project study area, available in the wooded areas. Minimal impacts to this species' suitable habitat is anticipated. There is no adverse effect anticipated for the sand butterfly-pea.

3.8.9 Pygmy Fringe-Tree

The pygmy fringe-tree is listed as federally endangered. It is listed under the state of Florida as threatened. This species exists in scrub, sandhills, and xeric hammocks, primarily on the Lake Wales Ridge. It may form thickets with evergreen scrub oaks and shrubs. There is sparse suitable habitat within the project study area, available within the pine flatwoods. Minimal impacts to this species' suitable habitat is anticipated. The determination for the pygmy fringe-tree is May Affect, Not Likely to Adversely Affect (MANLAA).

3.8.10 Nodding Pinweed

The nodding pinweed is listed by the state of Florida as threatened. This species can be found in open, unshaded white sands of scrub and scrubby flatwoods. This plant is often associated with Florida rosemary. There is no suitable habitat within the project study area. There is no effect anticipated for nodding pinweed.

3.8.11 Lowland Loosestrife

The lowland loosestrife is listed by the state of Florida as endangered. This species can be found in swamps and thickets. There is suitable habitat within the project study area, available in the various types of swamps. Minimal impacts to this species' suitable habitat is anticipated. There is no adverse effect anticipated for the lowland loosestrife.

3.8.12 Florida Spiny-Pod

The Florida spiny-pod is listed by the state of Florida as endangered. This species can be found in bluffs and pine-oak-hickory woods. There is no suitable habitat within the project study area. There is no effect anticipated for the Florida spiny-pod.

3.8.13 Shell-Mound Prickly Pear

The shell-mound prickly pear is listed by the state of Florida as threatened. This species can be found in coastal dunes and scrub, shell mounds, and occasionally in mangrove swamps. There is suitable habitat within the project study area, available within the mangrove wetlands. Minimal impacts to this species' suitable habitat is anticipated. There is no adverse effect anticipated for the shell-mound prickly pear.

3.8.14 Plume Polypody

The plume polybody is listed by the state of Florida as endangered. This species can be found in wet hammocks and swamps. It is epiphytic on live oaks and occasionally on rocks or land. There is suitable habitat within the project study area, available in the numerous swamps. Minimal impacts to this species' suitable habitat is anticipated. There is no adverse effect anticipated for the plume polybody.

3.8.15 Swamp Plume Polypody

The swamp plume polybody is listed by the state of Florida as endangered. This species can be found in hammocks and swamps. It is an epiphytic fern. There is suitable habitat within the project study area, available in the numerous swamps. Minimal impacts to this species' suitable habitat is anticipated. There is no adverse effect anticipated for the swamp plume polybody.

3.8.16 Hairy-Spikelet Beakrush

The hairy-spikelet beakrush is listed by the state of Florida as endangered. This species can be found in scrubby flatwoods. There is no suitable habitat within the project study area. There is no effect anticipated for the hairy-spikelet beakrush.

3.8.17 Chaff-Seed

The Chaff-seed is federally listed as endangered. This species can be found in moist, grassy ecotones around ponds in longleaf pine sandhills. More generally, it can be found in longleaf pine savannas, sandhills, and flatwoods. There is suitable habitat within the project study area, available in the pine flatwoods. Minimal impacts to this species' suitable habitat is anticipated. The determination for the Chaff-seed is May Affect but is Not Likely to Adversely Affect (MANLAA).

3.8.18 Hoary-Pea

The hoary-pea is listed by the state of Florida as endangered. This species can be found in coastal strand, beach dunes, and pine rockland. There is no suitable habitat within the project study area. There is no effect anticipated for the hoary-pea.

3.8.19 Dentate Lattice-Vein Fern

The dentate lattice-vein fern is listed by the state of Florida as endangered. This species can be found in hammocks, cypress sloughs, and swamps. There is suitable habitat within the project study area, available in the swamps. Minimal impacts to this species' suitable habitat is anticipated. There is no adverse effect anticipated for the dentate lattice-vein fern.

3.8.20 Wide-Leaved Triphora

The wide-leaved triphora is listed by the state of Florida as endangered. This species can be found in hardwood hammocks. There is no suitable habitat within the project study area. There is no effect anticipated for the wide-leaved triphora.

3.8.21 Tampa Vervain

Tampa vervain is listed by the state of Florida as endangered. This species can be found in flatwoods and hammocks. There is suitable habitat within the project study area, available in the pine flatwoods. Minimal impacts to this species' suitable habitat is anticipated. There is no adverse effect anticipated for Tampa vervain.

3.8.22 Simpson's Zephyr-Lily

Simpson's zephyr-lily is listed by the state of Florida as threatened. This species can be found in wet pinelands and pastures, and wet roadsides. There is suitable habitat within the project study area. Minimal impacts to this species' suitable habitat is anticipated. There is no adverse effect anticipated for the Simpson's zephyr-lily.

Section 4 Wetlands, Surface Waters, and Other Surface Waters Impacts

Wetlands, surface waters, and other surface waters were evaluated in accordance with *Executive Order 11990, Protection of Wetlands* (May 1977), the *Clean Water Act* (CWA, 1972), the 1987 Corps of Engineers *Wetlands Delineation Manual*, and the FDOT *PD&E Manual*.

This Addendum evaluates changes in wetland and surface water impacts for the proposed design changes with regard to impacts to resources identified in the 2017 WEBAR. The 2017 WEBAR identified approximately 1.29 acres of wetland, and 2.12 acres of surface water impacts based on the 2017 conceptual design plans. The majority of those surface water impacts resulted from the extension of existing culverts and the replacement of the bridges over Alafia River and Bullfrog Creek.

4.1 Methodology and Assessment

A variety of resources were used to identify wetlands, other surface waters, and their ecological conditions and landscape relationships within the project study area. These resources included the National Wetlands Inventory (NWI), SWFWMD mapped land use land cover, National Hydrography Dataset (NHD) data, historical aerials, other remote imagery, Natural Resources Conservation Service (NRCS) United States Department of Agriculture (USDA) Web Soil Survey, United States Geological Survey (USGS) GIS data, and site visits.

Project scientists verified the presence of wetlands and surface waters within the project study area during field reviews conducted in November 2024. Pond sites were not evaluated as part of the 2017 WEBAR, which accounts for the increase in impacts. Several additional wetlands and surface waters are now identified as being impacted by project activities due to the addition of SMF and FPC sites. A wetland and other surface waters map depicting the anticipated impacts is provided in Appendix Q. Representative wetland and other surface water photographs are available in Appendix R.

4.2 Wetland Evaluation and Impacts

Table 4-1 provides anticipated impacts to wetlands, surface waters, and other surface waters identified within the project study area. Identification numbers used in the 2017 WEBAR are changed within this report to match current identification scheme. The updated wetland evaluation herein has an overall increase in impacts from the 2017 WEBAR due to SMF and FPC site evaluation (Table 4-1). The current roadway and pond designs have 0.74 acres of impacts to other surface waters, 2.45 acres of surface waters impacts, and 5.86 acres of impacts to wetlands.

Table 4-1 Wetland and Other Surface Water Impacts

2017 Identifier	2025 Identifier	FLUCCS	NWI	2017 SEIR Impact Acreage		2025 NRE Impact Acreage		Impact Change Acres
				Roadway	SMF & FPC	Roadway	SMF & FPC	
Wetlands								
840+60L	WL-1	612	E2SS3	0.05	--	0.12	--	0.07
841+50R	WL-2	612	E2SS3	0.17	--	0.22	--	0.05
840+60L	WL-3	612	E2SS3	0.05	--	0.02	--	-0.03
841+50R	WL-4	612	E2SS3	0.17	--	0.1	--	-0.07
840+60L	WL-5	612	E2SS3	0.05	--	0.02	--	-0.03
--	WL-6	612	E2SS3	--	--	--	0.12	0.12
--	WL-7	630	E2F03P	--	--	--	1.36	1.36
--	WL-8	642	E2EM1	--	--	--	0.71	0.71
911+40L	WL-9	612	E2SS3	0.00†	--	<0.01	--	<0.01
--	WL-10	644	PABHx	--	--	--	0.11	0.11
990+30L	WL-11	612	E2SS3	0.05	--	0.05	--	0
990+60R	WL-12	612	E2SS3	0.03	--	0.03	--	0
998+50L	WL-13	612	E2SS3	0.03	--	0.03	--	0
65+50R	WL-14	640	PSS3C	0.01	--	0.03	--	0.02
65+50R	WL-15	640	PSS3C	0.01	--	<0.01	--	<0.01
65+50R	WL-16	640	PSS3C	0.01	--	<0.01	--	<0.01
91+00R	WL-17	642	E2EM1	0.01	--	0.01	--	0
96+70R	WL-18	642	E2EM1/SS3	0.11	--	0.05	--	-0.06
96+70R	WL-19	642	E2EM1/SS3	0.11	--	0.16	--	0.05
--	WL-20	642	E2EM1	--	--	--	0.22	0.22
--	WL-21	612	E2SS3	--	--	0.01	--	0.01
112+40R	WL-22	642	E2EM1/SS3	0.05	--	0.09	--	0.04
112+40R	WL-23	642	E2EM1/SS3	0.05	--	<0.01	--	<0.01
--	WL-24	630	E2F03P	--	--	--	2.05	2.05
140+80R	WL-25	612	E2SS3	0.03	--	0.03	--	0
147+75L	WL-26	641	PEM1	0.02	--	0.02	--	0
146+90R	WL-27	641	PEM1/SS3	0.19	--	0.19	--	0

2017 Identifier	2025 Identifier	FLUCCS	NWI	2017 SEIR Impact Acreage		2025 NRE Impact Acreage		Impact Change Acres
				Roadway	SMF & FPC	Roadway	SMF & FPC	
204+55R	WL-28	641	PEM1/SS3	0.11	--	0.11	--	0
			Total Wetland Impacts	1.29	--	1.29	4.57	4.57
				1.29		5.86		
Surface Waters								
Kitchen Branch	SW-1	510	E1UBL	0.04	--	0.04	--	0.00
Dug Creek	SW-2	510	E1UB	0.22	--	0.22	--	0.00
--	SW-3	530	L1UBH	--	--	--	0.87	0.87
Bullfrog Creek	SW-4	510	E1UB	0.32	--	0.32	--	0.00
Alafia River	SW-5	510	E1UB	0.66	--	0.66	--	0.00
SW 999+20R	SW-6	500	E1UB	0.10	--	0.10	--	0.00
Archie Creek	SW-7	510	E1UB	0.07	--	0.07	--	0.00
North Archie Creek	SW-8	510	E1UB	0.08	--	0.08	--	0.00
Fred's Creek	SW-9	510	E1UB	0.09	--	0.09	--	0.00
			Total Surface Waters Impacts	1.58	--	1.58	0.87	0.87
				1.58		2.45		
Other Surface Waters								
--	OSW-1	510	E1UB	--	--	0.09	--	0.09
--	OSW-2	510	E1UB	--	--	0.06	--	0.06
--	OSW-3	510	E1UB	--	--	0.01	--	0.01
--	OSW-4	510	E1UB	--	--	0.03	--	0.03
SW 170+50R	OSW-5	510	E1UB	0.14	--	0.14	--	0.00
SW 186+50R	OSW-6	510	E1UB	0.09	--	0.09	--	0.00
SW 190+50R	OSW-7	510	E1UB	0.01	--	0.01	--	0.00
SW 192+00R	OSW-8	510	E1UB	0.03	--	0.03	--	0.00
SW 194+50R	OSW-9	510	E1UB	0.03	--	0.03	--	0.00
SW 196+00R	OSW-10	510	E1UB	0.25	--	0.25	--	0.00
			Total Other Surface Waters Impacts	0.55	--	0.74	--	0.19
				0.55		0.74		
			Total Project Impacts	3.42		9.05		5.63

NWI = National Wetlands Inventory, FLUCCS = Florida Land Use and Cover Classification System; † = Value is lower than two significant decimals, -- = no impact identified

4.3 Wetland Functional Analysis

The Uniform Mitigation Assessment Method (UMAM) was used to assess functions and values for the wetlands within the study area, in accordance with Chapter 62-345, FAC. UMAM scores were developed for individual wetland impacts identified within the study area (**Appendix S)**. The wetland quality ratings (delta values) are expressed numerically with numbers ranging between 0 and 10, with 10 representing an extremely high-quality wetland and 0 reflecting an area that is no longer functioning as a wetland.

The functional loss of a wetland system is calculated by multiplying the delta value (change in functional score) by the impact acreage. Functional loss values are used to determine the amount of mitigation required. The total functional loss value for the wetlands and other surface waters within the project study area is 3.89, as compared to the functional loss of 2.33 reported in the 2017 WEBAR. **Table 4-2** summarizes impact acreage and functional loss for the wetland habitat type.

Table 4-2 Functional Loss Analysis

FLUCCS	Description	2017 Impact (acres)	2017 Functional Loss	2025 Impact (acres)	2025 Functional Loss	Loss Change
Wetlands						
612	Mangrove Swamps	0.63	0.44	0.75	0.29	-0.15
630	Wetland Forested Mixed	--	--	3.41	2.40	2.40
640	Vegetated Non-forested	0.03	0.02	0.03	0.01	-0.01
641	Freshwater Marshes	0.32	0.21	0.32	0.12	-0.09
642	Saltwater Marshes	0.31	0.25	1.24	0.69	0.44
644	Emergent Aquatic	--	--	0.11	0.01	0.01
	Total Wetlands	**1.29**	**0.92**	**5.86**	**3.52**	**2.60**
Surface Waters						
510	Streams and Waterways	1.58	1.41	1.58	0.17	-1.24
530	Reservoirs	--	--	0.87	0.20	0.20
	Total Surface Waters	**1.58**	**1.41**	**2.45**	**0.37**	**-1.04**
Other Surface Waters						
500	Water	0.55	0	0.74	0.00	0.00
	Total Other Surface Waters	**0.55**	**0**	**0.74**	**0.00**	**0.00**
	TOTAL	**3.42**	**2.33**	**9.05**	**3.89**	**1.56**

4.4 Avoidance and Minimization

Avoidance and minimization of impacts to wetlands have been implemented throughout the project phases, including pond site sites being placed in uplands. Wetland impacts due to pond placement discussed in this *NRE Addendum* have the potential to be re-shaped during future design phases to further avoid and minimize impacts. BMPs will be implemented during construction to avoid and limit secondary and incidental impacts to wetlands during construction. A Stormwater Pollution Prevention Plan (SWPPP)

and an erosion and sediment control plan will be prepared and followed during construction. The erosion control devices will be per the FDOT *Standard Specifications for Road and Bridge Construction*. Opportunities to avoid and minimize impacts to wetlands will be further evaluated during the final design of the project.

4.5 Wetland Impact Mitigation

Impacts will be mitigated pursuant to Section 373.4137, Florida Statutes (F.S.), to satisfy all mitigation requirements of Part IV of Chapter 373, F.S., and 33 U.S.C. §1344. The proposed project is located within the service area of three wetland mitigation banks approved by SWFWMD and US Army Corps of Engineers (USACE): Alafia River Mitigation Bank, Big Bullfrog Mitigation Bank, and Mangrove Point Mitigation Bank. As of December 2025, all three mitigation banks have federal and state freshwater herbaceous and forested credits.

Section 5 Essential Fish Habitat

Essential Fish Habitat (EFH) is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, and development to maturity. EFH was established in the Magnuson–Stevens Fishery Conservation and Management Act amendment of 1996 (MSA). The National Marine Fisheries Services (NMFS), a part of National Oceanic and Atmospheric Administration, is responsible for establishing the boundaries of EFH. NMFS reviews federal actions for compliance with EFH protections.

This project is within the Gulf Fishery Management Council, which manages fishery resources within the project study area. The project area contains EFH which may support managed fishery resources from the following Fishery Management Plans (FMPs): Reef Fish, Red Drum, Shrimp, Coastal Migratory Pelagics, and Highly Migratory Species. The project study area was evaluated for the presence of Habitat Areas of Particular Concern (HAPCs) within EFH. There are no HAPCs within the project study area.

The project study area was evaluated for EFH presence using SWFWMD FLUCCS, NWI, USGS topographical maps, aerial photographs, NMFS' EFH mapper, Inland EFH mapper, FMPs, the ETDM Programming Screen Summary Report (PSSR), Chapter 17 of the PD&E Manual and field reviews.

5.1 Analysis of Effects on Essential Fish Habitat

EFH exists in the project study area within the habitats of Alafia River, Bullfrog Creek, tidally influenced marshes, and mangrove forests. The EFH types existing within the project study area include soft bottom waterways with potential patches of Submerged Aquatic Vegetation (SAV), mangroves, and emergent marshes. The addition of proposed pond sites (FPC and SMF areas) resulted in increased impacts to EFH, as compared to the 2017 WEBAR. Furthermore, EFH impacts have varied slightly since the 2017 WEBAR due to alignment shifts. A comparison of the 2017 and 2025 EFH impacts by Wetland/Surface Water ID is presented in Table 5-1. A map of current EFH limits is presented in Appendix T.

Table 5-1 2017 and 2025 Impacts to Potential EFH by Wetland/Surface Water ID

Wetland/Surface Water ID	FLUCCS	NWI	2017 Impact (acres)	2025 Impact (acres)	Impact Change (acres)
WL-1	612	E2SS3	0.05	0.12	0.07
WL-2	612	E2SS3	0.16	0.22	0.06
WL-3	612	E2SS3	0.05	0.02	-0.03
WL-4	612	E2SS3	0.16	0.1	-0.06
WL-5	612	E2SS3	0.05	0.02	-0.03
WL-6	612	E2SS3	--	0.12	0.12
WL-8	642	E2EM1	--	0.71	0.71
WL-9	612	E2SS3	0	<0.01	0
WL-12	612	E2SS3	0.05	0.05	0

Wetland/Surface Water ID	FLUCCS	NWI	2017 Impact (acres)	2025 Impact (acres)	Impact Change (acres)
WL-13	612	E2SS3	0.03	0.03	0
WL-14	612	E2SS3	0.03	0.03	0
WL-18	642	E2EM1	0.01	0.01	0
WL-19	642	E2EM1/SS3	0.11	0.05	-0.06
WL-20	642	E2EM1/SS3	0.11	0.16	0.05
WL-21	642	E2EM1	--	0.22	0.22
WL-22	612	E2SS3	--	0.01	0.01
WL-23	642	E2EM1/SS3	0.05	0.09	0.04
WL-24	642	E2EM1/SS3	0.05	<0.01	-0.05
WL-26	612	E2SS3	0.03	0.03	0
SW-1	510	E1UBL	0.04	0.04	0.00
SW-2	510	E1UB	0.22	0.22	0.00
SW-4	510	E1UB	0.32	0.32	0.00
SW-5	510	E1UB	0.66	0.66	0.00
SW-6	500	E1UB	--	0.10	0.10
SW-7	510	E1UB	0.07	0.07	0.00
SW-8	510	E1UB	0.08	0.08	0.00
SW-9	510	E1UB	0.09	0.09	0.00
		TOTAL	2.42	3.57	1.15

Impacts to EFH due to this project will occur in estuarine soft bottom surface waters, mangroves, and emergent marshes. There will be approximately 1.5 acres of permanent impacts to streams and waterways (FLUCCS 510), known as Kitchen Branch, Dug Creek, Bullfrog Creek, Alafia River, Archie Creek, North Archie Creek, and Fred's Creek as well as an estuarine inlet at Alafia River (FLUCCS 500). These impacts will result from widened bridges and culverts, which will cause new shading over the waterways. Bridge pilings may be required to support the bridge widenings; however, these impacts will not be determined until the Design Phase of the project. Approximately 0.63 acres of mangrove swamps will be impacted by permanent roadway fill and 0.12 acres will be permanently impacted by SMF & FPC sites. Lastly, approximately 0.31 acres of saltwater marshes will be impacted by permanent roadway fill and 0.93 acres will be permanently impacted by SMF & FPC sites. **Table 5-2** lists current (2025) EFH impacts by type.

Table 5-2 2025 EFH Impacts by FLUCCS Code and Impact Type

FLUCCS	EFH Habitat Description	Impact Type†	2025 Impact (acres)
Water (500)	Soft Bottoms	Roadway Fill	0.10
Streams and Waterways (510)	Soft Bottoms	Roadway Fill	1.48

FLUCCS	EFH Habitat Description	Impact Type†	2025 Impact (acres)
Mangrove Swamps (612)	Mangroves	Roadway Fill	0.63
		SMF & FPC Sites	0.12
Saltwater Marshes (642)	Emergent Marshes	Roadway Fill	0.31
		SMF & FPC Sites	0.93
		TOTAL	**3.57**

† All impacts listed in the table are *permanent*

Table 5-3 lists fish species potentially present and their respective life stage(s) within EFH proposed for impact in the project study area, developed using the NMFS Gulf FMP's *5-Year Review of Essential Fish Habitat Requirements* (2016). Only shading impacts are expected to impact surface water mapped as EFH and the functional loss for this will be minimal.

Table 5-3 Potentially Occurring Managed Fisheries Species

Common Name	Scientific Name	Life History Stage
Cobia	*Rachycentron canadum*	Eggs and Larvae
Red Drum	*Sciaenops ocellatus*	Juvenile and Adult
Spiny Lobster	*Panulirus argus*	Puerulus Postlarvae and Adult
Pink Shrimp	*Penaus duorarum*	Larvae/Pre-settlement Postlarvae, Juveniles, Sub-Adult
White Shrimp	*Litopenaeus setiferus*	Postlarvae, Juveniles, Sub-Adult, Adult, Spawning
Gray snapper	*Lutjanus griseus*	Juvenile and Adults
Spanish Mackerel	*Scomberomorus maculatus*	Juvenile and Adult
Mutton Snapper	*Lutjanus analis*	Eggs, Larvae, Juvenile, Adult and Spawning Adult
Hogfish	*Lachnolaimus maximus*	Juvenile
Gag	*Mycteroperca microlepis*	Juvenile
Goliath Grouper	*Epinephelus itajara*	Juvenile
Red Grouper	*Epinephelus morio*	Juvenile
Black Grouper	*Mycteroperca bonaci*	Juvenile
Yellowmouth Grouper	*Mycteroperca interstitialis*	Juvenile
Yellowfin Grouper	*Mycteroperca venenose*	Juvenile
Lane Snapper	*Lutjanus synagris*	Juvenile
Yellowtail Snapper	*Ocyurus chrysurus*	Juvenile
Cubera Snapper	*Lutjanus cyanopterus*	Juvenile and Adult

5.1.1 Proposed Mitigation and Minimization Efforts

Impacts to EFH were avoided and minimized by alignment shifts and pond siting analysis during the PD&E phase. The proposed project will have no impacts to seagrasses or other SAV. If any changes are made during the design phase that result in seagrass or other SAV impacts, mitigation measures will be developed

in coordination with the appropriate agencies. Mitigation will be provided for all wetland impacts. Adverse effects from the project to EFH will be minimal.

Impacts to water quality from construction activities will be avoided and minimized through the use of BMPs. BMPs generally include phased construction, turbidity screens, silt fences, cofferdams, and other construction techniques approved by the regulatory agencies. Stormwater runoff for the proposed improvements will be collected as part of the stormwater management system. The specifics of the stormwater system will be determined during the design phase. The project will be designed to meet all state and federal water quality standards at the time of permitting.

Section 6 Permits

This project is expected to qualify for permits with USACE, SWFWMD, FDEP, and USCG for impacts to wetlands and for stormwater permitting. The necessary environmental permits are summarized in **Table 6-1**. The coordination documents from the 2017 WEBAR with SWFWMD and USCG are presented in **Appendix A**.

Table 6-1 Permits Needed

Agency	Permit
Florida Department of Environmental Protection (FDEP)	National Pollutant Discharge Elimination System (NPDES)
SWFWMD	Individual Environmental Resource Permit (ERP)
USACE	Section 404 (Dredge and Fill)
USCG	Section 10 (Rivers and Harbors Act)

Section 7 Conclusions

This Addendum evaluates changes from the 2017 WEBAR to current conditions, including protected species and their habitats, wetlands and other surface waters, and essential fish habitat. Agencies from which consultation will be sought include USFWS and NMFS. Prior coordination with USFWS and FWC was initiated during the 2017 WEBAR (Appendix A).

7.1 Protected Species and Habitat

Updated literature reviews, agency database searches, and preliminary field reviews of habitat were conducted to identify the potential for protected species occurring within the project study area. Five protected species have been delisted since the 2017 WEBAR, and multiple species have had listing status changes. See Table 7-1 for an overview of the 2025 identified faunal species and effect determinations. See Table 7-2 for an overview of floral species and effect determinations.

Table 7-1 2025 Faunal Species Listing Status and Effect Determinations.

Species	Common Name	State Status (FWC)	Federal Status (USFWS)	Probability of Occurrence	Effect Determination
FISHES					
Acipenser oxyrhynchus desoto	Gulf sturgeon	FT	FT	Low	MANLAA
Microphis brachyrus	Opossum pipefish	--	SSC	Moderate	MANLAA
Mobula birostris	Giant manta ray	FT	FT	Low	MANLAA
Pristis pectinata	Smalltooth sawfish	FE	FE	Low	MANLAA
REPTILES					
Alligator mississippiensis‡	American alligator	FT(S/A)	FT(S/A)	High	NE
Caretta caretta	Loggerhead sea turtle	FT	FT	Low	MANLAA
Chelonia mydas	Green sea turtle	FE	FE	Low	MANLAA
Crocodylus acutus	American crocodile	FT	FT	Low	MANLAA
Dermochelys coriacea	Leatherback sea turtle	FE	FE	Low	NE
Drymarchon couperi	Eastern indigo snake	FT	FT	Moderate	MANLAA
Eretmochelys imbricata	Hawksbill sea turtle	FE	FE	Low	NE
Gopherus polyphemus	Gopher tortoise	ST	--	Moderate	NAEA
Lepidochelys kempii	Kemp's Ridley sea turtle	FE	FE	Low	MANLAA
Pituophis melanoleucus	Florida pine snake	ST	--	None	NEA

Species	Common Name	State Status (FWC)	Federal Status (USFWS)	Probability of Occurrence	Effect Determination
INSECTS					
Danaus plexippus	Monarch butterfly	--	FPT	Moderate	--
MAMMALS					
Perimyotis subflavus	Tricolored bat	SGCN	FPE	Moderate	--
Trichechus manatus	West Indian manatee	FT	FT	High	MANLAA
BIRDS					
Ursus americanus floridanus	Florida black bear	--	--	Low	--
Antigone canadensis pratensis	Florida sandhill crane†	ST	--	Moderate	NAEA
Aphelocoma coerulescens	Florida scrub-jay	FT	FT	Low	NE
Athene cunicularia floridana	Florida burrowing owl	ST	--	Low	NEA
Calidris canutus rufa	Rufa red knot	FT	FT	Low	MANLAA
Caracara plancus audubonii	Audubon's crested caracara	FT	FT	Low	MANLAA
Charadrius melodus	Piping Plover	FT	FT	None	NE
Charadrius nivosus	Snowy plover	ST	--	None	NAEA
Egretta caerulea	Little blue heron†	ST	--	Moderate	NAEA
Egretta refescens	Reddish egret	ST	--	Moderate	NAEA
Egretta tricolor	Tricolored heron	ST	--	Moderate	NAEA
Grus americana	Whooping crane	--	EXPN	None	--
Haematopus palliatus	American oystercatcher	ST	--	Low	NAEA
Haliaeetus leucocephalus[1]	Bald eagle	--	--	High	NE
Laterallus jamaicensis ssp. Jamaicensis	Eastern black rail	FT	FT	None	NE
Mycteria americana	Wood stork	ST	FT	High	MANLAA
Platea ajaja	Roseate spoonbill	ST	--	Moderate	NAEA
Rostrhamus sociabilis	Everglade Snail Kite	FE	FE	Low	MANLAA
Rynchops niger	Black skimmer	ST	--	Low	NAEA
Sternula antillarum	Least tern	ST	--	Moderate	NAEA

MANLAA = May Affect, Not Likely to Adversely Affect, NAEA = No Adverse Effect Anticipated, , NEA = No Effect Anticipated, NE = No Effect, FT(S/A)= Federal Threatened due to similarity of appearance to another species, FPT = Federally Proposed as Threatened, FT= Federal Threatened, FPE= Proposed Endangered, FE=Federal Endangered, FPE = Federally Proposed as Endangered, ST=State Threatened , SE=State Endangered, SGCN = State of Florida Species of Greatest Conservation Need, SSC = Species of Special Concern, EXPN= Experimental Population (Non-essential), ND == Not Discussed, DL = Species Delisted (no effect determination required), , --=Not Listed; [1] = Bald and Golden Eagle Protection Act; † = Species observed during November 2024 field review; ‡ = Previous USFWS Coordination resulted in no discussion needed for this species

Table 7-2 Floral Protected Species Status, Probability of Occurrence, and Determinations

Species	Common Name	State Status (FDACS)	Federal Status (USFWS)	Probability of Occurrence	Effect Determination
Acrostichum aureum	golden leather fern	ST	--	Moderate	NAEA
Andropogon arctatus	pinewoods bluestem	ST	--	Moderate	NAEA
Asclepias curtissii	Curtiss's milkweed	SE	--	Low	NEA
Asplenium auritum	auricled spleenwort	SE	--	Low	NEA
Bonamia grandiflora	Florida bonamia	SE	FT	Moderate	MANLAA
Calopogon multiflorus	many-flowered grass pink	ST	--	Low	NEA
Campanula robinsiae	Brooksville bellflower (*State name: Chinsegut bellflower*)	SE	FE	Moderate	MANLAA
Centrosema arenicola	sand butterfly-pea	SE	--	Moderate	NAEA
Chionanthus pygmaeus	Pygmy fringe-tree	ST	FE	Moderate	MANLAA
Lechea cernua	Nodding pinweed	ST	--	Low	NEA
Lythrum flagellare	Lowland loosestrife	SE	--	Moderate	NAEA
Matelea floridana	Florida spiny-pod	SE	--	Low	NEA
Opuntia stricta	shell mound prickly pear	ST	--	Moderate	NAEA
Polypodium plumula (syn. *Pecluma plumula)*	plume polybody	SE	--	Moderate	NAEA
Polypodium ptilodon (syn. *Pecluma ptilodon*)	swamp plume polypody	SE	--	Moderate	NAEA
Rhynchospora megaplumosa	hairy-spikelet beakrush	SE	--	Low	NEA
Schwalbea americana	Chaff-seed	SE	FE	Moderate	MANLAA
Tephrosia angustissima	hoary-pea	SE	--	Low	NEA
Thelypteris serrata	dentate lattice-vein fern	SE	--	Moderate	NAEA
Triphora latifolia (syn *amazonica*)	wide-leaved triphora	SE	--	Low	NEA
Verbena tampensis	Tampa vervain	SE	--	Moderate	NAEA

Species	Common Name	State Status (FDACS)	Federal Status (USFWS)	Probability of Occurrence	Effect Determination
(syn *Glandular tampensis*)					
Zephyranthes simpsonii	Simpson's zephyr-lily	ST	--	Moderate	NAEA

FE=Federal Endangered, FT= Federal Threatened, SE=State Endangered, ST=State Threatened, -- = Not Listed, ND == Not Discussed, NEA = No Effect Anticipated, NAEA = No Adverse Effect Anticipated, MANLAA = May affect, not likely to adversely affect

7.2 Wetlands and Other Surface Waters

The 2017 WEBAR determined impacts to be 1.29 acres of wetland and 2.12 acres of surface waters. There are modifications to the design concepts to incorporate additional stormwater features (SMF & FPC). The proposed project will result in an overall increase of impacts to wetlands and other surface waters, to 5.86 acres of wetland impacts, 2.45 acres of surface water impacts, and 0.74 acres of other surface waters impacts. The total functional loss for this project is 3.89, as calculated with UMAM. See **Table 7-3** for the updated impact acreage and overall functional loss as a result of the 2025 proposed project improvements.

Table 7-3 2025 Impact Acreage and Functional Loss

FLUCCS	Description	Impact (acres)	Functional Loss
612	Mangrove Swamps	0.75	0.29
630	Wetland Forested Mixed	3.41	2.40
640	Vegetated Non-forested	0.03	0.01
641	Freshwater Marshes	0.32	0.12
642	Saltwater Marshes	1.24	0.69
644	Emergent Aquatic	0.11	0.01
	Total Wetlands	5.86	3.52
510	Streams and Waterways	1.58	0.17
530	Reservoirs	0.87	0.20
	Total Surface Waters	2.45	0.37
500	Water	0.74	0.00
	Total Other Surface Waters	0.74	0.00
	TOTAL	**9.05**	**3.89**

7.3 Essential Fish Habitats

EFH impacts have increased by 1.05 acres, totaling 3.57 acres of impact (**Table 7-4**). This project will result in minimal adverse effects on EFH.

Table 7-4 2025 Potential Impacts to EFH

FLUCCS	EFH Habitat Description	Impact Type†	2025 Impact (acres)
Water (500)	Soft Bottoms	Roadway Fill	0.10
Streams and Waterways (510)	Soft Bottoms	Roadway Fill	1.48
Mangrove Swamps (612)	Mangroves	Roadway Fill	0.63
		SMF & FPC Sites	0.12
Saltwater Marshes (642)	Emergent Marshes	Roadway Fill	0.31
		SMF & FPC Sites	0.93
		TOTAL	**3.57**

† All impacts listed in the table are *permanent*

7.4 Implementation Measures

- This project will implement FWC Osprey conservation measures and guidelines before and during construction.
- Surveys for gopher tortoise burrows, as well as commensal species, will be conducted during the design phase and permits to relocate tortoises and commensals as appropriate will be obtained from the FWC
- Surveys to update locations of active bald eagle nest sites will be conducted prior to construction, and permits will be acquired if there are unavoidable impacts due to proximity, noise, or dust during construction. Coordination with USFWS and FWC will take place, as necessary.
- Wetland impacts which will result from the construction of this project will be mitigated pursuant to Section 373.4137, F.S., to satisfy all mitigation requirements of Part IV of Chapter 373, F.S., and 33 U.S.C. § 1344, and will be completed during Design Phase.
- Best Management Practices will be incorporated during construction to minimize wetland, wildlife, and water quality impacts.
- Avoidance and minimization measures will be implemented in accordance with the FWC *Florida Sandhill Crane Conservation Measures and Permitting Guidelines*. If nests are observed during future project phases, the FDOT will coordinate further with the FWC.
- Due to the presence of suitable habitat for federal or state listed plants, the project will be reviewed for their presence during the permitting phase in accordance with Chapter 68A-27, FAC, Rules Relating to Endangered or Threatened Species. Field reviews will be performed when respective species are flowering to enhance potential of identification of presence.

7.5 Commitments

- If the listing status of the monarch butterfly is elevated by USFWS to Threatened or Endangered and the Preferred Alternative is located within the consultation area, during the design and

permitting phase of the proposed project, the FDOT commits to reinitiating consultation with the USFWS to determine the appropriate survey methodology and to address USFWS regulations regarding the protection of the monarch butterfly.

- Upon listing of the tricolored bat, FDOT will not conduct tree trimming/clearing activities during the tricolored bat pup season (May 1st to July 15th) and when bats may be in torpor (when temperatures are below 45 degrees Fahrenheit).
    - Upon listing of the tricolored bat, if the project contains suitable habitat and FDOT needs to trim or clear trees or perform work on bridges/culverts during the maternity season and/or when the temperature is below 45 degrees Fahrenheit, then FDOT will survey the project area for evidence of the tricolored bat.
    - The Indiana Bat and Northern Long-eared Bat Survey Guidance (USFWS) acoustic survey protocol in the year-round range (mist netting is not being conducted in Florida at this time) will be used for areas with tree trimming/clearing. For bridges and culverts, the Indiana Bat and Northern Long-eared Bat Survey Guidance, Assessing Bridges and Culverts for Bats, will be used.
        - If the surveys result in no tricolored bats detected, FDOT will proceed with the project activities. Negative results from bridge/culvert surveys are valid for 2 years. Negative results for acoustic surveys are valid for 5 years. However, negative results for either survey may be invalidated if additional tricolored bat survey data is submitted to FWS showing presence of the species within the vicinity of the project area. Additional survey work by FDOT, or application of the avoidance and minimization measures noted in the first bullet, may be required if updated detections are reported, and may result in reinitiation of consultation with FWS.
        - If the surveys result in positive detections of the tricolored bat, FDOT will implement conservation measures such as: not conducting tree trimming/clearing activities during the tricolored bat pup season (May 1st to July 15th) when pups are not volant and not able to escape disturbance; similarly avoid tree trimming/clearing activities when the temperatures are below 45 degrees Fahrenheit when bats may be in torpor and unresponsive to disturbance.
- The most recent version of the USFWS *Standard Protection Measures for the Eastern Indigo Snake* will be utilized during construction.
- FDOT will provide mitigation for impacts to wood stork Suitable Foraging Habitat within the Service Area of a Service-approved wetland mitigation bank or wood stork conservation bank.
- The FDOT will adhere to the *NMFS's Southeast Region's Protected Species Construction Conditions* and *NMFS's Vessel Strike Avoidance Measures* during construction of the project.
- The *NMFS and USFWS Construction Special Provisions, Gulf Sturgeon Protection Guidelines* will be utilized during construction
- The FDOT will coordinate with NMFS on potential impacts associated with any pile driving activities.

- A ramp-up procedure will be utilized at the beginning of each in-water pile-driving event, and a ramp-up procedure is also required for impact hammer proofing of any pipe piles installed with a vibratory hammer during construction.

- The USFWS and FWC *Standard Manatee Construction Conditions for In-Water Work will* be utilized during construction.

- Special conditions for manatees will need to be addressed during construction and include the following:

  - No nighttime in-water work will be performed. In-water work can be conducted from official sunrise until official sunset times.

  - Two dedicated (minimum one primary) experienced manatee observers will be present when in-water work is performed. Primary observers will have experience observing manatees in the wild on construction projects similar to this one.

  - All siltation barriers or coffer dams will be checked at least twice a day, in the morning and in the evening, for manatees that may become entangled or entrapped at the site.

  - Barges will be equipped with fender systems that provide a minimum standoff distance of four feet between wharves, bulkheads and vessels moored together to prevent crushing manatees. All existing slow speed or no wake zones will apply to all work boats and barges associated with construction.

  - Any culverts larger than eight inches and less than eight feet in diameter will be grated to prevent manatee entrapment. The spacing between the bridge pilings will be at least 60 inches to allow for manatee movement in between the pilings. If a minimum of 60-inch spacing is not provided between piles, further coordination will be conducted with the USFWS.

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APPENDICES

APPENDIX A 2017 WEBAR

Agency Coordination

From: David Rydene - NOAA Federal <david.rydene@noaa.gov>
Sent: Thursday, August 06, 2015 11:22 AM
To: Selly, Nicole
Subject: NMFS response to the US 41 (Kracker Ave to SR 676) WEBAR

Follow Up Flag: Follow up
Flag Status: Flagged

NMFS staff has reviewed the Draft Wetland Evaluation and Biological Assessment Report. NMFS believes that the report provides an adequate assessment of impacts to NMFS trust resources at this phase of project development. It is NMFS's understanding that the wetland impact assessment will be refined as the project moves forward into the design phase. The determination of compensatory mitigation for unavoidable wetland impacts also needs to be finalized. Endangered Species Act Section 7 consultation with NMFS should be initiated once design details (especially regarding pile driving) are available.

On page 6-4, the statement "If blasting is required, informal consultation will be undertaken with the USFWS for the manatee. Blasting should be performed during specific times of the year, if possible. An extensive blast plan would need to be developed and submitted to the USFWS and FWC for
approval as early as possible prior to construction.", should be modified to include coordination with NMFS.

Thank you for the opportunity to provide comments.

--
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August 11, 2015

Ms. Nicole Selly
Environmental Specialist
Florida Department of Transportation (FDOT) District Seven
11201 North McKinley Drive
Tampa, FL 33612
Nicole.Selly@DOT.state.fl.us

Re: US 41 from Kracker Ave. to South of SR 676 PD&E Study, Hillsborough County, Draft Wetland Evaluation and Biological Assessment Report

Dear Ms. Selly:

Florida Fish and Wildlife Conservation Commission (FWC) staff has reviewed the Draft Wetland Evaluation and Biological Assessment Report (WEBAR) for the above-referenced project, prepared as part of the PD&E Study for the proposed project. We have previously reviewed this project via the Efficient Transportation Decision Making process as ETDM #5180. We provide the following comments and recommendations for your consideration in accordance with Chapter 379, Florida Statutes, and Rule 68A-27, Florida Administrative Code (F.A.C.).

The project involves widening US 41 from four to six lanes between Kracker Avenue and south of SR 676 in Hillsborough County, a distance of approximately 7.0 miles. The project will also include intersection improvements, construction of stormwater management and floodplain compensation facilities, multimodal facilities, and widening or replacement of the bridges over Bullfrog Creek and the Alafia River. A State Environmental Impact Report (SEIR) will be prepared for the project. The project vicinity consists of a mix of industrial, residential, commercial, and natural vegetative landcover. Natural communities include mangrove and saltmarsh wetlands, forested and herbaceous freshwater wetlands, and forested or shrubby uplands.

The WEBAR evaluated potential project impacts to 26 wildlife species classified under the Endangered Species Act as Federally Endangered (FE) or Threatened (FT), or by the State of Florida as Threatened (ST) or Species of Special Concern (SSC). Listed species were evaluated based on range and potential appropriate habitat or because the project is within a U.S. Fish and Wildlife Service (USFWS) Consultation Area. Included were: Gulf sturgeon (FT), smalltooth sawfish (FE), Eastern indigo snake (FT), American alligator (FT due to similarity of appearance to American crocodile), loggerhead sea turtle (FT), green sea turtle (FE), leatherback sea turtle (FE), Kemp's ridley sea turtle (FE), wood stork (FE), Florida scrub jay (FT), piping plover (FT), Florida manatee (FE), gopher frog (SSC), gopher tortoise (ST), snowy plover (ST), roseate spoonbill (SSC), snowy egret (SSC), reddish egret (SSC), little blue heron (SSC), tricolored heron (SSC), white ibis (SSC), American oystercatcher (SSC), brown pelican (SSC), least tern (ST), black skimmer (SSC), and osprey (SSC, but only in Monroe County). We recommend the addition of rivulus (SSC), Florida pine snake (SSC), and Florida mouse (SSC) to this list and deletion of the osprey.

Also evaluated was the bald eagle, which was delisted by state and federal agencies, but this species remains protected under state rule in Section 68A-16.002, F.A.C. and by the federal Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d).

Project biologists made a finding of "no effect" for the scrub jay, piping plover, and American alligator due to a lack of suitable habitat for these species within the project area, or in the case of the alligator, a lack of relevant connection to the species listing. The biologists determined that the project "may affect, but is unlikely to adversely affect" all the other species. We agree with these determinations.

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

1. Should a bald eagle nest be built prior to or during construction within 660 feet of the construction limits, further coordination will occur with the FWC and/or USFWS as appropriate.

2. The standard FDOT Construction Precautions for the Eastern Indigo Snake will be followed during construction.

3. Due to the presence of gopher tortoise habitat within the project area, a gopher tortoise survey in appropriate habitat will be performed within construction limits prior to construction, and the FDOT will secure any relocation permit from the FWC.

   Please reference the FWC's Gopher Tortoise Permitting Guidelines (Revised February 2015 http://myfwc.com/media/2984206/GT-Permitting-Guidelines-FINAL-Feb2015.pdf) for survey methodology and permitting guidance prior to any construction activity. Specific guidance in the permitting guidelines includes methods for avoiding permitting as well as options and state requirements for minimizing, mitigating, and permitting potential impacts of the proposed activities. Any commensal species observed during the burrow excavations should be relocated in accordance with Appendix 9 of the Gopher Tortoise Permitting Guidelines. To the maximum extent possible, the FWC also recommends that all staging and storage areas be sited to avoid impacts to gopher tortoise burrows and their habitat.

4. If protected species are observed during preconstruction surveys, coordination with the USFWS, FWC and/or the Florida Department of Agriculture and Consumer Services (for protected plants) will be initiated to determine any permit requirements or modifications to construction activities that may be required.

5. Wetland impacts will result in loss of wood stork foraging habitat, thus requiring mitigation acceptable to the USFWS. This mitigation should also compensate for habitat loss for the other potentially affected wading birds.

6. The FDOT will adhere to the National Marine Fisheries Service (NMFS) *Sea Turtle and Smalltooth Sawfish Construction Conditions* and *Construction Special Conditions for the protection of the Gulf Sturgeon* during construction of the project.

7. The FDOT will coordinate with NMFS on potential impacts associated with pile driving activities.

8. To assure the protection of wildlife during construction, the FDOT will implement a Marine Wildlife Watch Plan (MWWP), which includes the FWC *Standard Manatee Conditions for In-Water Work*. The FDOT will require the construction contractor to abide by these guidelines during construction.

The WEBAR evaluates the potential project impacts to an estimated 1.29 acres of wetlands and 2.12 acres of surface waters with a commitment to provide appropriate mitigation. We agree with the findings of this evaluation.

Thank you for the opportunity to review the WEBAR for the US 41 from Kracker Avenue to SR 676 project in Hillsborough County. If you need further assistance, please do not hesitate to contact Jane Chabre either by phone at (850) 410-5367 or at FWCConservationPlanningServices@MyFWC.com. If you have specific technical questions regarding the content of this letter, please contact Brian Barnett at (772) 579-9746 or email brian.bamett@MyFWC.com.

Sincerely,

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

jdg/bb
ENV 1-13-2

United States Department of the Interior
U. S. FISH AND WILDLIFE SERVICE
7915 BAYMEADOWS WAY, SUITE 200
JACKSONVILLE, FLORIDA 32256-7517

IN REPLY REFER TO:
FWS Log No. 04EF1000-2015-I-0295

September 1, 2015

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

RE: PD&E Study (US 41 (SR 45) from Kracker Ave to South of SR 676 (Causeway Blvd)
WPI Segment Number: 430056-1
Hillsborough County, Florida

Dear Ms. Selly:

The U.S. Fish and Wildlife Service (Service) has completed its review of the final draft Wetland Evaluation and Biological Assessment Report (WEBAR) for the Project Development and Environmental (PD&E) Study that is evaluating the alternatives to improve safety and satisfy future transportation demand for US 41 (SR 45) from Kracker Avenue to south of SR 676 (Causeway Boulevard) in Hillsborough County, Florida. The proposed project is approximately 7.0 miles. The highway is a four-lane divided rural and urban facility which will be improved to a six-lane divided facility that will include construction of stormwater management facilities and multimodal facilities (trail, pedestrian, bicycle, and transit accommodations). Bridges over Bullfrog Creek and the Alafia River are also proposed to be widened or replaced. The Service provides the following comments in accordance with section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*).

Eastern Indigo Snake (*Drymarchon corais couperi*)

The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands but they also utilize some wetlands and agricultural areas. FDOT will adhere to the Service's *Standard Protection Measures for the Eastern Indigo Snake* (USFWS 2013) during the construction phase of this project, through implementation of BMPs during construction, preconstruction surveys, and avoidance of unnecessary land clearing. Based on these commitments and our review of the information available in the WEBAR the Service concurs with a 'may affect, but not likely to adversely affect' determination for the Eastern indigo snake.

Wood stork (*Mycteria americana*)

In Florida, wood storks depend on wetlands for foraging and nesting. They have been documented foraging in forested wetlands, cypress domes, fresh water marshes, retention ponds and roadside ditches. FDOT commits to evaluate impacts to wood stork suitable foraging habitat (SFH) during the permitting process and compensation during the final mitigation plan. Based on the information provided in the WEBAR and our records for this area the Service concurs with FDOT's determination that this project 'may affect, but will not likely to adversely affect' the wood stork.

Florida Manatee (*Trichechus manatus latirostris*)

The Florida manatee (manatee) inhabits 5 to 20 feet deep canals, rivers, estuarine habitats, and bays in the Tampa Bay area. During the colder months (October-April), manatees concentrate in areas of warmer water in Florida's natural springs and industrial outfalls. The proposed project may impact the species during in-water work required for the proposed bridge replacements. In order to avoid impacts to the Florida manatee during removal of the old bridge structures and construction of the new bridges, FDOT commits to implementing manatee protection measures in the construction plans and permits for the proposed project. These measures include the *Standard Manatee Conditions for In-Water Work*, restrictions on blasting, monitoring of turbidity barriers, and exclusionary grating on culverts, presence of manatee observers during in-water work, a defined or limited construction window, and prohibition of night-time in-water work. Based on above mentioned commitments and the information reviewed in the WEBAR the Service concurs with FDOT's determination that this project 'may affect, but will not likely to adversely affect' the manatee.

Gulf Sturgeon (*Acipenser oxyrinchus desotoi*)

The Gulf sturgeon is an anadromous fish that forages in the Gulf of Mexico (Gulf) and spawns in most coastal rivers along the Gulf and has been documented as far south as Florida Bay. FDOT evaluated potential impacts to the species during the construction of the proposed bridges for the project and commits to implementing Best Management Practices (BMPs) and adhere to the *Construction Special Conditions for the Protection of the Gulf Sturgeon* during construction of the proposed bridges. Based on the information provided in the WEBAR for this species and the above mentioned commitments, the Service concurs with FDOT's determination that the proposed project 'may affect, but will not likely to adversely affect' the Gulf sturgeon.

Florida Scrub Jay (*Aphelocoma coerulescens*) and Piping Plover (*Charadrius melodus*)

Suitable habitat for the Florida scrub jay was not identified during field reviews or through the data available to the Service. The WEBAR identifies the upland habitat along the proposed project corridor as being disturbed by human activity with high invasive species coverage (Brazilian peppers) which make the surrounding area unsuitable for scrub jays. On the coast, we find piping plovers which come to winter in Florida in beaches, mudflats, and sandflats along the Gulf of Mexico and the Atlantic. Suitable habitat was not identified in the immediate corridor within the proposed project or directly adjacent to the corridor. Based on the information

provided in the WEBAR and the location of the proposed project, the Service concurs with FDOT's determination that the proposed project will have no effect on the Florida scrub jay or the piping plover.

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

Sincerely,

for Jay B. Herrington
Field Supervisor

THIS FORM IS INTENDED TO FACILITATE AND GUIDE THE DIALOGUE DURING A PRE-APPLICATION MEETING BY PROVIDING A PARTIAL "PROMPT LIST" OF DISCUSSION SUBJECTS. IT IS NOT A LIST OF REQUIREMENTS FOR SUBMITTAL BY THE APPLICANT.

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
RESOURCE REGULATION DIVISION
PRE-APPLICATION MEETING NOTES

FILE NUMBER:

PA 400801

Date:	1/22/2014
Time:	11:00
Project Name:	FDOT US 41 PD&E Study from south of Causeway to Kracker Ave.
Attendees:	Richard Alt; Chaz LaRiche; Andrew Goldsmith, American Consulting, agoldsmith@acp-fl.com; Michael Ryan, American Consulting, Christopher Salicco, American Consulting

County:	Hillsborough	**Sec/Twp/Rge:**	Multiple
Total Land Acreage:	159	**Project Acreage:**	159 acres

Prior On-Site/Off-Site Permit Activity:

- ERP – Researching

Project Overview:

- Widen from 4 lane to 6 lane
- Wetlands/Surface Waters – Yes
- FDOT ETDM 5180

Environmental Discussion: (Wetlands On-Site, Wetlands on Adjacent Properties, Delineation, T&E species, Easements, Drawdown Issues, Setbacks, Justification, Elimination/Reduction, Permanent/Temporary Impacts, Secondary and Cumulative Impacts, Mitigation Options, SHWL, Upland Habitats, Site Visit, etc.)

- Review the ETDM report for specific issues associated with the potential wetland/surface water issues
- Replacement of bridges over the rivers and creeks
- Provide the limits of jurisdictional wetlands.
- Provide appropriate mitigation using UMAM for impacts, if applicable.
- Demonstrate elimination and reduction of wetland impacts.
- Maintain minimum 15 foot, average 25 foot wetland conservation area setback or address secondary impacts.

Site Information Discussion: (SHW Levels, Floodplain, Tailwater Conditions, Adjacent Off-Site Contributing Sources, Receiving Waterbody, etc.)

- Existing roadway/intersections.
- Eleven WBID's - 8 are impaired for nutrients
- Discharging to impaired waters.
- Need coordination with DEP on adjacent contaminated sites.

Water Quantity Discussions: (Basin Description, Storm Event, Pre/Post Volume, Pre/Post Discharge, etc.)

- Demonstrate that discharges from proposed project area will not cause an adverse impact for a 25-year, 24-hour storm event if the pond does not discharge to an infinite basin. Or demonstrate no adverse impacts if attenuation is not provided.
- Demonstrate that site will not impede the conveyance of contributing off-site flows.
- Demonstrate that the project will not increase riverine flood stages up- or down-stream of the project area(s).
- Provide equivalent compensating storage for all 100-year, 24-hour riverine floodplain impacts if applicable.

Water Quality Discussions: (Type of Treatment, Technical Characteristics, Non-presumptive Alternatives, etc.)

- Provide water quality treatment for the required project area.
- In addition, if the project discharges to an impaired water body, must provide a net environmental improvement.
- Applicant must demonstrate a net improvement for the parameters of concern by performing a pre/post pollutant loading analysis based on existing land use and the proposed land use.
- Will acknowledge compensatory treatment to offset pollutant loads associated with portions of the project area that cannot be physically treated.

Sovereign Lands Discussion: (Determining Location, Correct Form of Authorization, Content of Application, Assessment of Fees, Coordination with FDEP)

- Any work below the MHW line will require coordination with Tampa Port Authority

Operation and Maintenance/Legal Information: (Ownership or Perpetual Control, O&M Entity, O&M Instructions, Homeowner Association Documents, Coastal Zone requirements, etc.)

- The permit must be issued to the FDOT.
- Provide proof of ownership in the form of a deed or contract for sale.
- Provide appropriate O&M instructions.
- Provide detailed construction surface water management plan.

Application Type and Fee Required:

- SWERP – Sections A, C and E of the ERP Application.
- < 640 acres of project area and <50 acres of wetland or surface water impacts - $3,106.00 Online Submittal

Other: (Future Pre-Application Meetings, Fast Track, Submittal Date, Construction Start Date, Required District Permits – WUP, WOD, Well Construction, etc.)

-

THIS FORM IS INTENDED TO FACILITATE AND GUIDE THE DIALOGUE DURING A PRE-APPLICATION MEETING BY PROVIDING A PARTIAL "PROMPT LIST" OF DISCUSSION SUBJECTS. IT IS NOT A LIST OF REQUIREMENTS FOR SUBMITTAL BY THE APPLICANT.

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
RESOURCE REGULATION DIVISION
PRE-APPLICATION MEETING NOTES

FILE NUMBER:

PA 402518

Date:	8/19/2015
Time:	11:00
Project Name:	FDOT US41 S of Causeway to Kracker Ave
Attendees:	Richard Alt, Al Gagne, Andrew Goldsmith - American Consulting agoldsmith@acp-fl.com William Adams, Larry Weatherby

County:	Hillsborough	**Sec/Twp/Rge:**	
Total Land Acreage:	170	**Project Acreage:**	170 acres

Prior On-Site/Off-Site Permit Activity:

- 4 lane rural
- PA 400801, ETDM 5180

Project Overview:

- Expand to 6 lane urban and suburban

Environmental Discussion: (Wetlands On-Site, Wetlands on Adjacent Properties, Delineation, T&E species, Easements, Drawdown Issues, Setbacks, Justification, Elimination/Reduction, Permanent/Temporary Impacts, Secondary and Cumulative Impacts, Mitigation Options, SHWL, Upland Habitats, Site Visit, etc.)

- Project is located in both the Tampa Bay/Coastal Basin and the Alafia Basin. Impacts in the Alafia basin may be located within the service area for the Tampa Bay Mitigation Bank. Will need to verify this. If so, they may be able to use a connectivity argument to mitigate Alafia impacts at the Tampa Bay Mit Bank. Will need to submit a cumulative impact analysis using a connectivity argument for tidal systems.
- Provide the limits of jurisdictional wetlands.
- Provide appropriate mitigation using UMAM for impacts, if applicable.
- Demonstrate elimination and reduction of wetland impacts.
- Maintain minimum 15 foot, average 25 foot wetland conservation area setback or address secondary impacts.
- If the project is located in a county which is listed as a coastal county under the Coastal Zone Management Act (CZM) and the project has wetland impacts, it will require a noticing period once the permit application is deemed complete. Wetland and/or surface waters impacts less than 1 acre in size will require a 10 day noticing period, prior to the issuance of the permit. Wetland and/or surface water impacts greater than 1 acre in size will require a 30 day noticing period, prior to the issuance of the permit. Permits could be issued as early as the 11th or 31st day, but staffs' schedule and workload will determine the actual issuance date.

Site Information Discussion: (SHW Levels, Floodplain, Tailwater Conditions, Adjacent Off-Site Contributing Sources, Receiving Waterbody, etc.)

- Existing roadway/intersections –
- WBIDs need to be independently verified by the consultant - WBID – 1682,1676, 1666A, 1664, 1621G, 1628A, 1632, 1637, and 1636
- Discharging to impaired waters in some areas.

Water Quantity Discussions: (Basin Description, Storm Event, Pre/Post Volume, Pre/Post Discharge, etc.)

- Demonstrate that discharges from proposed project area will not cause an adverse impact for a 25-year, 24-hour storm event. Only SMF 12/13 will need to attenuate, all others (as shown during the meeting) will not require attenuation.
- Demonstrate that site will not impede the conveyance of contributing off-site flows.
- Demonstrate that the project will not increase flood stages up- or down-stream of the project area(s).
- Provide equivalent compensating storage for all 100-year, 24-hour riverine floodplain impacts if applicable.

Water Quality Discussions: (Type of Treatment, Technical Characteristics, Non-presumptive Alternatives, etc.)

- Provide water quality treatment for the required project area.
- In addition, must provide a net environmental improvement.
- Applicant must demonstrate a net improvement for the parameters of concern by performing a pre/post pollutant loading analysis based on existing land use and the proposed land use.
- Will acknowledge compensatory treatment to offset pollutant loads associated with portions of the project area that cannot be physically treated.

Sovereign Lands Discussion: (Determining Location, Correct Form of Authorization, Content of Application, Assessment of Fees, Coordination with FDEP)

- N/A. Tampa Port Authority owns the bottom lands in Hillsborough County. Will need to coordinate with EPC and the Tampa Port Authority.

Operation and Maintenance/Legal Information: (Ownership or Perpetual Control, O&M Entity, O&M Instructions, Homeowner Association Documents, Coastal Zone requirements, etc.)

- The permit must be issued to the FDOT.
- Provide proof of ownership in the form of a deed or contract for sale.
- Provide appropriate O&M instructions.
- Provide detailed construction surface water management plan.

Application Type and Fee Required:

- SWERP – Sections A, C, and E of the ERP Application.
- < 640 acres of project area and < 50 acres of wetland or surface water impacts - $3,105.75

Other: (Future Pre-Application Meetings, Fast Track, Submittal Date, Construction Start Date, Required District Permits – WUP, WOD, Well Construction, etc.)

- In accordance with Rule 40D-1.603(2), F.A.C., no later than 30 days after submittal of an initial application of an Individual surface water management permit the applicant shall publish at the applicant's expense a notice of the District's receipt of the application in a newspaper having general circulation as defined in Chapter 50, F.S., in the county or counties in which the activity is proposed. Please provide documentation that such noticing has been accomplished. Note that the published notices of receipt for an ERP must be in accordance with the language provided in Rule 40D-1.603(10), F.A.C., and receipt of an affidavit establishing proof of this publication will be considered a completeness item of this ERP Application. Per Rule 40D-1.603(12), F.A.C., this must be received before the application will be considered complete and the 60-day timeframe for taking agency action on the application will commence.

  40D-1.603(12) – “Applicants required to publish a notice of receipt of application must provide to the District a publisher’s affidavit establishing proof of publication pursuant to Sections 50.041and 50.051, F.S., before the application will be considered complete and the applicable timeframe for taking agency action on the application will commence.”

U.S. Department of Homeland Security

United States Coast Guard

Commander
Seventh Coast Guard District

909 SE 1st Avenue Suite 432
Miami, FL 33131-3050
Staff Symbol: (DPB)
Phone: (305) 415-6747
E-mail: William.G.Tate@Uscg.Mil

16591
April 6, 2015

Florida Department of Transportation District Seven
Intermodal Systems Development Office
Attn: Stephanie M. Pierce, PD&E Project Manager
11201 N. McKinley Drive
Tampa, FL 33612

Via e-mail to: Stephanie.Pierce@Dot.State.Fl.Us

Dear Ms. Pierce:

This is in response to your bridge project questionnaire submitted electronically on February 5, 2015, regarding replacement a bridge over the Alafia River, mile 1.0, a tributary of Hillsboro/Tampa Bay Tampa, Florida.

A Coast Guard bridge permit will be required for the proposed bridge replacement. You should plan on navigational clearances no less than those provided by the existing bridge. To determine if the reasonable needs of navigation might require greater clearances, we recommend you consult with waterway users early in your design process. This needs analysis should reduce the likelihood of your permit being delayed for navigational considerations.

The Coast Guard Bridge Permit Application Guide is available at:

http://www.uscg.mil/hq/cg5/cg551/BPAG_Page.asp

Please submit the permit application as outlined in the guide with original 8 ½" x 11" permit plans showing the project vicinity, and existing and proposed bridge structures in plan, elevation and section views.

If you have any questions regarding this matter, please call Mr. Gwin Tate at (305) 415-6747 or e-mail me at William.G.Tate@Uscg.Mil

Regards,

W. GWIN TATE III
Bridge Management Specialist
U.S. Coast Guard
By direction

U.S. Department of Homeland Security
United States Coast Guard

Commander
Seventh Coast Guard District

909 SE 1st Ave. Ste. 432
Miami, FL 33131-3028
Staff Symbol: (dpb)
Phone: (305) 415-6747
E-mail: William.G.Tate@Uscg.Mil

16591
April 6, 2015

Florida Department of Transportation District Seven
Intermodal Systems Development Office
Attn: Stephanie M. Pierce, PD&E Project Manager
11201 N. McKinley Drive
Tampa, FL 33612

Via e-mail to: Stephanie.Pierce@Dot.State.Fl.Us

Dear Ms. Pierce:

This is in response to your bridge project questionnaire submitted electronically on March 10, 2015, requesting a determination of Advance Approval for a proposed bridge replacement project across Bullfrog Creek at US 41, mile 0.7, tributary of the Hillsborough Bay/Tampa Bay, Tampa, Hillsborough County, Florida.

Based on our determination, the proposed bridge project across Bullfrog Creek will not require a Coast Guard bridge permit. In such cases, the clearances provided for high water stages are considered adequate to meet the reasonable needs of navigation (33 CFR 115.70). Although this project will not require a bridge permit other areas of Coast Guard jurisdiction apply. The following stipulations must be met:

a. This office shall be notified 60 days prior to the actual commencement of construction. The 60 day notification shall be provided to Mr. Michael Lieberum at (305) 415-6744, e-mail Michael.B.Lieberum@Uscg.Mil Upon completion of design and finalization of the location, this office shall be contacted regarding approval of lights and other signals that may be required under 33 CFR 118. Approval of said lighting or waiver shall be obtained prior to construction.

b. Upon completion of construction, the bridge owner shall submit "as built" drawings (8 1/2 x 11") showing clearances through the bridge and sufficient data to allow this office to prepare a completion report. Also submit a photo of the completed bridge for our bridge file and database.

c. The lowest portion of the superstructure of the bridge across the waterway shall clear the 100-year flood height elevation. Coordinate with the Federal Emergency Management Administration if this is not possible.

Coast Guard approval does not relieve the applicant of the responsibility to ensure compliance with any applicable federal, state, or local laws and regulations for the proposed project. When

the bridge is no longer used for transportation purposes, it must be removed in its entirety and you must notify this office that the waterway has been cleared.

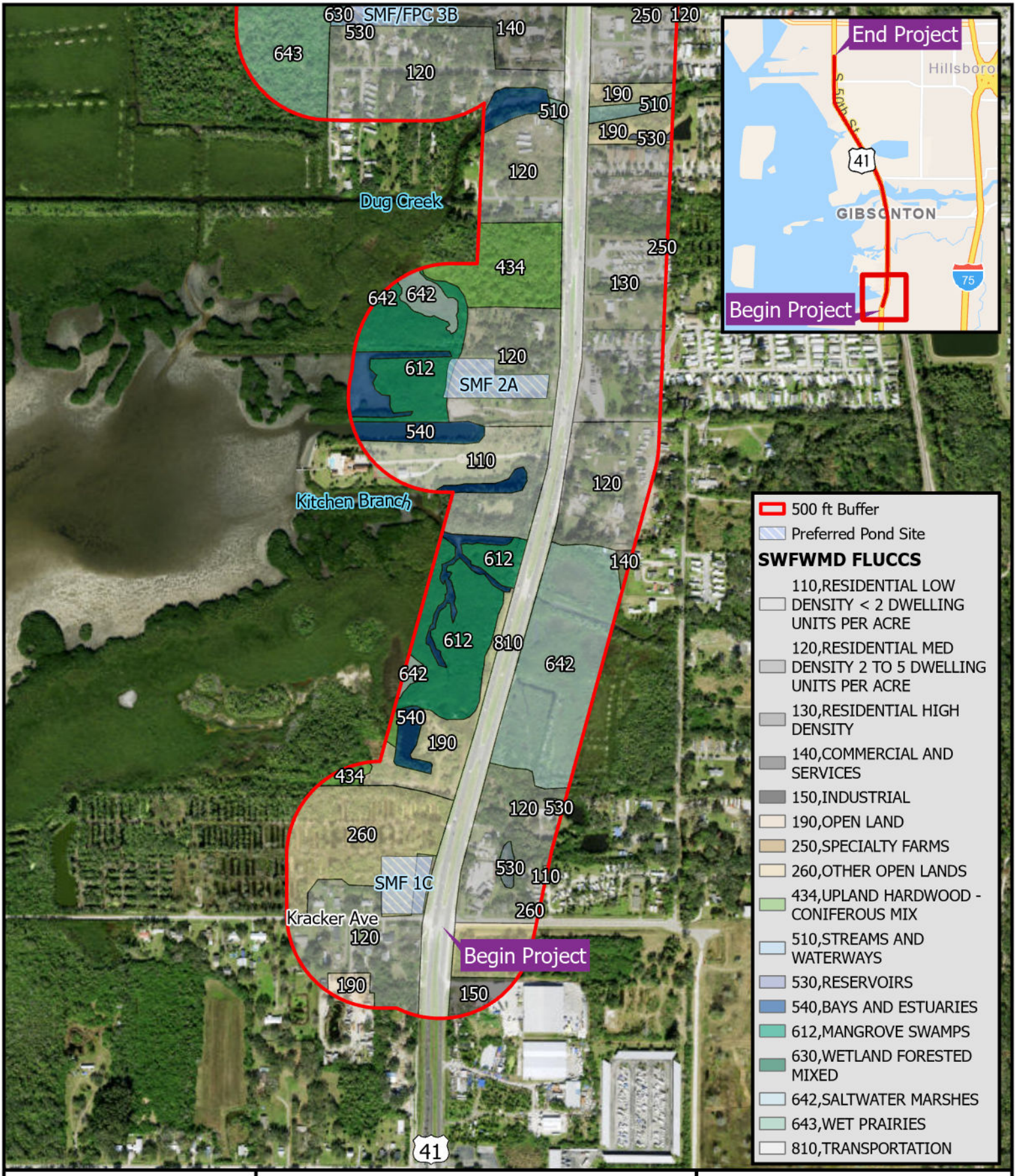
This exemption will not necessarily apply to future modifications of this bridge or the construction of other bridges along this waterway since waterway usage may change over time. Increased activity along this waterway could remove the bridge from the Advance Approval category. If construction of this bridge is not commenced within 3 years from the date of this letter this advance approval determination is rendered null and void. Please resubmit an updated "Bridge Project Questionnaire" for further consideration.

Please contact Mr. Gwin Tate at (305) 415-6747 if you have any questions about our approval.

Regards,

W. GWIN TATE III
Bridge Management Specialist
U. S. Coast Guard
By direction

APPENDIX B Existing SWFWMD LULC Map



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

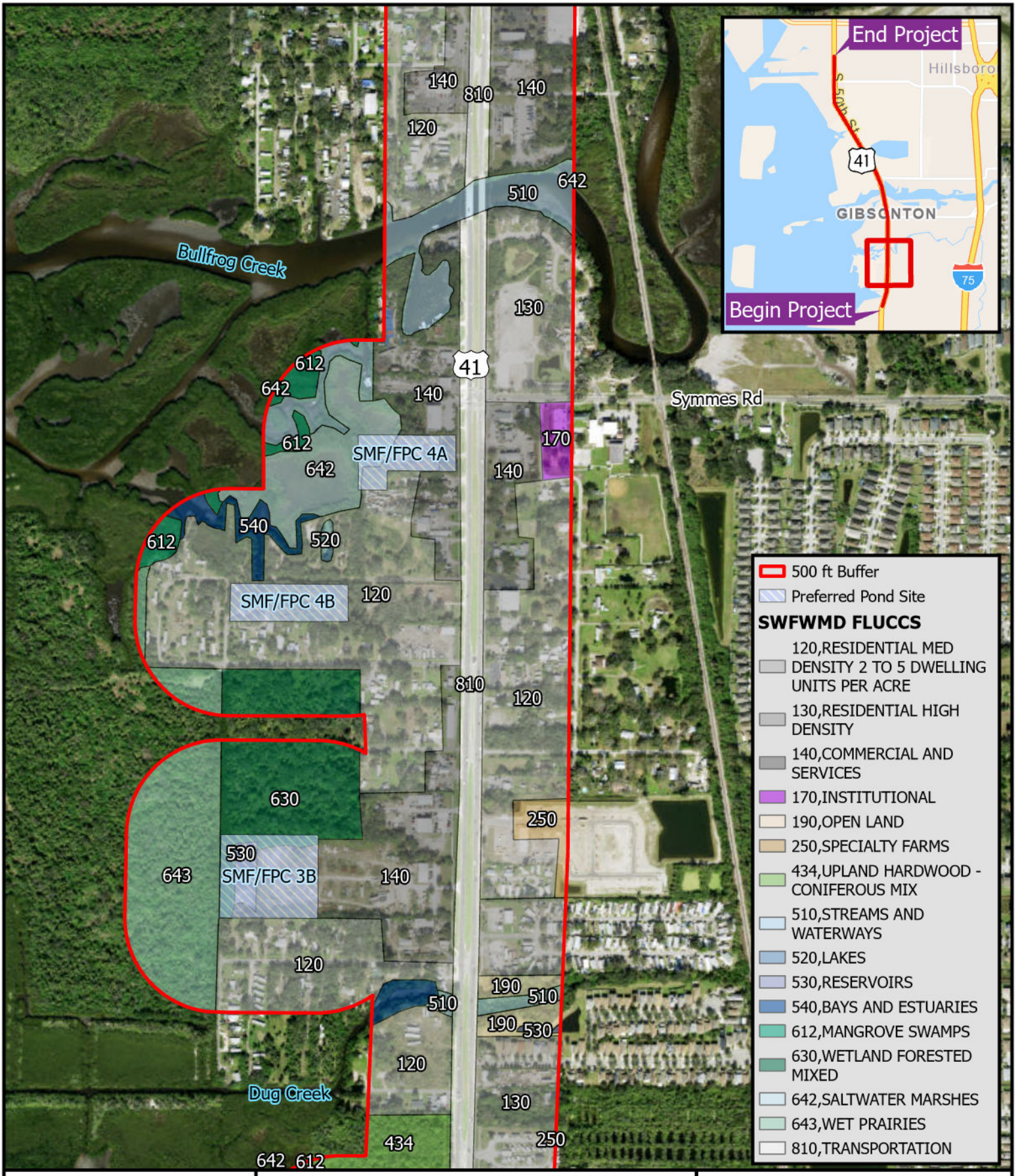
Hillsborough County, FL

N

SWFWMD Land Use

0 400 800

Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

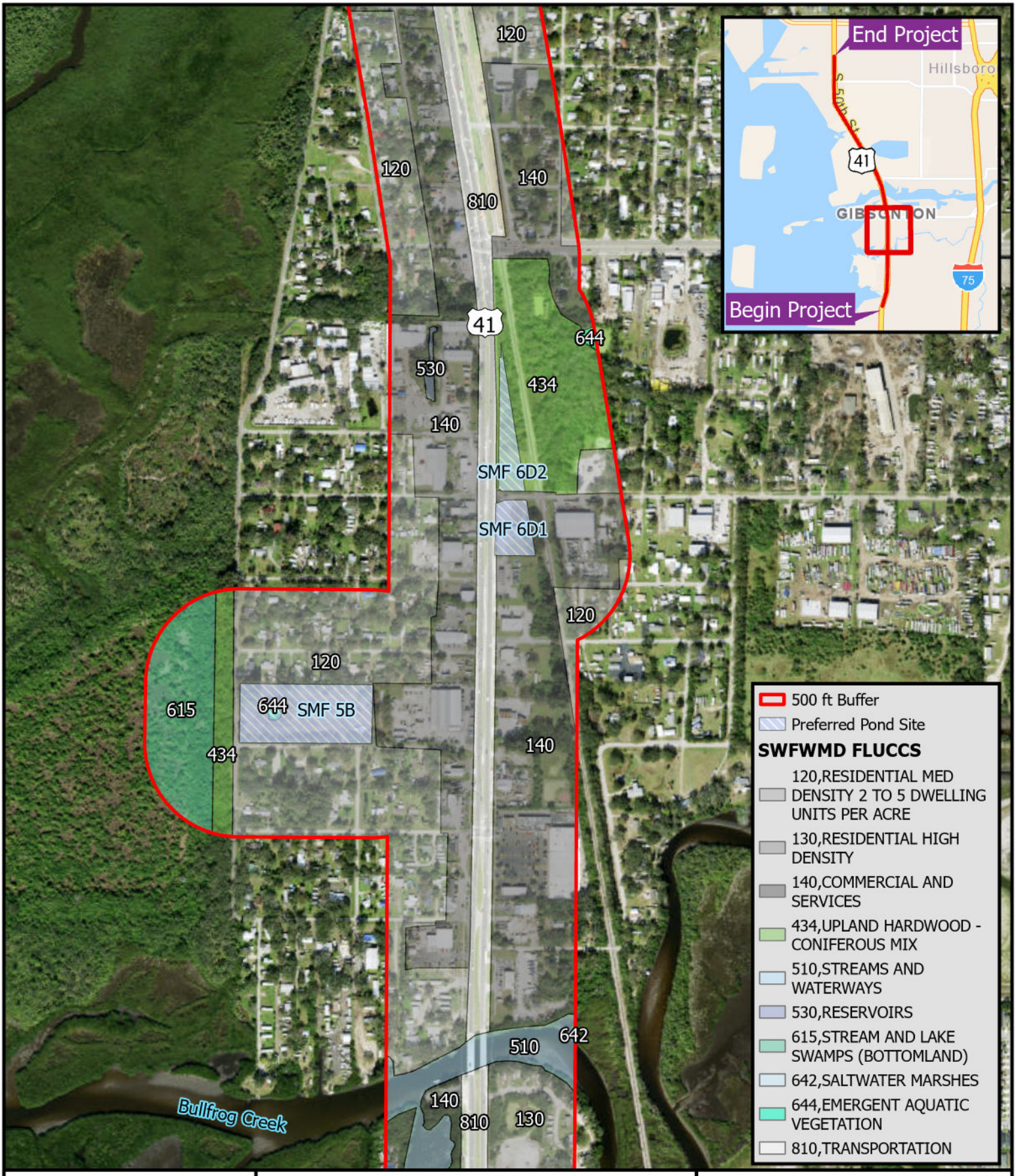
FPID: 430056-1-22-01

Hillsborough County, FL

N

SWFWMD Land Use

0 400 800 Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

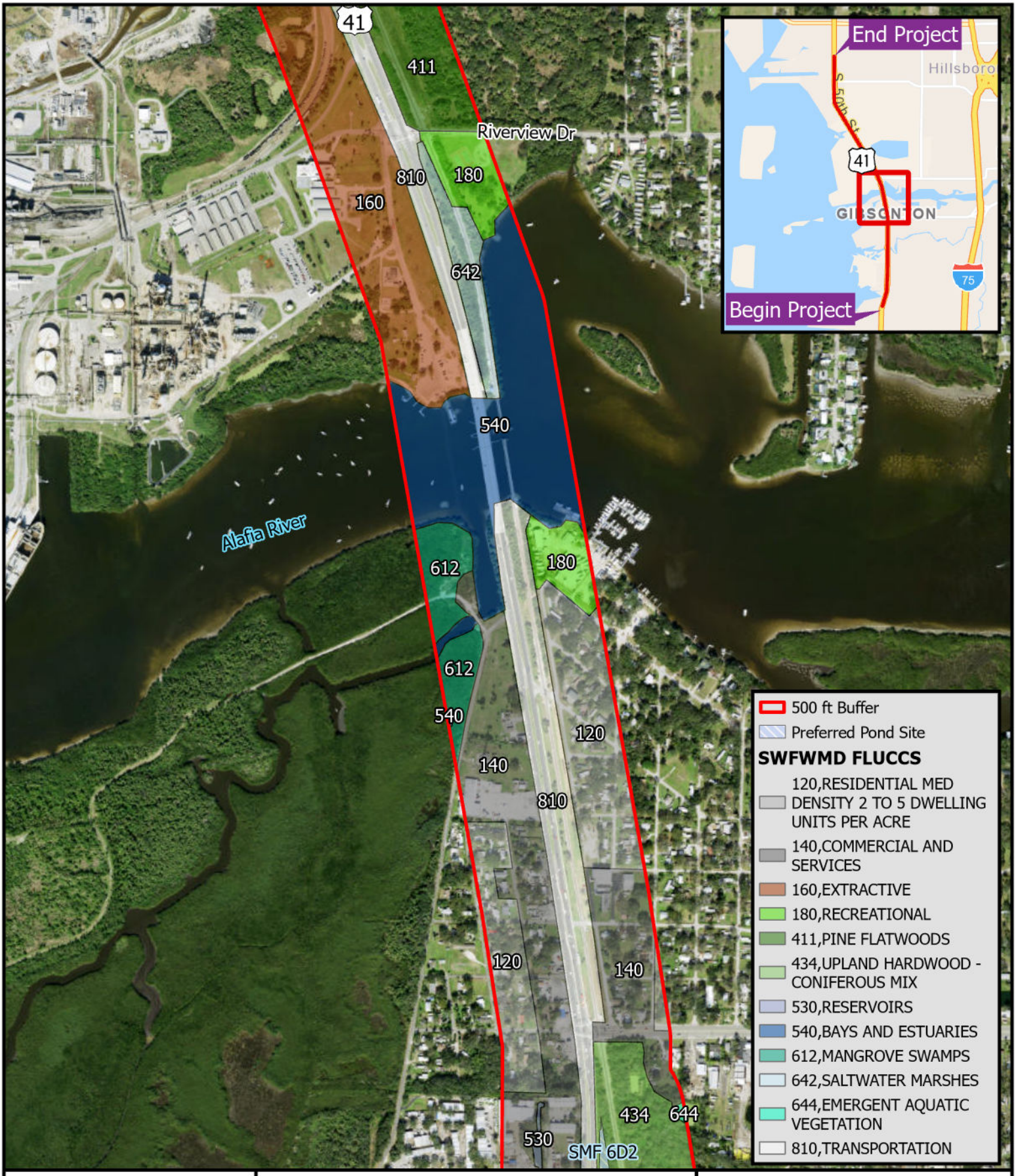
Hillsborough County, FL

N

SWFWMD Land Use

0 400 800

Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

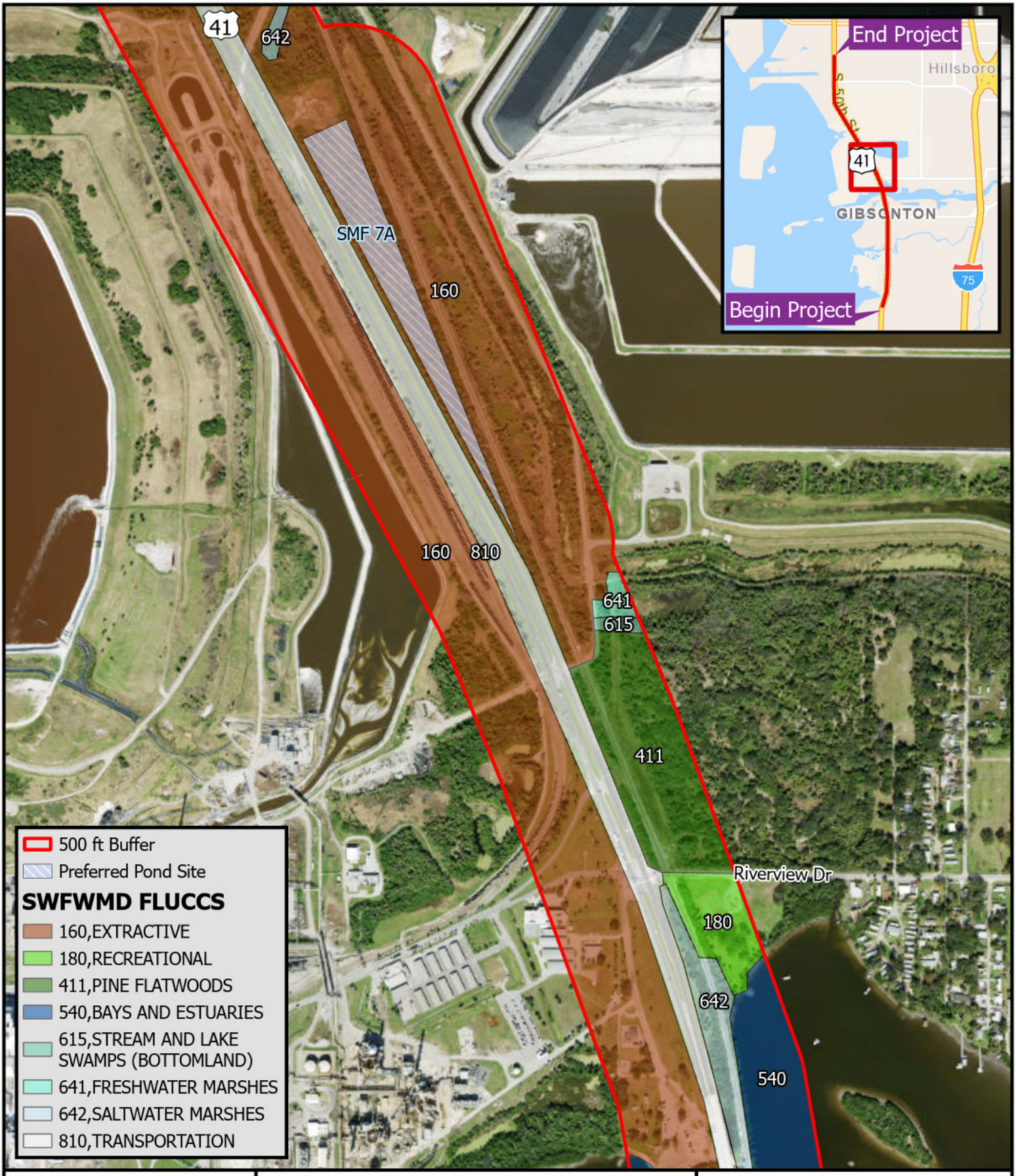
Hillsborough County, FL

N

SWFWMD Land Use

0 400 800

Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

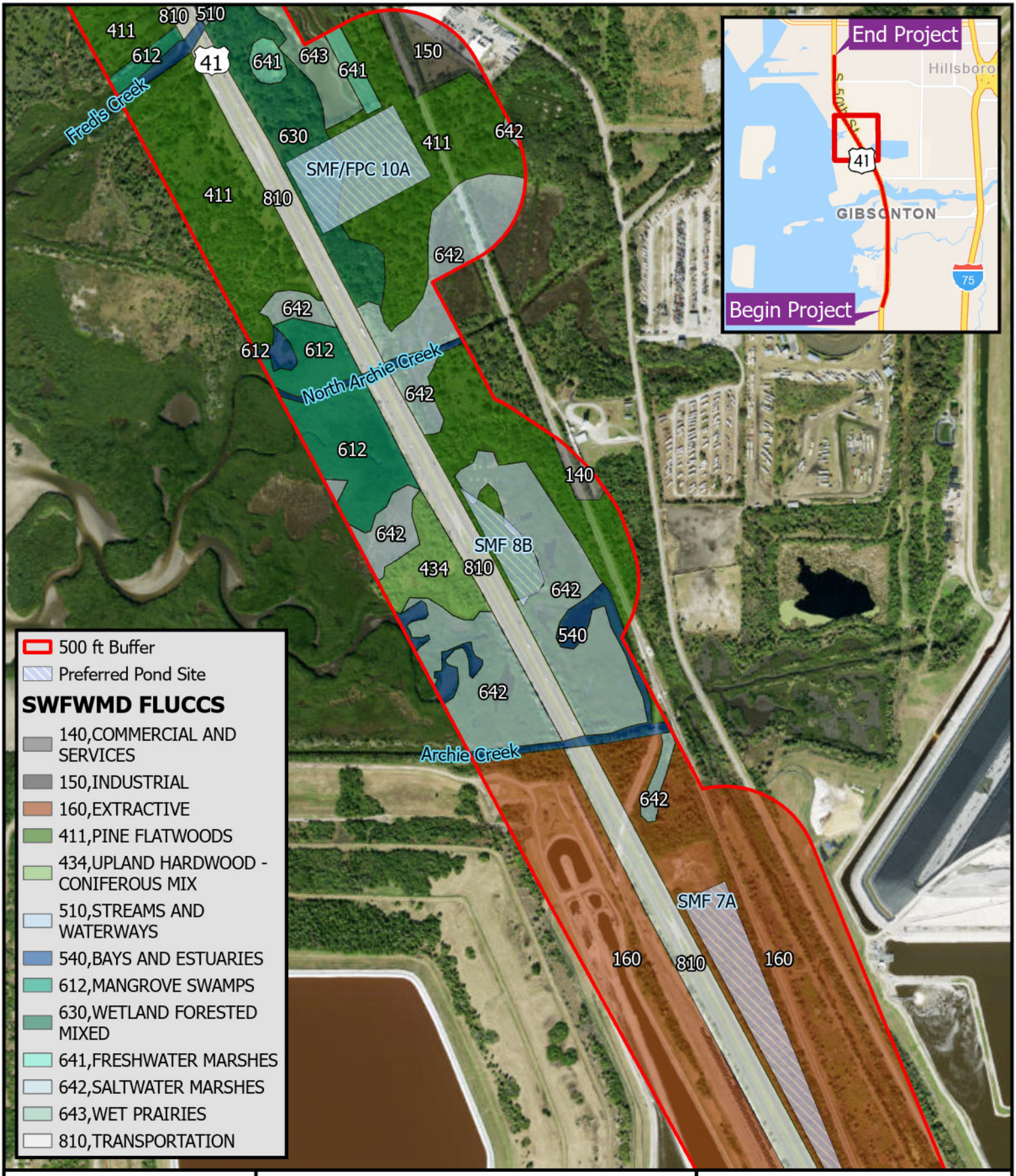
Hillsborough County, FL

N

SWFWMD Land Use

0 400 800

Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

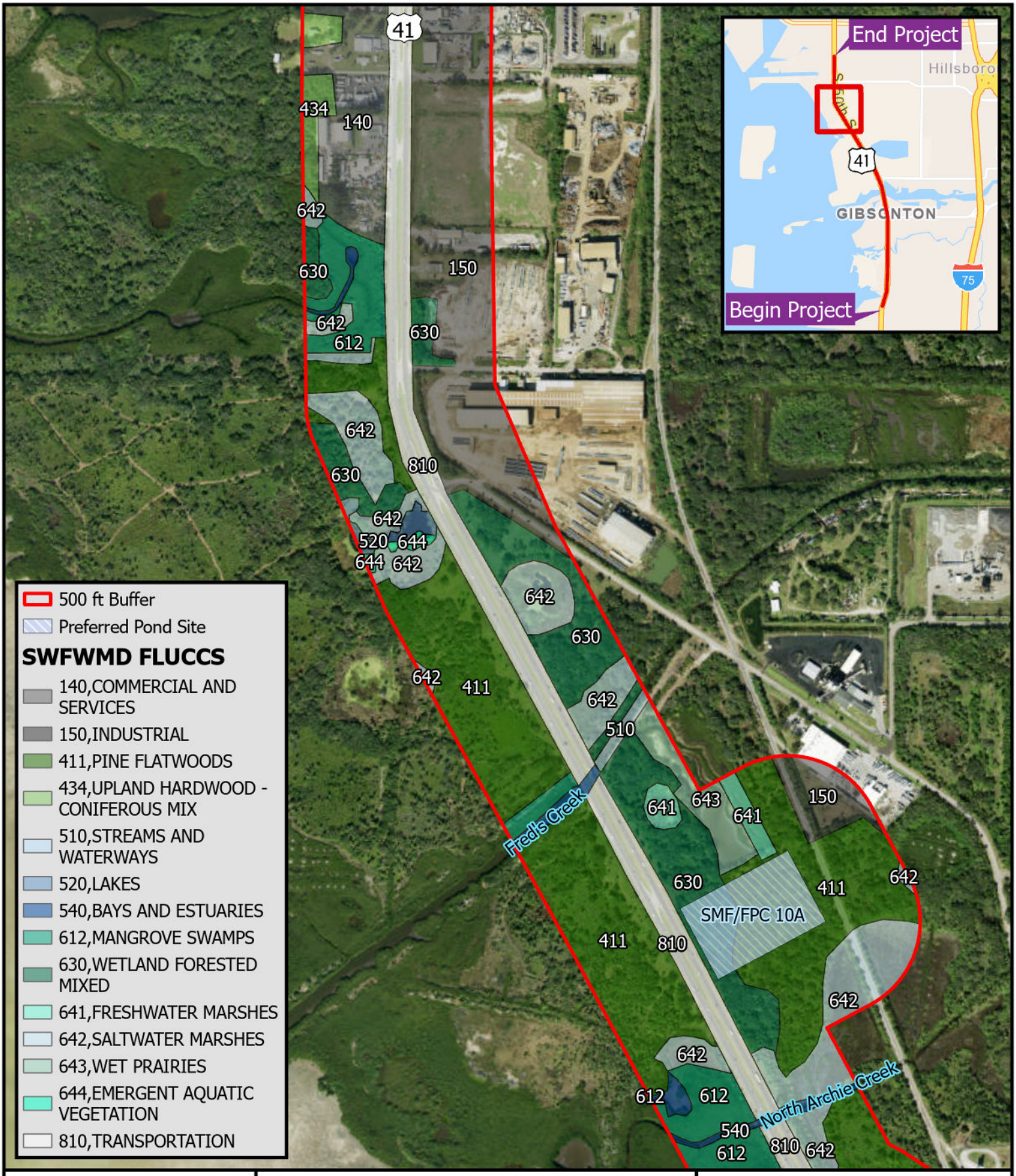
Hillsborough County, FL

N

SWFWMD Land Use

0 400 800

Feet



US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

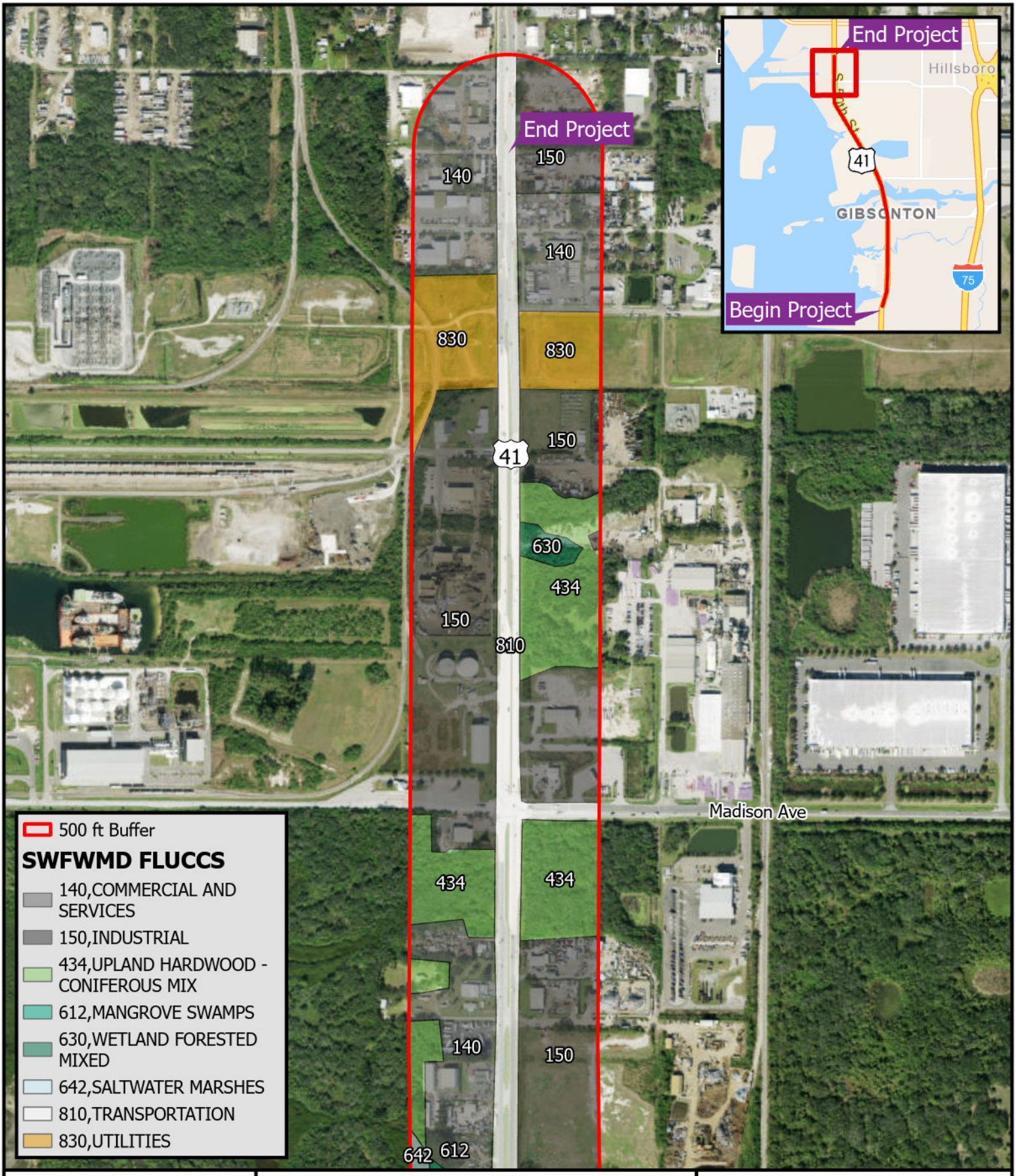
Hillsborough County, FL

SWFWMD Land Use

N

0 400 800

Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

Hillsborough County, FL

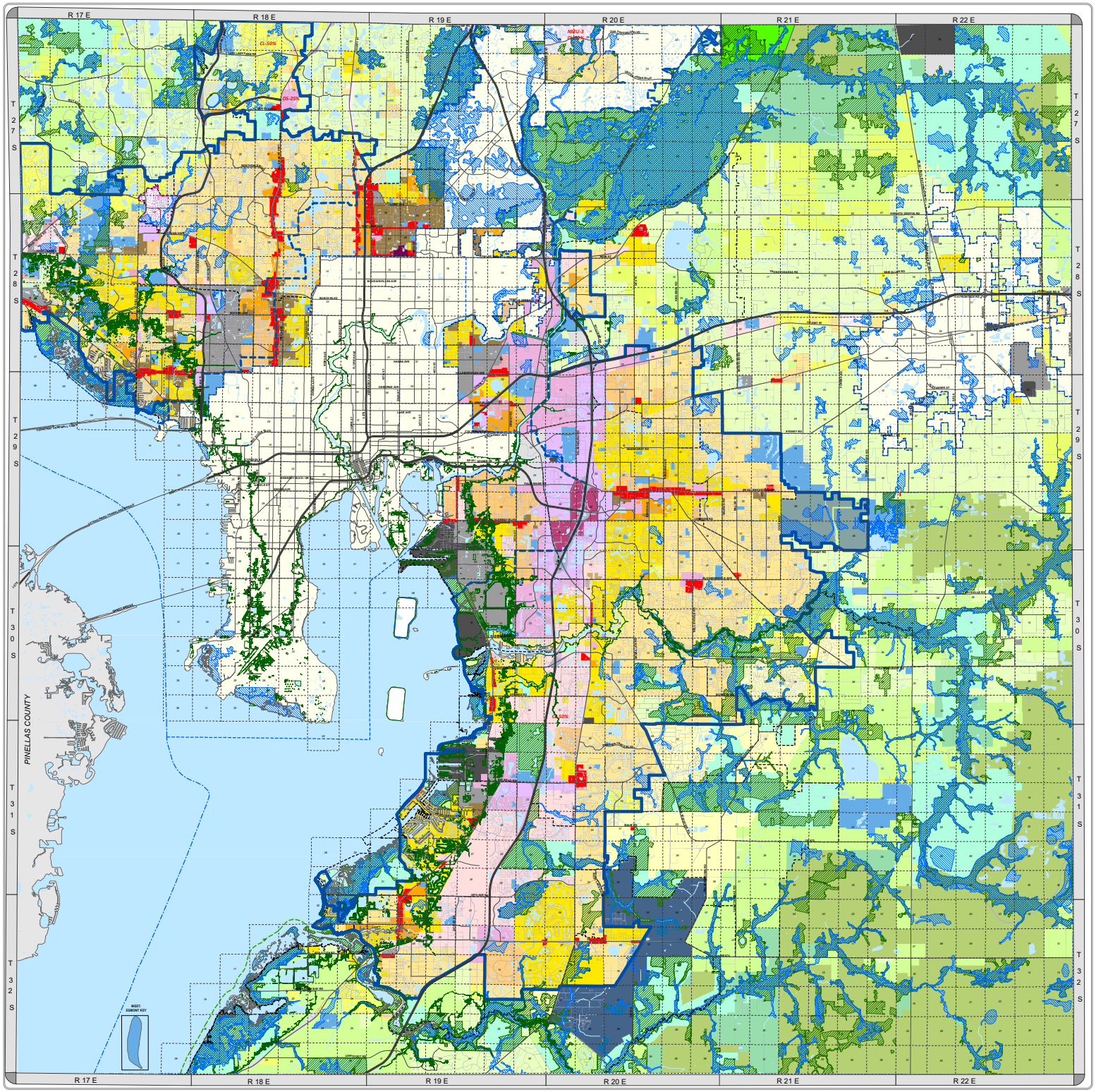
N

SWFWMD Land Use

0 400 800

Feet

APPENDIX C Future Land Use Map (2025)



HILLSBOROUGH COUNTY, FLORIDA

ADOPTED 2025 FUTURE LAND USE

UNINCORPORATED COUNTY-WIDE

EFFECTIVE: JUNE 24, 2022

ORIGINALLY ADOPTED: JUNE 8, 2008

Hillsborough County City-County Planning Commission

LEGEND

UNINCORPORATED HILLSBOROUGH COUNTY

- AGRICULTURAL / MINING - 1/20
- AGRICULTURAL - 1/10
- AGRICULTURAL / RURAL - 1/5
- PLANNED ENVIRONMENTAL COMMUNITY - 1/2
- AGRICULTURAL ESTATE - 1/2.5
- RESIDENTIAL - 1
- RESIDENTIAL - 2
- RESIDENTIAL PLANNED - 2
- RESIDENTIAL - 4
- RESIDENTIAL - 6
- RESIDENTIAL - 9
- RESIDENTIAL - 12
- RESIDENTIAL - 16
- RESIDENTIAL - 20
- RESIDENTIAL - 35
- NEIGHBORHOOD MIXED USE - 4(3)
- SUBURBAN MIXED USE - 6
- COMMUNITY MIXED USE - 12
- URBAN MIXED USE - 20
- REGIONAL MIXED USE - 35
- INNOVATION CORRIDOR MIXED USE - 35
- OFFICE COMMERCIAL - 20
- RESEARCH CORPORATE PARK
- ENERGY INDUSTRIAL PARK
- LIGHT INDUSTRIAL PLANNED
- LIGHT INDUSTRIAL
- HEAVY INDUSTRIAL
- PUBLIC / QUASI-PUBLIC
- WIMAUMA VILLAGE RESIDENTIAL - 2
- NATURAL PRESERVATION
- CITRUS PARK VILLAGE (See Citrus Park Village Plan - Sub-Areas Map)
- TRANSITIONAL AREA (Due to contraction of municipal city limits)

Detailed land use category descriptions can be found in the Future Land Use section of the Comprehensive Plan.

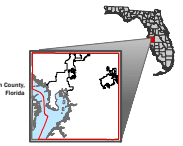
WATER AND ENVIRONMENTALLY SENSITIVE AREAS

- WATER
- SIGNIFICANT WILDLIFE HABITAT
- MAJOR WETLANDS

ROADS AND BOUNDARY LINES

- COCKROACH BAY AQUATIC PRESERVE BOUNDARY
- COUNTY BOUNDARY
- JURISDICTION BOUNDARY
- URBAN SERVICE AREA
- TPA SERVICE AREA
- EXISTING MAJOR ROAD NETWORK
- LIMITED ACCESS ROADS
- PLANNING AREA BOUNDARY
- COASTAL HIGH HAZARD AREA BOUNDARY
- RIGHT-OF-WAY OR OTHERWISE NOT CLASSIFIED

LOCATOR MAP AND REFERENCE INFORMATION



2025 FUTURE LAND USE: Hillsborough County City-County Planning Commission. Originally Adopted - June 08, 2009.

JURISDICTIONAL AREAS: Updated by plan amendment. Effective to present quarterly update.

URBAN SERVICE AREA BOUNDARIES: Hillsborough County City-County Planning Commission. Effective to present quarterly update.

SIGNIFICANT WILDLIFE HABITAT: Hillsborough County Geomatics.

WETLANDS AND WATER: Southwest Florida Water Management District. Wetland features over 40 acres extracted. from Land Use Land Cover.

MAJOR ROADS: Metropolitan Planning Organization Long Range Transportation Plan. See Adopted MPO Long Range Transportation Plan for specific improvements.

CHHA: Tampa Bay Regional Planning Council, July 28, 2016. The Coastal High Hazard Area as shown on the Future Land Use map is a general depiction as per HB1339, which is the area below the elevation of the category 1 storm surge line as established by the SLOSH computerized storm surge model. More specific information can be obtained by reviewing the TBRPC's computerized storm surge model.

ACCURACY: It is intended that the accuracy of the base map comply with U.S. map accuracy standards. However, such accuracy is not guaranteed by the Hillsborough County City-County Planning Commission.

N

0 0.75 1.5 3 4.5 6 Miles

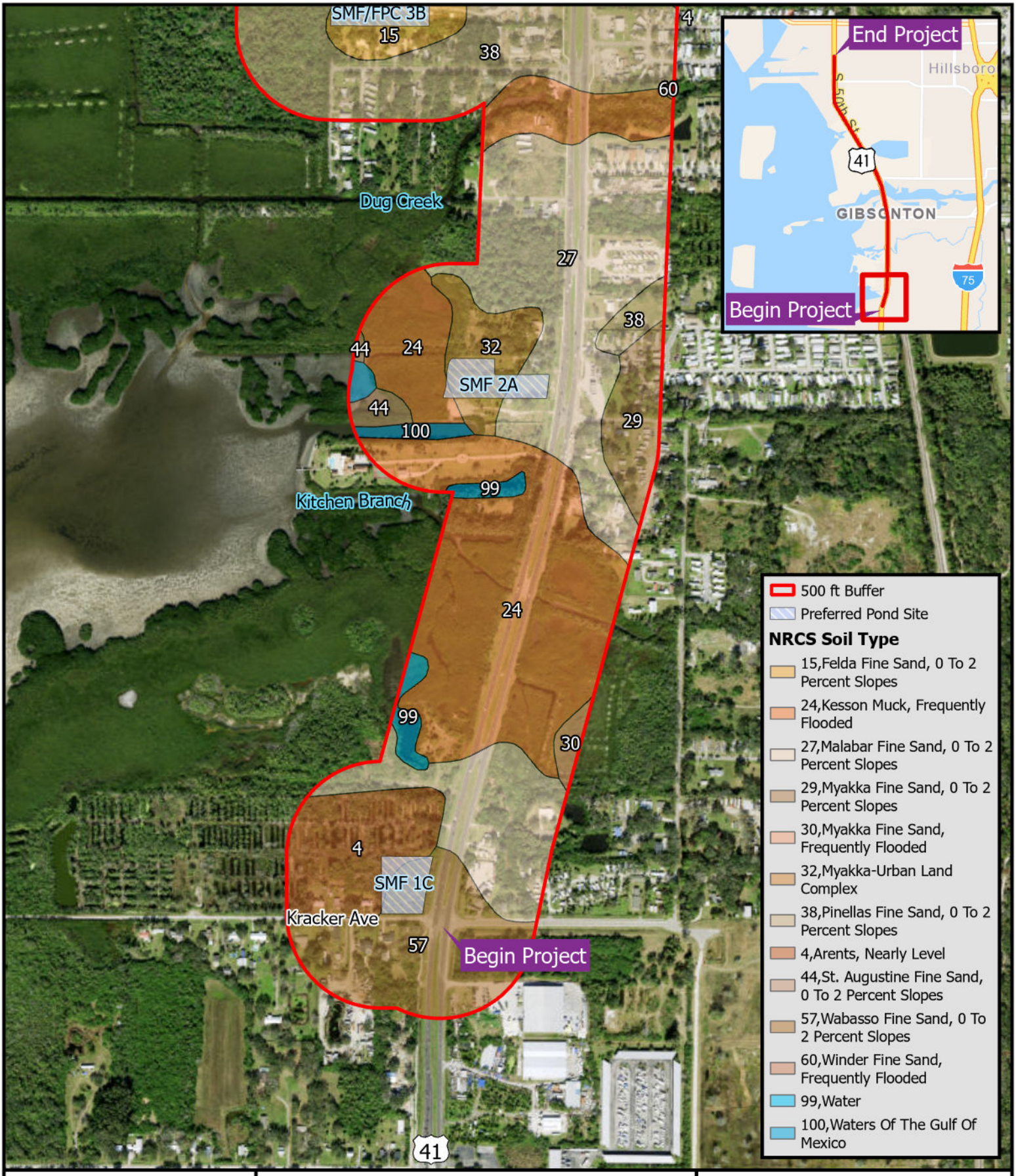
Author: CATANIAC

Date: 6/24/2022

Path: G:\gisroot\Projects\Cathy\Arcmap\NEW_MXD\Future_Land_Use\FLU_Maps_Current\Unincorporated Hillsborough County FLU_wam.mxd

PlanHillsborough.org

APPENDIX D NRCS Soils Map



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

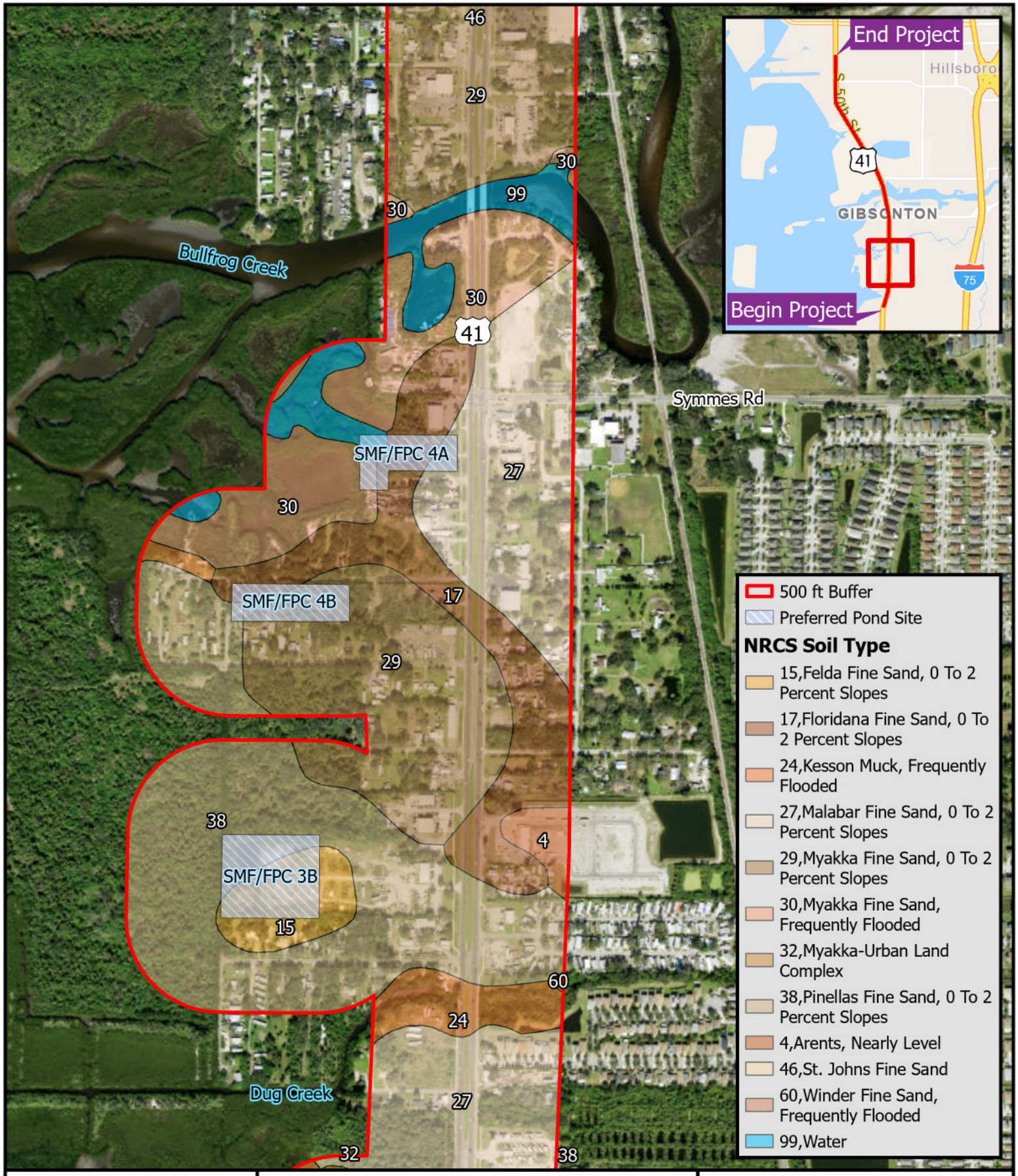
Hillsborough County, FL

N

NRCS Soil Types

0 400 800

Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

Hillsborough County, FL

N

NRCS Soil Types

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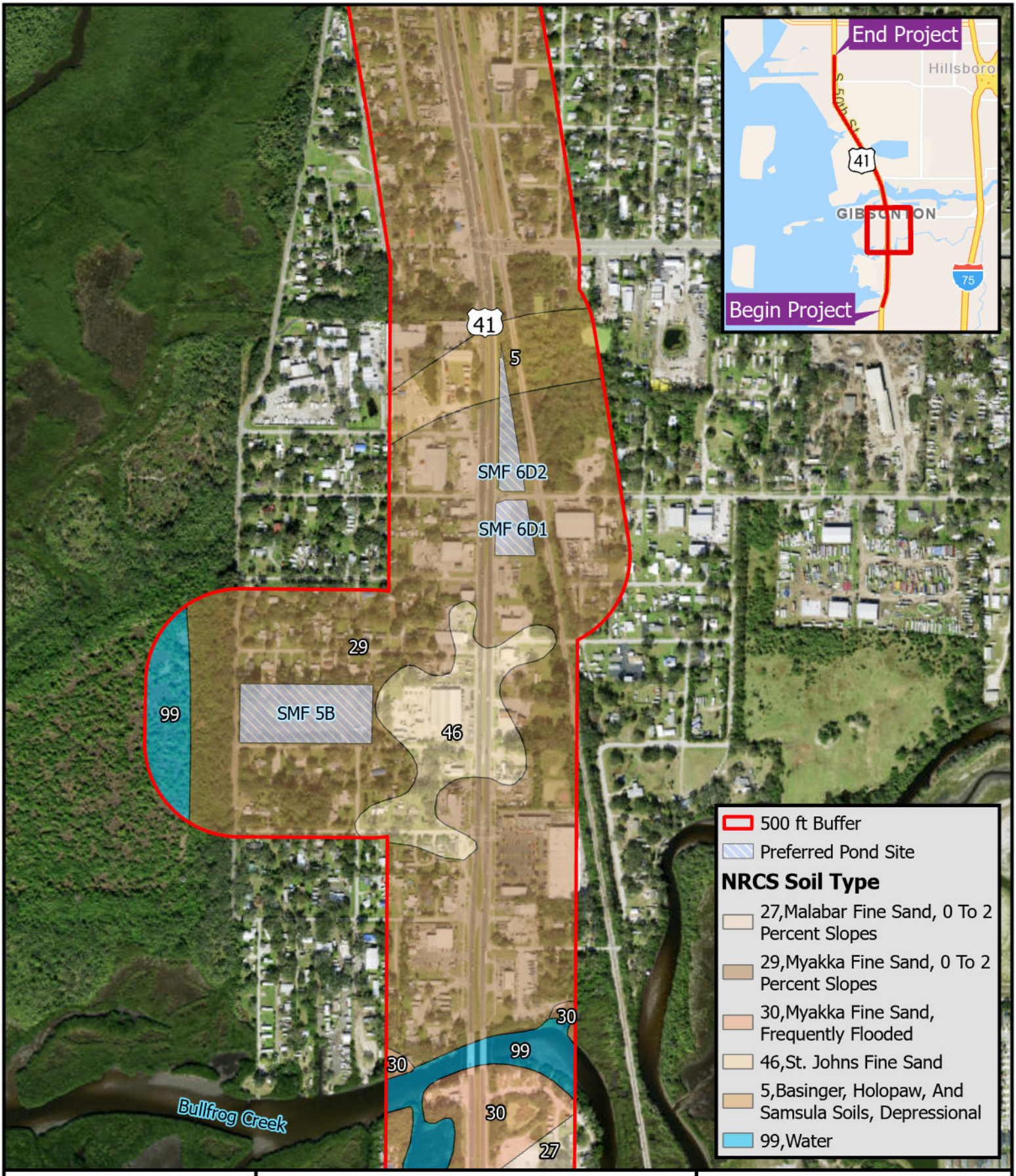

FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

Hillsborough County, FL

N

NRCS Soil Types

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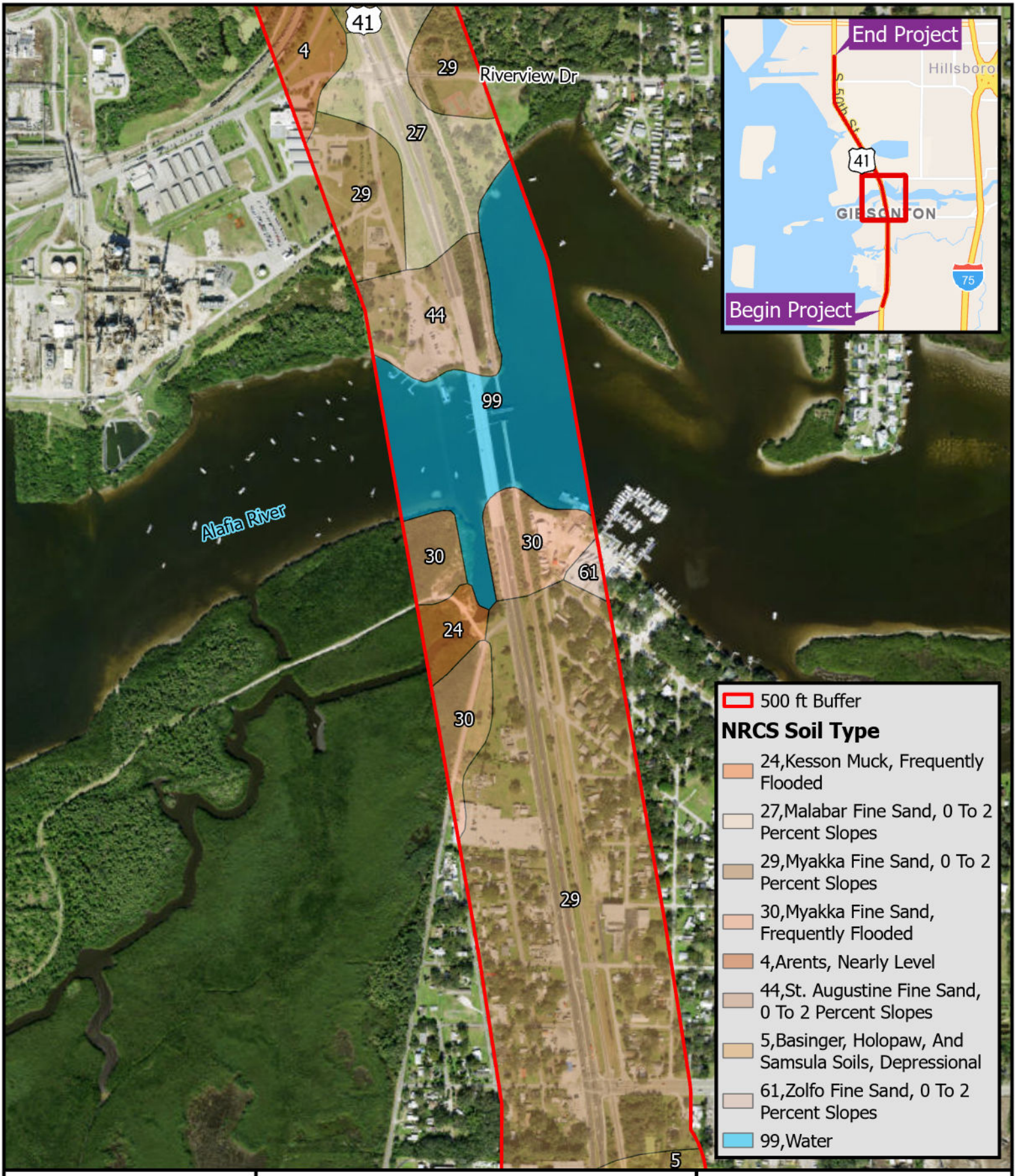
Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

Hillsborough County, FL

N

NRCS Soil Types

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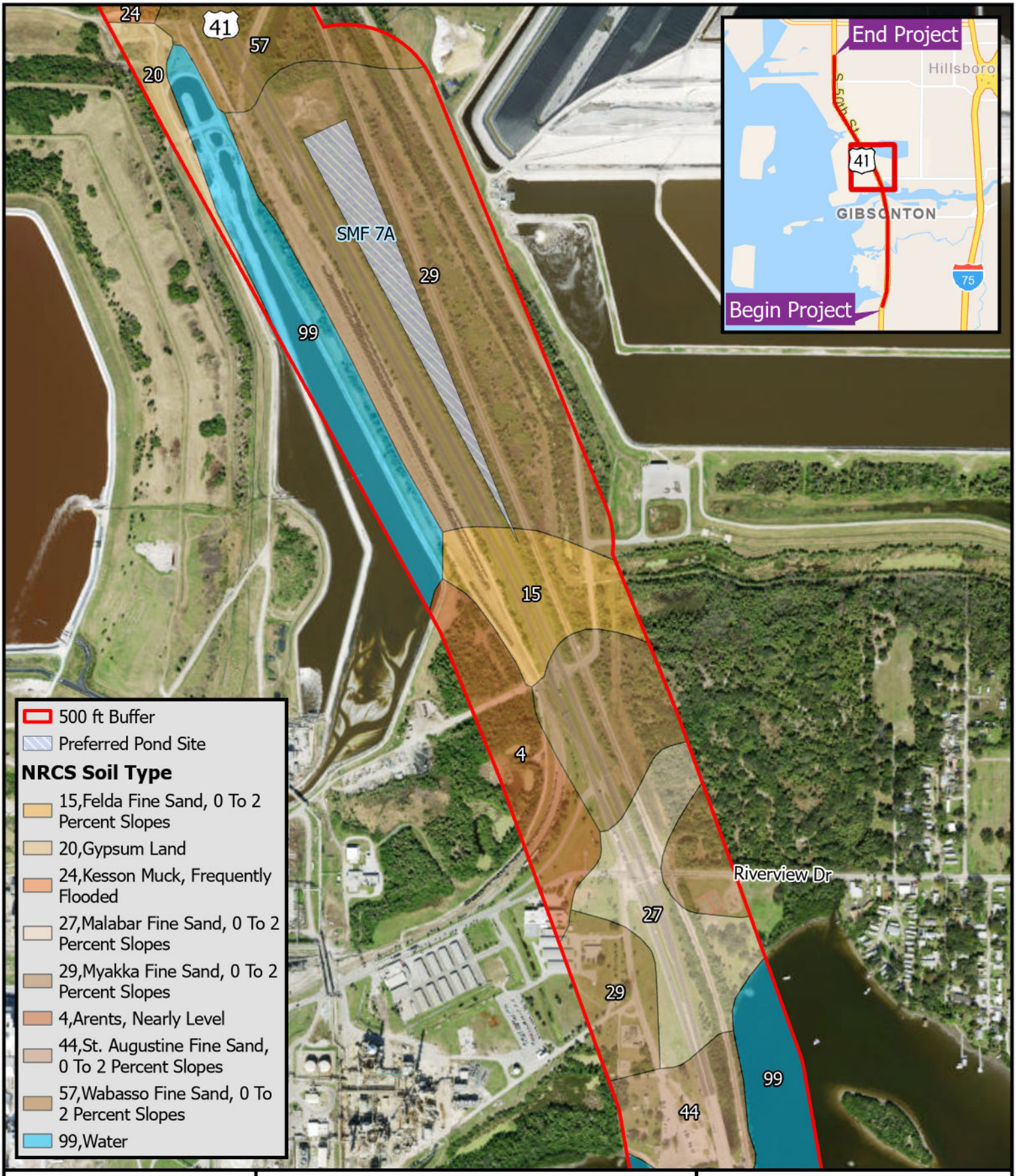
Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

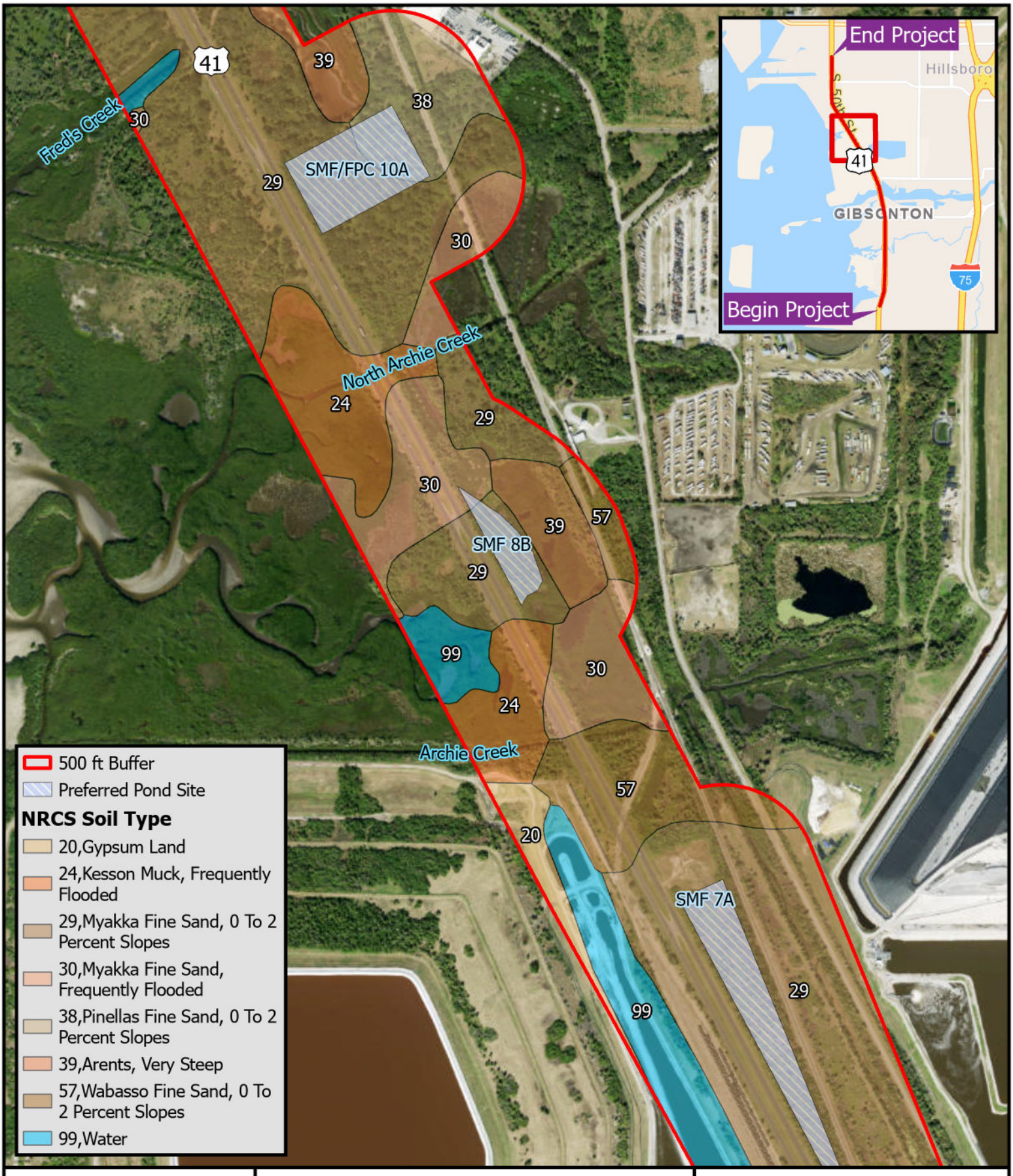
Hillsborough County, FL

N

NRCS Soil Types

0 400 800

Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

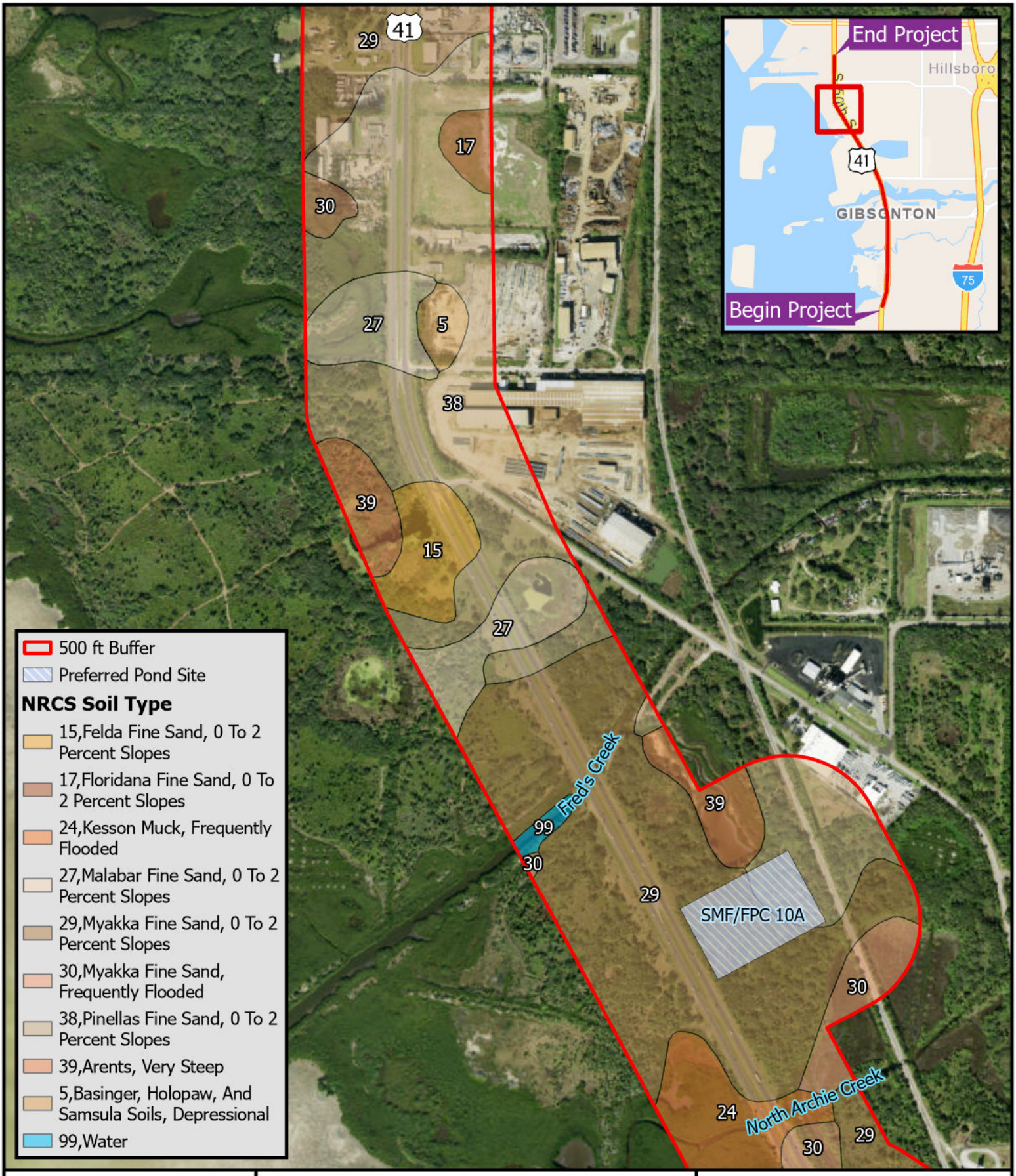
Hillsborough County, FL

N

NRCS Soil Types

0 400 800

Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

Hillsborough County, FL

N

NRCS Soil Types

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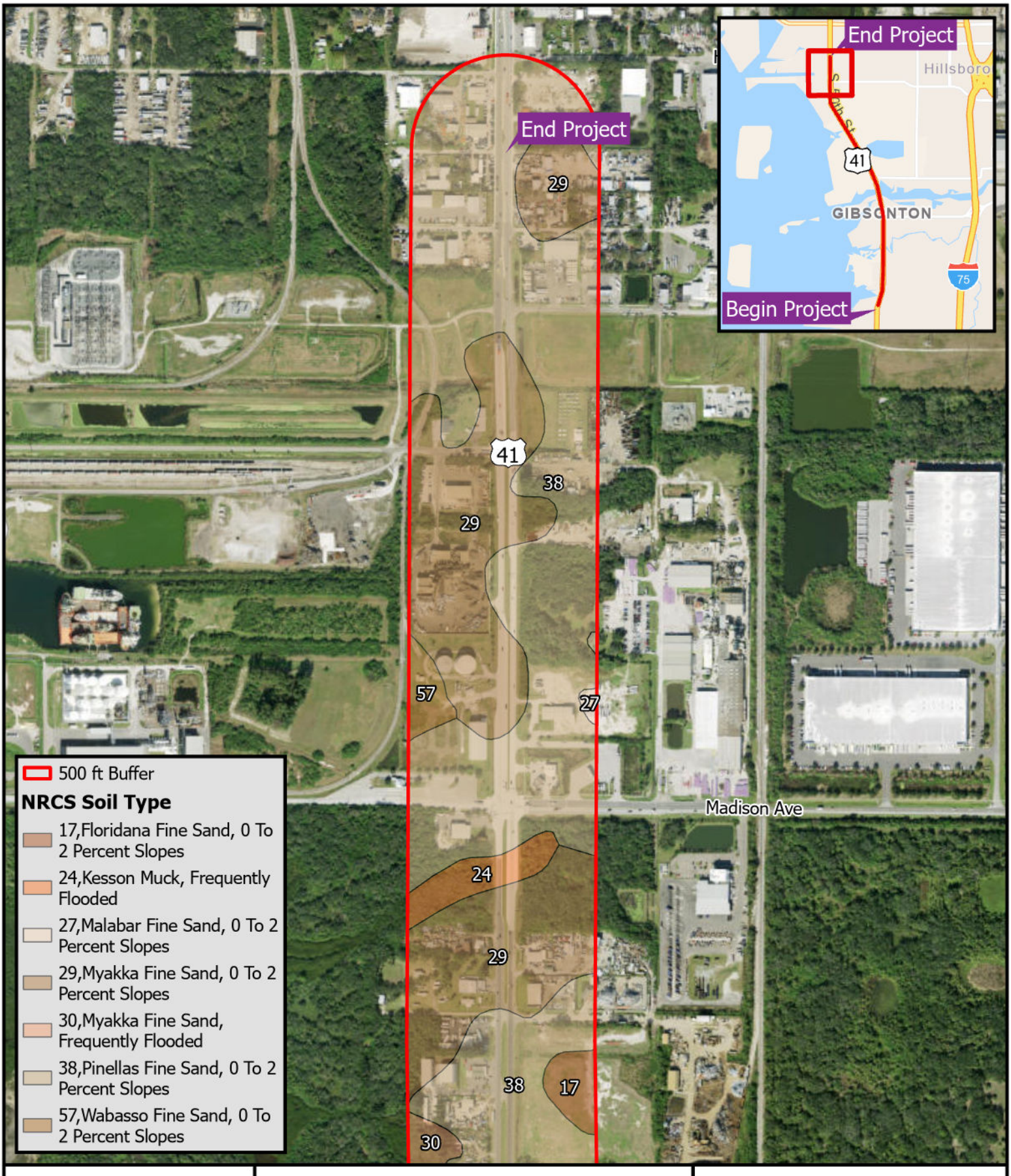
Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

Hillsborough County, FL

N

NRCS Soil Types

0 400 800

Feet

APPENDIX E Protected Species Observations

FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

Hillsborough County, FL

Protected Species Impact

N

0 0.5 1 Miles

APPENDIX F IPaC Official Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Florida Ecological Services Field Office
777 37th St
Suite D-101
Vero Beach, FL 32960-3559
Phone: (352) 448-9151 Fax: (772) 562-4288
Email Address: fw4flesregs@fws.gov
https://www.fws.gov/office/florida-ecological-services

In Reply Refer To: 11/18/2025 15:53:58 UTC
Project Code: 2025-0102294
Project Name: US 41 PD&E Study

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. **Please include your Project Code, listed at the top of this letter, in all subsequent correspondence regarding this project.** Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Florida bonneted bat: If the Florida bonneted bat or Florida bonneted bat Critical Habitat is on your Official Species List, please make sure you are using the 2024 Florida Bonneted Bat Guidelines and Key and submitting acoustic survey data to NABat if acoustic surveys are conducted.

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/program/migratory-bird-permits/what-we-do.

It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of

Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Marine Mammals
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Florida Ecological Services Field Office
777 37th St
Suite D-101
Vero Beach, FL 32960-3559
(352) 448-9151

PROJECT SUMMARY

Project Code: 2025-0102294
Project Name: US 41 PD&E Study
Project Type: Road/Hwy - New Construction
Project Description: Widening of US 41.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@27.8694589,-82.38756381680824,14z

Counties: Hillsborough County, Florida

ENDANGERED SPECIES ACT SPECIES

There is a total of 13 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered
West Indian Manatee *Trichechus manatus* There is **final** critical habitat for this species. Your location overlaps the critical habitat. ***This species is also protected by the Marine Mammal Protection Act, and may have additional consultation requirements.*** Species profile: https://ecos.fws.gov/ecp/species/4469 General project design guidelines: https://ipac.ecosphere.fws.gov/project/BB2KQLRYSZBRNGRUE4HLHORGSI/documents/generated/7281.pdf	Threatened

BIRDS

NAME	STATUS
Crested Caracara (audubon's) [fl Dps] *Caracara plancus audubonii* Population: FL DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8250	Threatened
Eastern Black Rail *Laterallus jamaicensis ssp. jamaicensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10477	Threatened
Everglade Snail Kite *Rostrhamus sociabilis plumbeus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7713	Endangered
Rufa Red Knot *Calidris canutus rufa* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane *Grus americana* Population: U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/758	Experimental Population, Non-Essential
Wood Stork *Mycteria americana* Population: AL, FL, GA, MS, NC, SC No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8477 General project design guidelines: https://ipac.ecosphere.fws.gov/project/BB2KQLRYSZBRNGRUE4HLHORGSI/documents/generated/6954.pdf	Threatened

REPTILES

NAME	STATUS
American Crocodile *Crocodylus acutus* Population: U.S.A. (FL) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6604	Threatened
Eastern Indigo Snake *Drymarchon couperi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/646	Threatened
Southern Hognose Snake *Heterodon simus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3248	Proposed Threatened

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

FLOWERING PLANTS

NAME	STATUS
Pygmy Fringe-tree *Chionanthus pygmaeus* Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1084	Endangered

CRITICAL HABITATS

You should contact the local field office to determine whether critical habitat for the following species should be considered:

NAME	STATUS
West Indian Manatee *Trichechus manatus* https://ecos.fws.gov/ecp/species/4469#crithab	Final

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

---

1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/ activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

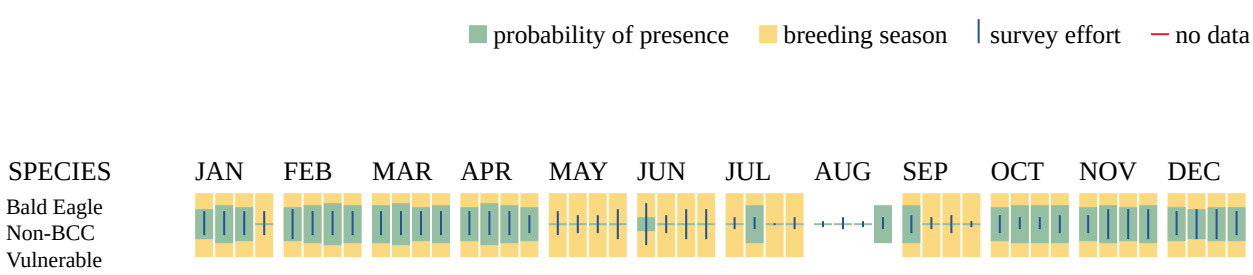
Probability of Presence (▪)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (▪)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds

- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Kestrel *Falco sparverius paulus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9587	Breeds Apr 1 to Aug 31
American Oystercatcher *Haematopus palliatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8935	Breeds Apr 15 to Aug 31
Bachman's Sparrow *Peucaea aestivalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6177	Breeds May 1 to Sep 30
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

NAME	BREEDING SEASON
Black Skimmer *Rynchops niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234	Breeds May 20 to Sep 15
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Great Blue Heron *Ardea herodias occidentalis* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/10590	Breeds Jan 1 to Dec 31
Gull-billed Tern *Gelochelidon nilotica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9501	Breeds May 1 to Jul 31
Least Tern *Sternula antillarum antillarum* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/11919	Breeds Apr 25 to Sep 5
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Magnificent Frigatebird *Fregata magnificens* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9588	Breeds Oct 1 to Apr 30
Painted Bunting *Passerina ciris* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9511	Breeds Apr 25 to Aug 15
Pectoral Sandpiper *Calidris melanotos* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561	Breeds elsewhere
Prairie Warbler *Setophaga discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9513	Breeds May 1 to Jul 31

NAME	BREEDING SEASON
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Reddish Egret *Egretta rufescens* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/7617	Breeds Mar 1 to Sep 15
Ruddy Turnstone *Arenaria interpres morinella* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/10633	Breeds elsewhere
Saltmarsh Sparrow *Ammospiza caudacuta* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9719	Breeds May 15 to Sep 5
Semipalmated Sandpiper *Calidris pusilla* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9603	Breeds elsewhere
Short-billed Dowitcher *Limnodromus griseus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Swallow-tailed Kite *Elanoides forficatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8938	Breeds Mar 10 to Jun 30
Whimbrel *Numenius phaeopus hudsonicus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/11991	Breeds elsewhere
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10669	Breeds Apr 20 to Aug 5
Wilson's Plover *Charadrius wilsonia* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9722	Breeds Apr 1 to Aug 20

NAME	BREEDING SEASON
Worthington's Marsh Wren *Cistothorus palustris griseus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9560	Breeds Apr 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

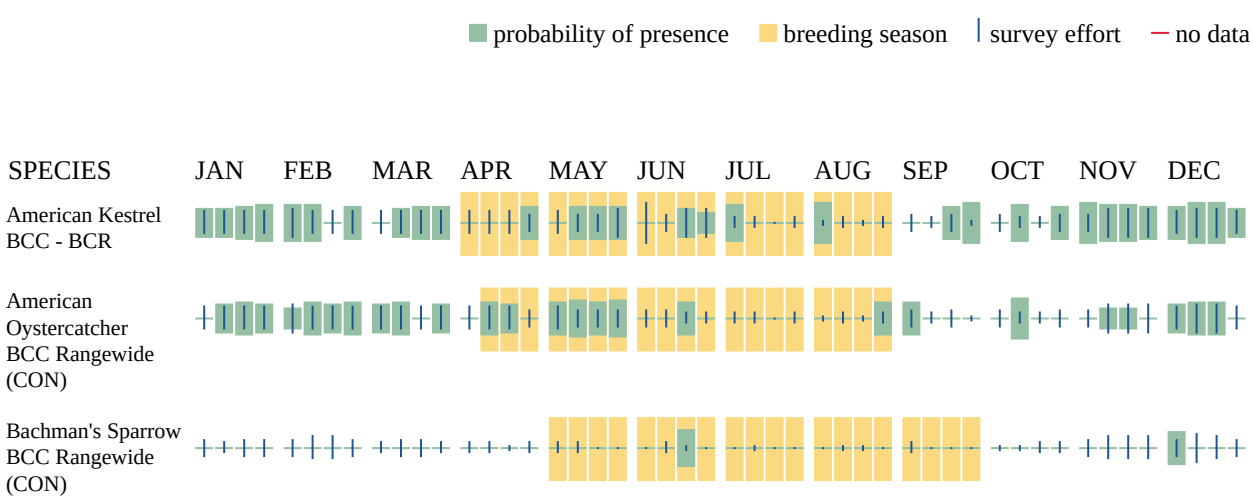
Probability of Presence (■)

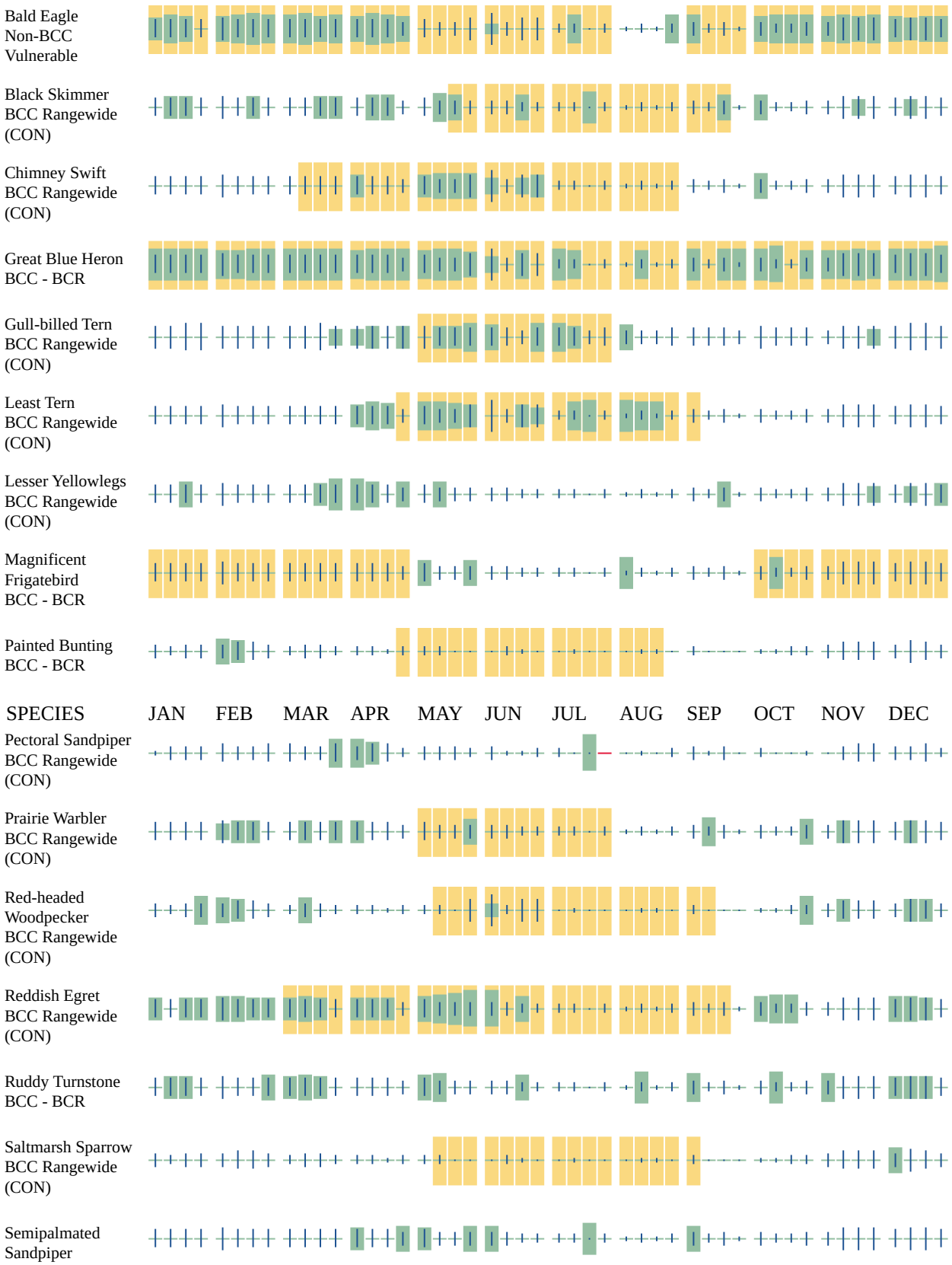
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

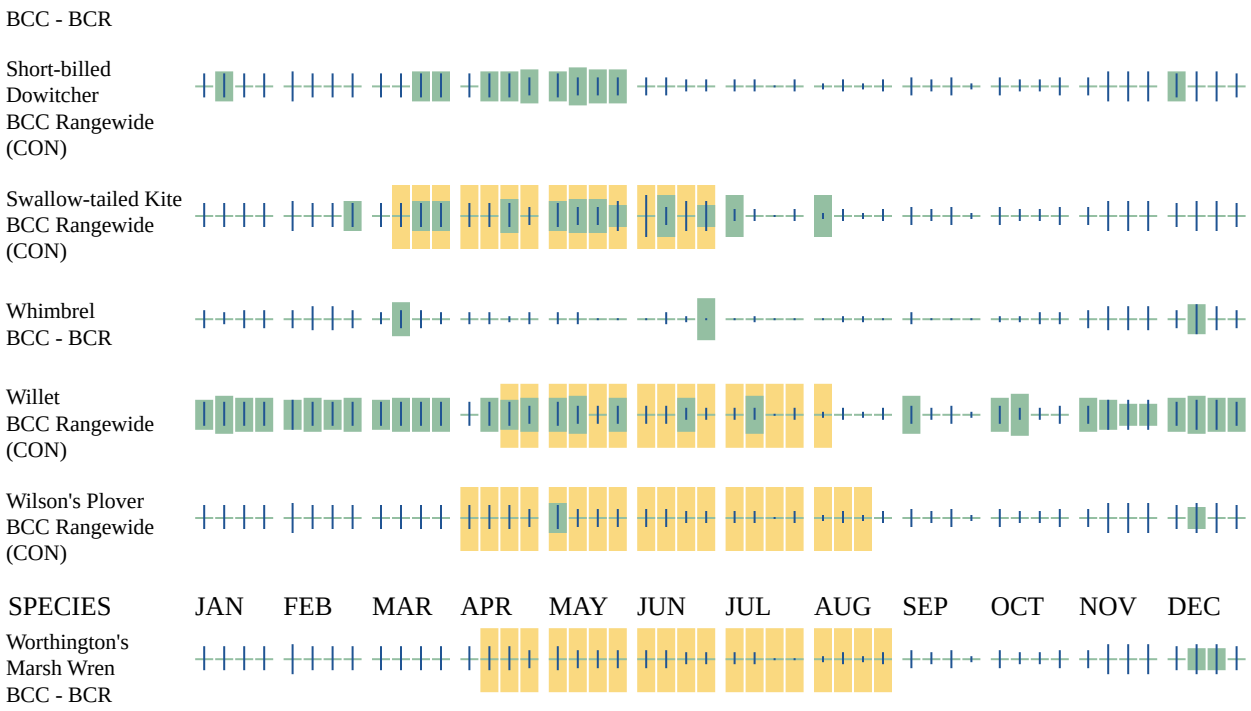
Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.




Bald Eagle
Non-BCC
Vulnerable
Black Skimmer
BCC Rangewide
(CON)
Chimney Swift
BCC Rangewide
(CON)
Great Blue Heron
BCC - BCR
Gull-billed Tern
BCC Rangewide
(CON)
Least Tern
BCC Rangewide
(CON)
Lesser Yellowlegs
BCC Rangewide
(CON)
Magnificent
Frigatebird
BCC - BCR
Painted Bunting
BCC - BCR
SPECIES
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Pectoral Sandpiper
BCC Rangewide
(CON)
Prairie Warbler
BCC Rangewide
(CON)
Red-headed
Woodpecker
BCC Rangewide
(CON)
Reddish Egret
BCC Rangewide
(CON)
Ruddy Turnstone
BCC - BCR
Saltmarsh Sparrow
BCC Rangewide
(CON)
Semipalmated
Sandpiper



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MARINE MAMMALS

Marine mammals are protected under the Marine Mammal Protection Act. Some are also protected under the Endangered Species Act[1] and the Convention on International Trade in Endangered Species of Wild Fauna and Flora[2].

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries[3] [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the Marine Mammals page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

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1. The Endangered Species Act (ESA) of 1973.
2. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
3. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

NAME

West Indian Manatee *Trichechus manatus*
Species profile: https://ecos.fws.gov/ecp/species/4469

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

ESTUARINE AND MARINE WETLAND

- E2FO3N
- E2FO3P
- E2EM1P
- E2EM1N
- E2USM
- E2SS3P
- E2USN
- E2SS3N

FRESHWATER EMERGENT WETLAND

- PEM1Cx
- PEM1F
- PEM2Fx

- PEM1A
- PEM1C

FRESHWATER FORESTED/SHRUB WETLAND

- PSS3C
- PFO3C

ESTUARINE AND MARINE DEEPWATER

- E1UBL
- E1UBLx

RIVERINE

- R2UBHx
- R2ABH

FRESHWATER POND

- PABHx

IPAC USER CONTACT INFORMATION

Agency: Florida Department of Transportation
Name: Sophia Hayes
Address: 2818 Cypress Ridge Blvd.
City: Wesley Chapel
State: FL
Zip: 33544
Email sophi.hayes@consoreng.com
Phone: 8134352603

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Florida Department of Transportation

APPENDIX G Eastern Indigo Snake Programmatic Effect Determination Key

United States Department of the Interior

U. S. FISH AND WILDLIFE SERVICE

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

IN REPLY REFER TO:
August 13, 2013

Colonel Alan M. Dodd, District Engineer
Department of the Army
Jacksonville District Corps of Engineers
P.O Box 4970
Jacksonville, Florida 32232-0019
(Attn: Mr. David S. Hobbie)

RE: Update Addendum to USFWS Concurrence Letter to U.S. Army Corps of Engineers Regarding Use of the Attached Eastern Indigo Snake Programmatic Effect Determination Key

Dear Colonel Dodd:

This letter is to amend the January 25, 2010, letter to the U.S. Army Corps of Engineers regarding the use of the attached eastern indigo snake programmatic effect determination key (key). It supersedes the update addendum issued January 5, 2012.

We have evaluated the original programmatic concurrence and find it suitable and appropriate to extend its use to the remainder of Florida covered by the Panama City Ecological Services Office.

On Page 2

The following replaces the last paragraph above the signatures:

"Thank you for your continued cooperation in the effort to conserve fish and wildlife resources. Any questions or comments should be directed to Annie Dziergowski (North Florida ESO) at 904-731-3089, Harold Mitchell (Panama City ESO) at 850-769-0552, or Victoria Foster (South Florida ESO) at 772-469-4269."

On Page 3

The following replaces both paragraphs under "Scope of the key":

"This key should be used only in the review of permit applications for effects determinations for the eastern indigo snake within the State of Florida, and not for other listed species or for aquatic resources such as Essential Fish Habitat (EFH)."

On Page 4

The following replaces the first paragraph under Conservation Measures:

"The Service routinely concurs with the Corps' "not likely to adversely affect" (NLAA) determination for individual project effects to the eastern indigo snake when assurances are given that

our *Standard Protection Measures for the Eastern Indigo Snake* (Service 2013) located at: http://www.fws.gov/northflorida/IndigoSnakes/indigo-snakes.htm will be used during project site preparation and project construction. There is no designated critical habitat for the eastern indigo snake."

On Page 4 and Page 5 (Couplet D)

The following replaces D. under Conservation Measures:

D. The project will impact less than 25 acres of xeric habitat (scrub, sandhill, or scrubby flatwoods) or less than 25 active and inactive gopher tortoise burrows.....*go to* E

The project will impact more than 25 acres of xeric habitat (scrub, sandhill, or scrubby flatwoods) or more than 25 active and inactive gopher tortoise burrows and consultation with the Service is requested[2].....*"may affect"*

On Page 5

The following replaces footnote #3:

"[3]If excavating potentially occupied burrows, active or inactive, individuals must first obtain state authorization via a FWC Authorized Gopher Tortoise Agent permit. The excavation method selected should also minimize the potential for injury of an indigo snake. Applicants should follow the excavation guidance provided within the most current Gopher Tortoise Permitting Guidelines found at http://myfwc.com/gophertortoise ."

Thank you for making these amendments concerning the Eastern Indigo Snake Key. If you have any questions, please contact Jodie Smithem of my staff at the address on the letterhead, by email at jodie_smithem@fws.gov, or by calling (904)731-3134.

Sincerely,

Dawn Jennings
Acting Field Supervisor

cc:
Panama City Ecological Services Field Office, Panama City, FL
South Florida Ecological Services Field Office, Vero Beach, FL

United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

January 25, 2010

David S. Hobbie
Chief, Regulatory Division
U.S. Army Corps of Engineers
Post Office Box 4970
Jacksonville, Florida 32232-0019

Service Federal Activity Code: 41420-2009-FA-0642
Service Consultation Code: 41420-2009-I-0467
41910-2010-I-0045
Subject: North and South Florida Ecological Services Field Offices Programmatic Concurrence for Use of Original Eastern Indigo Snake Key(s) Until Further Notice

Dear Mr. Hobbie:

The U.S. Fish and Wildlife Service's (Service) South and North Florida Ecological Services Field Offices (FO), through consultation with the U.S. Army Corps of Engineers Jacksonville District (Corps), propose revision to both Programmatic concurrence letters/keys for the federally threatened Eastern Indigo Snake (*Drymarchon corais couperi*), (indigo snake), and now provide one key for both FO's. The original programmatic key was issued by the South Florida FO on November 9, 2007. The North Florida FO issued a revised version of the original key on September 18, 2008. Both keys were similar in content, but reflected differences in geographic work areas between the two Field Offices. The enclosed key satisfies each office's responsibilities under the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C.1531 *et seq.*).

Footnote number 3 in the original keys indicated "A member of the excavation team should be authorized for Incidental Take during excavation through either a section 10(a)(1)(A) permit issued by the Service or an incidental take permit issued by the Florida Fish and Wildlife Conservation Commission (FWC)." We have removed this reference to a Service issued Section 10(a)(1)(A) permit, as one is not necessary for this activity. We also referenced the FWC's revised April 2009 Gopher Tortoise Permitting Guidelines with a link to their website for updated excavation guidance, and have provided a website link to our Standard Protection Measures. All other conditions and criteria apply.

We believe the implementation of the attached key achieves our mutual goal for all users to make consistent effect determinations regarding this species. The use of this key for review of projects

located in all referenced counties in our respective geographic work areas leads the Service to concur with the Corps' determination of "may affect, not likely to adversely affect" (MANLAA) for the Eastern indigo snake. The biological rationale for the determinations is contained within the referenced documents and is submitted in accordance with section 7 of the Act.

Should circumstances change or new information become available regarding the eastern indigo snake or implementation of the key, the determinations may be reconsidered as deemed necessary.

Thank you for your continued cooperation in the effort to conserve fish and wildlife resources. Any questions or comments should be directed to either Allen Webb (Vero Beach) at 772-562-3909, extension 246, or Jay Herrington (Jacksonville) at 904-731-3326.

Sincerely,

Paul Souza
Field Supervisor
South Florida Ecological Services Office

David L. Hankla
Field Supervisor
North Florida Ecological Services Office

Enclosure

cc: electronic only
FWC, Tallahassee, Florida (Dr. Elsa Haubold)
Service, Jacksonville, Florida (Jay Herrington)
Service, Vero Beach, Florida (Sandra Sneckenberger)

Eastern Indigo Snake Programmatic Effect Determination Key

Scope of the key

This key should be used only in the review of permit applications for effects determinations within the North and South Florida Ecological Services Field Offices Geographic Areas of Responsibility (GAR), and not for other listed species or for aquatic resources such as Essential Fish Habitat (EFH). Counties within the **North** Florida GAR include Alachua, Baker, Bradford, Brevard, Citrus, Clay, Columbia, Dixie, Duval, Flagler, Gilchrist, Hamilton, Hernando, Hillsborough, Lafayette, Lake, Levy, Madison, Manatee, Marion, Nassau, Orange, Pasco, Pinellas, Putnam, St. Johns, Seminole, Sumter, Suwannee, Taylor, Union, and Volusia.

Counties in the **South** Florida GAR include Broward, Charlotte, Collier, De Soto, Glades, Hardee, Hendry, Highlands, Lee, Indian River, Martin, Miami-Dade, Monroe, Okeechobee, Osceola, Palm Beach, Polk, Sarasota, St. Lucie.

Habitat

Over most of its range, the eastern indigo snake frequents several habitat types, including pine flatwoods, scrubby flatwoods, high pine, dry prairie, tropical hardwood hammocks, edges of freshwater marshes, agricultural fields, coastal dunes, and human-altered habitats (Service 1999). Eastern indigo snakes appear to need a mosaic of habitats to complete their life cycle. Wherever the eastern indigo snake occurs in xeric habitats, it is closely associated with the gopher tortoise *(Gopherus polyphemus),* the burrows of which provide shelter from winter cold and summer desiccation (Speake et al. 1978; Layne and Steiner 1996). Interspersion of tortoise-inhabited uplands and wetlands improves habitat quality for this species (Landers and Speake 1980; Auffenberg and Franz 1982).

In south Florida, agricultural sites, such as sugar cane fields, created in former wetland areas are occupied by eastern indigo snakes (Enge pers. comm. 2007). Formerly, indigo snakes would have only occupied higher elevation sites within the wetlands. The introduction of agriculture and its associated canal systems has resulted in an increase in rodents and other species of snakes that are prey for eastern indigo snakes. The result is that indigos occur at higher densities in these areas than they did historically.

Even though thermal stress may not be a limiting factor throughout the year in south Florida, indigo snakes still seek and use underground refugia. On the sandy central ridge of central Florida, eastern indigos use gopher tortoise burrows more (62 percent) than other underground refugia (Layne and Steiner 1996). Other underground refugia used include armadillo (*Dasypus novemcinctus*) burrows near citrus groves, cotton rat (*Sigmodon hispidus*) burrows, and land crab (*Cardisoma guanhumi*) burrows in coastal areas (Service 2006). Natural ground holes, hollows at the base of trees or shrubs, ground litter, trash piles, and crevices of rock-lined ditch walls are also used (Layne and Steiner 1996). These refugia are used most frequently where tortoise burrows are not available, principally in low-lying areas off the central and coastal ridges. In extreme south Florida (the Everglades and Florida Keys), indigo snakes are found in tropical

hardwood hammocks, pine rocklands, freshwater marshes, abandoned agricultural land, coastal prairie, mangrove swamps, and human-altered habitats (Steiner et al. 1983). It is suspected that they prefer hammocks and pine forests, because most observations occur in these habitats disproportionately to their presence in the landscape (Steiner et al. 1983). Hammocks may be important breeding areas as juveniles are typically found there. The eastern indigo snake is a snake-eater so the presence of other snake species may be a good indicator of habitat quality.

Conservation Measures

The Service routinely concurs with the Corps' "not likely to adversely affect" (NLAA) determination for individual project effects to the eastern indigo snake when assurances are given that our *Standard Protection Measures for the Eastern Indigo Snake* (Service 2004) located at: http://www.fws.gov/northflorida/IndigoSnakes/indigo-snakes will be used during project site preparation and project construction. There is no designated critical habitat for the eastern indigo snake.

In an effort to reduce correspondence in effect determinations and responses, the Service is providing an Eastern Indigo Snake Effect Determination Key, similar in utility to the West Indian Manatee Effect Determination Key and the Wood Stork Effect Determination Keys presently being utilized by the Corps. If the use of this key results in a Corps' determination of "no effect" for a particular project, the Service supports this determination. If the use of this Key results in a determination of NLAA, the Service concurs with this determination and no additional correspondence will be necessary[1]. This key is subject to revisitation as the Corps and Service deem necessary.

A. Project is not located in open water or salt marsh.....*go to* B

   Project is located solely in open water or salt marsh.....*"no effect"*

B. Permit will be conditioned for use of the Service's *Standard Protection Measures For The Eastern Indigo Snake* during site preparation and project construction.....*go to* C

   Permit will not be conditioned as above for the eastern indigo snake, or it is not known whether an applicant intends to use these measures and consultation with the Service is requested[2] .....*"may affect"*

C. There are gopher tortoise burrows, holes, cavities, or other refugia where a snake could be buried or trapped and injured during project activities .....*go to* D

   There are no gopher tortoise burrows, holes, cavities, or other refugia where a snake could be buried or trapped and injured during project activities .....*"NLAA"*

D. The project will impact less than 25 acres of xeric habitat supporting less than 25 active and inactive gopher tortoise burrows.....*go to* E

The project will impact more than 25 acres of xeric habitat or more than 25 active and inactive gopher tortoise burrows and consultation with the Service is requested[2]..... *"may affect"*

E. Any permit will be conditioned such that all gopher tortoise burrows, active or inactive, will be evacuated prior to site manipulation in the vicinity of the burrow[3]. If an indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity. Any permit will also be conditioned such that holes, cavities, and snake refugia other than gopher tortoise burrows will be inspected each morning before planned site manipulation of a particular area, and, if occupied by an indigo snake, no work will commence until the snake has vacated the vicinity of proposed work..... *"NLAA"*

Permit will not be conditioned as outlined above and consultation with the Service is requested[2] ..... *"may affect"*

---

[1]With an outcome of "no effect" or "NLAA" as outlined in this key, the requirements of section 7 of the Act are fulfilled for the eastern indigo snake and no further action is required.

[2]Consultation may be concluded informally or formally depending on project impacts.

[3] If burrow excavation is utilized, it should be performed by experienced personnel. The method used should minimize the potential for injury of an indigo snake. Applicants should follow the excavation guidance provided within the Florida Fish and Wildlife Conservation Commission's revised April 2009 Gopher Tortoise Permitting Guidelines located at **http://myfwc.com/License/Permits_ProtectedWildlife.htm#gophertortoise**. A member of the excavation team should be authorized for Incidental Take during excavation through an incidental take permit issued by the Florida Fish and Wildlife Conservation Commission.

APPENDIX H USFWS Standard Protection Measures for The Eastern Indigo Snake

STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE

U.S. Fish and Wildlife Service

May 2024

The Standard Protection Measures for the Eastern Indigo Snake (Plan) below has been developed by the U.S. Fish and Wildlife Service (USFWS) in Florida and Georgia for use by project proponents and their construction personnel help minimize adverse impacts to eastern indigo snakes. However, implementation of this Plan does not replace any state of federal consultation or regulatory requirements. At least 30 days prior to any land disturbance activities, the project proponent shall notify the appropriate USFWS Field Office (see Field Office contact information) via e-mail that the Plan will be implemented as described below.

As long as the signatory of the e-mail certifies compliance with the below Plan (including use of the approved poster and pamphlet (USFWS Eastern Indigo Snake Conservation webpage), no further written confirmation or approval from the USFWS is needed regarding use of this Plan as a component of the project.

If the project proponent decides to use an eastern indigo snake protection/education plan other than the approved Plan below, written confirmation or approval from the USFWS that the plan is adequate must be obtained. The project proponent shall submit their unique plan for review and approval. The USFWS will respond via e-mail, typically within 30 days of receiving the plan, either concurring that the plan is adequate or requesting additional information. A concurrence e-mail from the appropriate USFWS Field Office will fulfill approval requirements.

STANDARD PROTECTION MEASURES

BEFORE AND DURING CONSTRUCTION ACTIVITIES:

- All Project personnel shall be notified about the potential presence and appearance of the federally protected eastern indigo snake (*Drymarchon couperi*).
- All personnel shall be advised that there are civil and criminal penalties for harassing, harming, pursuing, hunting, shooting, wounding, killing, capturing, or collecting the species, in knowing violation of the Endangered Species Act of 1973.
- The project proponent or designated agent will post educational posters in the construction office and throughout the construction site. The posters must be clearly visible to all construction staff and shall be posted in a conspicuous location in the

Project field office until such time that Project construction has been completed and time charges have stopped.

- Prior to the onset of construction activities, the project proponent or designated agent will conduct a meeting with all construction staff (annually for multi-year projects) to discuss identification of the snake, its protected status, what to do if a snake is observed within the project area, and applicable penalties that may be imposed if state and/or federal regulations are violated. An educational pamphlet including color photographs of the snake will be given to each staff member in attendance and additional copies will be provided to the construction superintendent to make available in the onsite construction office. Photos of eastern indigo snakes may be accessed on USFWS, Florida Fish and Wildlife Conservation Commission and/or Georgia Department of Natural Resources websites.
- Each day, prior to the commencement of maintenance or construction activities, the Contractor shall perform a thorough inspection for the species of all worksite equipment.
- If an eastern indigo snake (alive, dead or skin shed) is observed on the project site during construction activities, all such activities are to cease until the established procedures are implemented according to the Plan, which includes notification of the appropriate USFWS Office. The contact information for the USFWS is provided below and on the referenced posters and pamphlets.
- During initial site clearing activities, an onsite observer is recommended to determine whether habitat conditions suggest a reasonable probability of an eastern indigo snake sighting (example: discovery of snake sheds, tracks, lots of refugia and cavities present in the area of clearing activities, and presence of gopher tortoises and burrows).
- Periodically during construction activities, the project area should be visited to observe the condition of the posters and Plan materials and replace them as needed. Construction personnel should be reminded of the instructions (above) as to what is expected if any eastern indigo snakes are seen.
- For erosion control use biodegradable, 100% natural fiber, net-free rolled erosion control blankets to avoid wildlife entanglement.

POST CONSTRUCTION ACTIVITIES:

Whether or not eastern indigo snakes are observed during construction activities, a monitoring report should be submitted to the appropriate USFWS Field Office within 60 days of project completion (See USFWS Field Office Contact Information).

USFWS FIELD OFFICE CONTACT INFORMATION

Georgia Field Office: Phone: (706) 613-9493, email: gaes_assistance@fws.gov
Florida Field Office: Phone: (352) 448-9151, email: fw4flesregs@fws.gov

POSTER & PAMPHLET INFORMATION

Posters with the following information shall be placed at strategic locations on the construction site and along any proposed access roads (final posters for Plan compliance are available on our website in English and Spanish and should be printed on 11 x 17in or larger paper and laminated (USFWS Eastern Indigo Snake Conservation webpage). Pamphlets are also available on our webpage and should be printed on 8.5 x 11in paper and folded, and available and distributed to staff working on the site.

POSTER CONTENT (ENGLISH):

ATTENTION

Federally-Threatened Eastern Indigo Snakes may be present on this site!

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

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

• Stop land disturbing activities and allow the snake time to move away from the site without interference. Do NOT attempt to touch or handle the snake.

• Take photographs of the snake, if possible, for identification and documentation purposes.

• Immediately notify supervisor/agent, and a U.S. Fish and Wildlife Service (USFWS) Ecological Services Field Office, with the location information and condition of the snake.

• If the snake is located near clearing or construction activities that will cause harm to the snake, the activities must pause until a representative of the USFWS returns the call (within one day) with further guidance.

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

• Stop land disturbing activities and immediately notify supervisor/applicant, and a USFWS Ecological Services Field Office, with the location information and condition of the snake.

• Take photographs of the snake, if possible, for identification and documentation purposes.

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

DESCRIPTION: The eastern indigo snake is one of the largest non-venomous snakes in North America, reaching up to 8 ft long. Named for the glossy, blue-black scales above and slate blue below, they often have orange to reddish color (cream color in some cases)

in the throat area. They are not typically aggressive.

SIMILAR SPECIES: The black racer resembles the eastern indigo snake. However, black racers have a white or cream chin, and thinner bodies.

LIFE HISTORY: Eastern indigo snakes live in a variety of terrestrial habitat types. Although they prefer uplands, they also use wetlands and agricultural areas. They will shelter inside gopher tortoise burrows, other animal burrows, stumps, roots, and debris piles. Females may lay from 4 to 12 white eggs as early as April through June, with young hatching in late July through October.

PROTECTED STATUS: The eastern indigo snake is protected by the USFWS, Florida Fish and Wildlife Conservation Commission, and Georgia Department of Natural Resources. Any attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage eastern indigo snakes is prohibited by the U.S. Endangered Species Act. Penalties include a maximum fine of $25,000 for civil violations and up to $50,000 and/or imprisonment for criminal offenses. Only authorized individuals with a permit (or an Incidental Take Statement associated with a USFWS Biological Opinion) may handle an eastern indigo snake.

Please contact your nearest USFWS Ecological Services Field Office if a live or dead eastern indigo snake is encountered:

Florida Office: (352) 448-9151

Georgia Office: (706) 613-9493

POSTER CONTENT (SPANISH):

ATENCIÓN

¡Especie amenazada, la culebra Índigo del Este, puede ocupar el área!

Matar, herir o hostigar culebras Índigo del Este es estrictamente prohibido bajo la Ley Federal.

SI VES UNA CULEBRA ÍNDIGO DEL ESTE O UNA CULEBRA NEGRA VIVA EN EL ÁREA:

• Pare excavación y permite el movimiento de la culebra fuera del área sin interferir. NO atentes tocar o recoger la culebra.

• Fotografié la culebra si es posible para identificación y documentación.

• Notifique supervisor/agente, y la Oficina de Campo de Servicios Ecológicos del Servicio Federal de Pesca y Vida Silvestre (USFWS) apropiada con información acerca del sitio y condición de la culebra.

• Si la culebra está cerca de un área de construcción que le pueda causar daño, las actividades deben parar hasta un representante del USFWS regrese la llamada (dentro de un día) con más orientación.

SI VES UNA CULEBRA ÍNDIGO DEL ESTE MUERTA EN EL ÁREA:

• Pare excavación. Notifique supervisor/aplicante, y la Oficina de Campo de Servicios Ecológicos apropiada con información acerca del sitio y condición de la culebra.

• Fotografié la culebra si es posible para identificación y documentación.

• Emerge completamente la culebra en agua y congele la especie hasta que personal apropiado de la agencia de vida silvestre la recoja.

DESCRIPCIÓN. La culebra Índigo del Este es una de las serpientes sin veneno más grande en Norte América, alcanzando hasta 8 pies de largo. Su nombre proviene del color azul-negro brilloso de sus escamas, pero pueden tener un color anaranjado-rojizo (color crema en algunos casos) en su mandíbula inferior. No tienden a ser agresivas.

SERPIENTES PARECIDAS. La corredora negra, que es de color negro sólido, es la única otra serpiente que se asemeja a la Índigo del Este. La corredora negra se diferencia por una mandíbula inferior color blanca o crema y un cuerpo más delgado.

HÁBITATS Y ECOLOGÍA. La culebra Índigo del Este vive en una variedad de hábitats, incluyendo tierras secas, humedales, y áreas de agricultura. Ellas buscan refugio en agujeros o huecos de tierra, en especial madrigueras de tortugas de tierra. Las hembras ponen 4 hasta 12 huevos blancos entre abril y junio, y la cría emergen entre julio y octubre.

PROTECCIÓN LEGAL. La culebra Índigo del Este es clasificada como especie amenazada por el USFWS, la Comisión de Conservación de Pesca y Vida Silvestre de Florida y el Departamento de Recursos Naturales de Georgia. Intento de matar, hostigar, herir, lastimar, perseguir, cazar, disparar, capturar, colectar o conducta parecida hacia las culebras Índigo del Este es prohibido por la Ley Federal de Especies en Peligro de Extinción. Penalidades incluyen un máximo de $25,000 por violaciones civiles y $50,000 y/o encarcelamiento por actos criminales. Solos individuales autorizados con un permiso o Determinación de toma incidental (Incidental Take Statement) asociado con una Opinión Biológico del USFWS pueden recoger una Índigo del Este.

Por favor de contactar tu Oficina de Campo de Servicios Ecológicos más cercana si encuentras una culebra Índigo del Este viva o muerta:

Oficina de Florida: (352) 448-9151

Oficina de Georgia: (706) 613-9493

APPENDIX I Effect Determination Key for the Wood Stork in Central & Northeast Peninsular Florida

THE CORPS OF ENGINEERS, JACKSONVILLE DISTRICT, U. S. FISH AND WILDLIFE SERVICE, JACKSONVILLE ECOLOGICAL SERVICES FIELD OFFICE AND STATE OF FLORIDA EFFECT DETERMINATION KEY FOR THE WOOD STORK IN CENTRAL AND NORTH PENINSULAR FLORIDA
September 2008

Purpose and Background

The purpose of this document is to provide a tool to improve the timing and consistency of review of Federal and State permit applications and Federal civil works projects, for potential effects of these projects on the endangered wood stork (*Mycteria americana*) within the Jacksonville Ecological Services Field Office (JAFL) geographic area of responsibility (GAR see below). The key is designed primarily for Corps Project Managers in the Regulatory and Planning Divisions and the Florida Department of Environmental Protection or its authorized designee, or Water Management Districts. The tool consists of the following dichotomous key and reference material. The key is intended to be used to evaluate permit applications and Corps' civil works projects for impacts potentially affecting wood storks or their wetland habitats. At certain steps in the key, the user is referred to graphics depicting known wood stork nesting colonies and their core foraging areas (CFA), footnotes, and other support documents. The graphics and supporting documents may be downloaded from the Corps' web page at http://www.saj.usace.army.mil/permit or at the JAFL web site at http://www.fws.gov/northflorida/WoodStorks. We intend to utilize the most recent information for both the graphics and supporting information; so should this information be updated, we will modify it accordingly. **Note: This information is provided as an aid to project review and analysis, and is not intended to substitute for a comprehensive biological assessment of potential project impacts. Such assessments are site-specific and usually generated by the project applicant or, in the case of civil works projects, by the Corps or project co-sponsor.**

Explanatory footnotes provided in the key must be closely followed whenever encountered.

Scope of the key

This key should only be used in the review of permit applications for effects determinations on wood storks within the JAFL GAR, and not for other listed species. Counties within the JAFL GAR include Alachua, Baker, Bradford, Brevard, Citrus, Clay, Columbia, Dixie, Duval, Flagler, Gilchrist, Hamilton, Hernando, Hillsborough, Lafayette, Lake, Levy, Madison, Manatee, Marion, Nassau, Orange, Pasco, Pinellas, Putnam, St. Johns, Seminole, Sumter, Suwannee, Taylor, Union, and Volusia.

The final effect determination will be based on project location and description, the potential effects to wood storks, and any measures (for example project components, special permit conditions) that avoid or minimize direct, indirect, and/or cumulative

impacts to wood storks and/or suitable wood stork foraging habitat. Projects that key to a "no effect" determination do not require additional consultation or coordination with the JAFL. Projects that key to "NLAA" also do not need further consultation; however, the JAFL staff will assist the Corps if requested, to answer questions regarding the appropriateness of mitigation options. Projects that key to a "may affect" determination equate to "likely to adversely affect" situations, and those projects should not be processed under the SPGP or any other programmatic general permit. For all "may affect" determinations, Corps Project Managers should request the JAFL to initiate formal consultation on the Wood stork.

Summary of General Wood Stork Nesting and Foraging Habitat Information

The wood stork is primarily associated with freshwater and estuarine habitats that are used for nesting, roosting, and foraging. Wood storks typically nest colonially in medium to tall trees that occur in stands located either in swamps or on islands surrounded by relatively broad expanses of open water (Ogden 1991; Rodgers et al. 1996). Successful breeding sites are those that have limited human disturbance and low exposure to land based predators. Nesting sites protected from land-based predators are characterized as those surrounded by large expanses of open water or where the nest trees are inundated at the onset of nesting and remain inundated throughout most of the breeding cycle. These colonies have water depths between 0.9 and 1.5 meters (3 and 5 feet) during the breeding season.

In addition to limited human disturbance and land-based predation, successful nesting depends on the availability of suitable foraging habitat. Such habitat generally results from a combination of average or above-average rainfall during the summer rainy season, and an absence of unusually rainy or cold weather during the winter-spring breeding season (Kahl 1964; Rodgers et al. 1987). This pattern produces widespread and prolonged flooding of summer marshes that tends to maximize production of freshwater fishes, followed by steady drying that concentrate fish during the season when storks nest (Kahl 1964). Successful nesting colonies are those that have a large number of foraging sites. To maintain a wide range of foraging opportunities, a variety of wetland habitats exhibiting short and long hydroperiods should be present. In terms of wood stork foraging, the Service (1999) describes a short hydroperiod as one where a wetland fluctuates between wet and dry in 1 to 5-month cycles, and a long hydroperiod where the wet period is greater than five consecutive months. Wood storks during the wet season generally feed in the shallow water of short-hydroperiod wetlands and in coastal habitats during low tide. During the dry season, foraging shifts to longer hydroperiod interior wetlands as they progressively dry down (though usually retaining some surface water throughout the dry season).

Because of their specialized feeding behavior, wood storks forage most effectively in shallow-water areas with highly concentrated prey. Typical foraging sites for the wood stork include freshwater marshes, depressions in cypress heads, swamp sloughs, managed impoundments, stock ponds, shallow-seasonally flooded roadside or agricultural ditches, and narrow tidal creeks or shallow tidal pools. Good foraging conditions are characterized by water that is relatively calm, open, and having water depths between 5 and 15 inches (5 and 38 cm). Preferred foraging habitat includes wetlands exhibiting a mosaic of submerged and/or emergent aquatic vegetation, and shallow, open-water areas subject to hydrologic

regimes ranging from dry to wet. The vegetative component provides nursery habitat for small fish, frogs, and other aquatic prey, and the shallow, open-water areas provide sites for concentration of the prey during daily or seasonal low water periods.

WOOD STORK KEY

Although designed primarily for use by Corps Project Managers in the Regulatory and Planning Divisions, and State Regulatory agencies or their designees, project permit applicants and co-sponsors of civil works projects may find this key and its supporting documents useful in identifying potential project impacts to wood storks, and planning how best to avoid, minimize, or compensate for any identified adverse effects.

A. Project within 2,500 feet of an active colony site[1]……*May affect*

Project more than 2,500 feet from a colony site……go to B

B. Project does not affect suitable foraging habitat[2] (SFH)…….*no effect*

Project impacts SFH[2]……go to C

C. Project impacts to SFH are less than or equal to 0.5 acre[3]…….....*NLAA*[4]

Project impacts to SFH are greater than or equal to 0.5 acre..……..go to D

D. Project impacts to SFH not within a Core Foraging Area[5] (see attached map) of a colony site, and no wood storks have been documented foraging on site…….....NLAA[4]

Project impacts to SFH are within the CFA of a colony site, or wood storks have been documented foraging on a project site outside the CFA ……..….go to E

E. Project provides SFH compensation within the Service Area of a Service-approved wetland mitigation bank or wood stork conservation bank preferably within the CFA, or consists of SFH compensation within the CFA consisting of enhancement, restoration or creation in a project phased approach that provides an amount of habitat and foraging function equivalent to that of impacted SFH (see *Wood Stork Foraging Habitat Assessment Procedure*[6] for guidance), is not contrary to the Service's *Habitat Management Guidelines For The Wood Stork In The Southeast Region* and in accordance with the CWA section 404(b)(1) guidelines……*NLAA*[4]

Project does not satisfy these elements.……....……...*May affect*

[1] An active nesting site is defined as a site currently supporting breeding pairs of wood storks, or has supported breeding wood storks at least once during the preceding 10-year period.

[2] Suitable foraging habitat (SFH) is described as any area containing patches of relatively open (< 25% aquatic vegetation), calm water, and having a permanent or seasonal water depth between 2 and 15 inches (5 to 38 cm). SFH supports and concentrates, or is capable of supporting and concentrating small fish, frogs, and other aquatic prey. Examples of SFH include, but are not limited to, freshwater marshes and stock ponds, shallow, seasonally flooded roadside or agricultural ditches, narrow tidal creeks or shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs. See above *Summary of General Wood Stork Nesting and Foraging Habitat Information*.

[3] On an individual basis, projects that impact less than 0.5 acre of SFH generally will not have a measurable effect on wood storks, although we request the Corps to require mitigation for these losses when appropriate. Wood Storks are a wide ranging species, and individually, habitat change from impacts to less than 0.5 acre of SFH is not likely to adversely affect wood storks. However, collectively they may have an effect and therefore regular monitoring and reporting of these effects are important.

[4] Upon Corps receipt of a general concurrence issued by the JAFL through the Programmatic Concurrence on this key, "NLAA" determinations for projects made pursuant to this key require no further consultation with the JAFL.

[5] The U.S. Fish and Wildlife Service (Service) has identified core foraging area (CFA) around all known wood stork nesting colonies that is important for reproductive success. In Central Florida, CFAs include suitable foraging habitat (SFH) within a 15-mile radius of the nest colony; CFAs in North Florida include SFH within a 13-mile radius of a colony. The referenced map provides locations of known colonies and their CFAs throughout Florida documented as active within the last 10 years. The Service believes loss of suitable foraging wetlands within these CFAs may reduce foraging opportunities for the wood stork.

[6]This draft document, *Wood Stork Foraging Habitat Assessment Procedure*, by Passarella and Associates, Incorporated, may serve as further guidance in ascertaining wetland foraging value to wood storks and compensating for impacts to wood stork foraging habitat.

Monitoring and Reporting Effects

For the Service to monitor cumulative effects, it is important for the Corps to monitor the number of permits and provide information to the Service regarding the number of permits issued that were determined "may affect, not likely to adversely affect." It is requested that information on date, Corps identification number, project acreage, project wetland acreage, and latitude and longitude in decimal degrees be sent to the Service quarterly.

Literature Cited

Kahl, M.P., Jr. 1964. Food ecology of the wood stork (*Mycteria americana*) in Florida. Ecological Monographs 34:97-117.

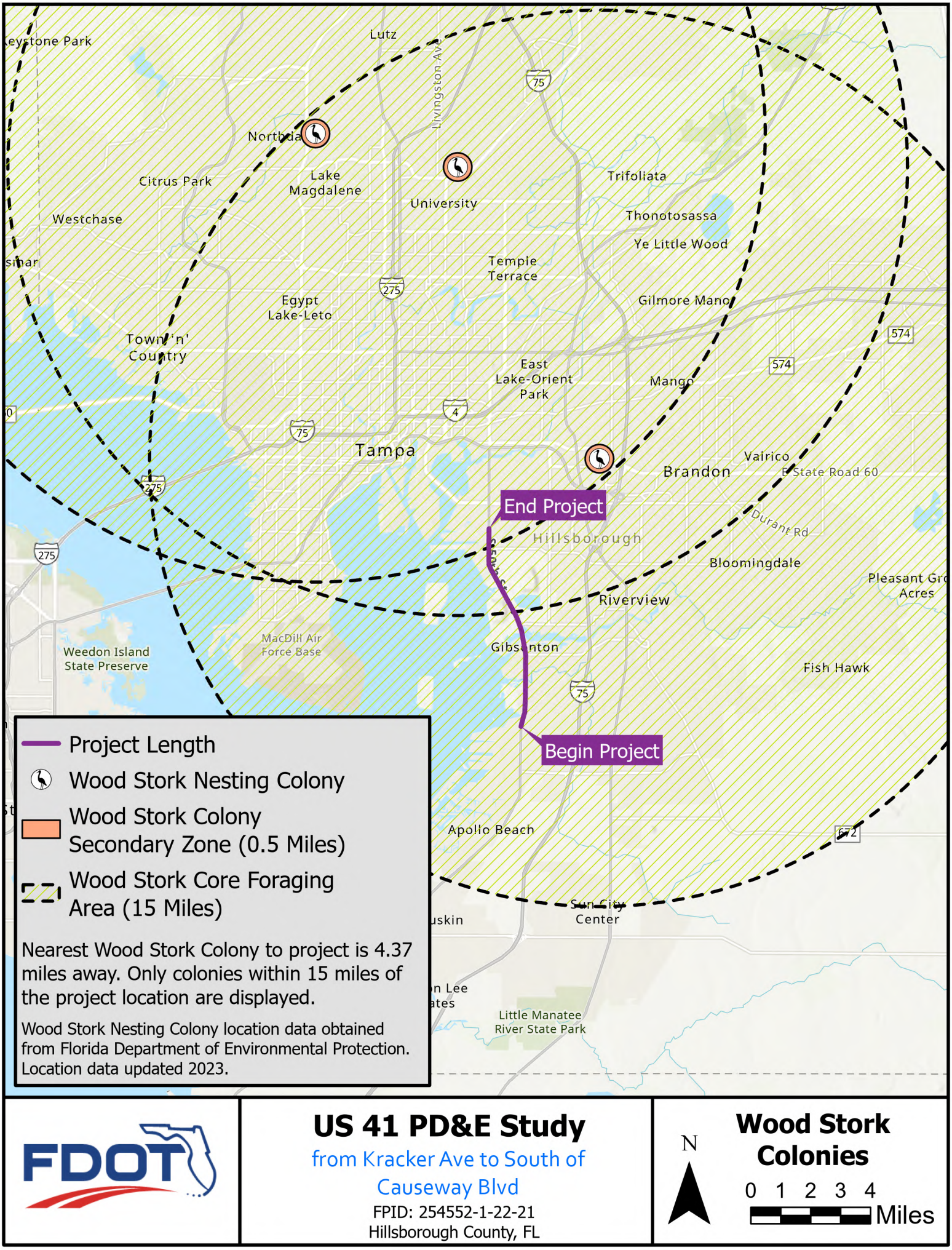
Ogden, J.C. 1991. Nesting by wood storks in natural, altered, and artificial wetlands in central and northern Florida. Colonial Waterbirds 14:39-45.

Rodgers, J.A. Jr., A.S. Wenner, and S.T. Schwikert. 1987. Population dynamics of wood storks in northern and central Florida, USA. Colonial Waterbirds 10:151-156.

Rodgers, J.A., Jr., S.T. Schwikert, and A. Shapiro-Wenner. 1996. Nesting habitat of wood storks in north and central Florida, USA. Colonial Waterbirds 19:1-21.

U.S. Fish and Wildlife Service. 1999. South Florida multi-species recovery plan. Fish and Wildlife Service; Atlanta, Georgia. Available from: http://verobeach.fws.gov/Programs/Recovery/vbms5.html.

APPENDIX J Wood Stork Colonies Map



US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 254552-1-22-21

Hillsborough County, FL

Wood Stork Colonies

N

0 1 2 3 4 Miles

APPENDIX K NMFS's Southeast Region's Protected Species Construction Conditions

PROTECTED SPECIES CONSTRUCTION CONDITIONS, NOAA FISHERIES SOUTHEAST REGIONAL OFFICE

The action agency and any permittee shall comply with the following construction conditions for protected species under the jurisdiction of NOAA Fisheries Southeast Regional Office (SERO) Protected Resources Division (PRD):[1]

Protected Species Sightings–The action agency and any permittee shall ensure that all personnel associated with the project are instructed about the potential presence of species protected under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA). All on-site project personnel are responsible for observing water-related activities for the presence of protected species. All personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing listed species and all marine mammals. To determine which protected species and critical habitat may be found in the transit area, please review the relevant marine mammal and ESA-listed species at Find A Species (https://www.fisheries.noaa.gov/find-species) and the consultation documents that have been completed for the project.

1. **Equipment**–Turbidity curtains, if used, shall be made of material in which protected species cannot become entangled and be regularly monitored to avoid protected species entrapment. All turbidity curtains and other in-water equipment shall be properly secured with materials that reduce the risk of protected species entanglement and entrapment.

    a. In-water lines (rope, chain, and cable, including the lines to secure turbidity curtains) shall be stiff, taut, and non-looping. Examples of such lines are heavy metal chains or heavy cables that do not readily loop and tangle. Flexible in-water lines, such as nylon rope or any lines that could loop or tangle, shall be enclosed in a plastic or rubber sleeve/tube to add rigidity and prevent the line from looping and tangling. In all instances, no excess line shall be allowed in the water. All anchoring shall be in areas free from hardbottom and seagrass.

    b. Turbidity curtains and other in-water equipment shall be placed in a manner that does not entrap protected species within the project area and minimizes the extent and duration of their exclusion from the project area.

    c. Turbidity barriers shall be positioned in a way that minimizes the extent and duration of protected species exclusion from important habitat (e.g. critical habitat, hardbottom, seagrass) in the project area.

2. **Operations**–For construction work that is generally stationary (e.g., barge-mounted equipment dredging a berth or section of river, or shore-based equipment extending into the water):

    a. Operations of moving equipment shall cease if a protected species is observed within 150 feet of operations.

[1] Manatees are managed under the jurisdiction of the U.S. Fish and Wildlife Service.

b. Activities shall not resume until the protected species has departed the project area of its own volition (e.g., species was observed departing or 20 minutes have passed since the animal was last seen in the area).

3. **Vessels**–For projects requiring vessels, the action agency, and any permittee shall ensure conditions in the Vessel Strike Avoidance Measures are implemented as part of the project/permit issuance (https://www.fisheries.noaa.gov/southeast/consultations/regulations-policies-and-guidance).

4. **Consultation Reporting Requirements–**Any interaction with a protected species shall be reported immediately to NOAA Fisheries SERO PRD and the local authorized stranding/rescue organization.

   To report to NOAA Fisheries SERO PRD, send an email to takereport.nmfsser@noaa.gov. Please include the species involved, the circumstances of the interaction, the fate and disposition of the species involved, photos (if available), and contact information for the person who can provide additional details if requested. Please include the project's Environmental Consultation Organizer (ECO) number and project title in the subject line of email reports.

   To report the interaction to the local stranding/rescue organization, please see the following website for the most up to date information for reporting sick, injured, or dead protected species:

   Reporting Violations–To report an ESA or MMPA violation, call the NOAA Fisheries Enforcement Hotline. This hotline is available 24 hours a day, 7 days week for anyone in the United States.

   NOAA Fisheries Enforcement Hotline (800) 853-1964

5. **Additional Conditions–**Any special construction conditions, required of your specific project, outside these general conditions, if applicable, will be addressed in the project consultation and must also be complied with.

For additional information, please contact NOAA Fisheries SERO PRD at:
NOAA Fisheries Service
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701
Tel: (727) 824-5312
Visit us on the web at Protected Marine Life in the Southeast
(https://www.fisheries.noaa.gov/region/southeast#protected-marine-life)

Revised: May 2021

APPENDIX L Construction Special Conditions for the Protection of the Gulf Sturgeon

CONSTRUCTION SPECIAL PROVISIONS
STURGEON PROTECTION GUIDELINES

The shortnose sturgeon (Acipenser brevirostrum) and the gulf sturgeon (A. oxyrinchus desotoi) are listed under the Endangered Species Act as endangered and threatened, respectively. These species are under the jurisdiction of the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS). In Florida, the lower St Johns River is habitat for shortnose sturgeon. Major portions of the Suwannee and Withlacoochee Rivers are designated as critical habitat for the gulf sturgeon.

The following special provisions will be incorporated into any construction contract where involvement with sturgeon may occur:

The FDOT will coordinate with the NMFS and USFWS early in the project development stage of new bridge projects. All efforts should be made to avoid known spawning habitats, nursery areas, feeding areas and thermal refuges.

1. Advise construction personnel of the potential presence of these species, of their endangered status and federal protection, and of the need to avoid any actions that would jeopardize these species.

2. The Florida Department of Transportation (FDOT) shall advise all FDOT project personnel and Contractor personnel on the project that there are civil and criminal penalties for harming, harassing or killing sturgeon, which are protected under the Endangered Species Act of 1973. The FDOT and the Contractor will be held responsible for any sturgeon harmed, harassed, or killed as a result of the project activity.

3. The FDOT shall provide information to all FDOT and Contract personnel for identification of sturgeon.

4. Appropriate work shift personnel will be instructed in the appearance, habits, biology, migratory patterns, and preservation of sturgeon. At least one of these trained personnel will be on site during construction activities to maintain a constant surveillance for these species, assure the cessation of activities (such as dredging, excess turbidity, and construction barge activity), which may endanger these species, and assure that uninhibited passage for the animals is provided.

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

6. Turbidity from construction activity will be adequately controlled to prevent degradation of the quality and transparency of the water. When sturgeon are present, turbidity curtains of appropriate dimension will be used to restrict the

animals 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. Continuous surveillance will be maintained in order to free animals which may become trapped in silt or turbidity barriers.

7. No dredging of the river bottom will be conducted for barge access.

8. Drilled shaft pile construction will be used whenever prudent and feasible as determined by FDOT.

9. Care shall be taken in lowering equipment or material below the water surface and into the stream bed. These precautions will be taken to ensure no harm occurs to any sturgeon which may have entered the construction area undetected.

10. Construction debris shall not be discarded into the water.

11. If the use of explosives is necessary, no blasting will occur during sturgeon spawning season or in known spawning, staging, feeding, or vital nursery areas.

    The following protection measures will be employed for blasting:

    A. For each explosive charge, detonation will **not** occur if a sturgeon is known to be within a circular area ("the danger zone") encompassing the detonation site defined by the following radius:

    $$r = 560(\sqrt[3]{W})$$

    Where: r = radius of danger zone in feet
    W = weight of explosive charge in pounds (tetryl or TNT)

    B. In the event that a sturgeon is killed during blasting, the NMFS and/or the USFWS will be notified immediately.

12. Any dead sturgeon will be secured on site for carcass analysis by notified agency representative.

13. Following completion of the project, a report summarizing any involvement with sturgeon will be prepared for NMFS and/or USFWS.

APPENDIX M NMFS Vessel Strike Avoidance Measures

VESSEL STRIKE AVOIDANCE MEASURES, NOAA FISHERIES SOUTHEAST REGIONAL OFFICE

Background

Vessel strikes can injure or kill species protected under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA). NOAA Fisheries Southeast Regional Office (SERO) Protected Resources Division (PRD) recommends implementing the following identification and avoidance measures to reduce the risk of vessel strikes and disturbance from vessels to protected species under our jurisdiction.[1]

Protected Species Sightings

All vessel operators and crews should be informed about the potential presence of species protected under the ESA and the MMPA and any critical habitat in a vessel transit area. All vessels should have personnel onboard responsible for observing for the presence of protected species. All personnel should be advised that there are civil and criminal penalties for harming, harassing, or killing listed species and all marine mammals. To determine which protected species and critical habitat may be found in the transit area, please review the relevant marine mammal and ESA-listed species at Find A Species (https://www.fisheries.noaa.gov/find-species) and any ESA Section 7 consultation documents if applicable.

Vessel Strike Avoidance

The following measures should be taken when they are consistent with safe navigation to avoid causing injury or death of a protected species:

1. Operate at the minimum safe speed when transiting and maintain a vigilant watch for protected species to avoid striking them. Even with a vigilant watch, most marine protected species are extremely difficult to see from a boat or ship, and you cannot rely on detecting them visually and then taking evasive action. The most effective way to avoid vessel strikes is to travel at a slow, safe speed. Whenever possible, assign a designated individual to observe for protected species and limit vessel operation to only daylight hours.

2. Follow deep-water routes (e.g., marked channels) whenever possible.

3. Operate at "Idle/No Wake" speeds in the following circumstances:
    a. while in any project construction areas
    b. while in water depths where the draft of the vessel provides less than four feet of clearance from the bottom, or
    c. in all depths after a protected species has been observed in and has recently departed the area.

[1] Manatees are managed under the jurisdiction of the U.S. Fish and Wildlife Service.

4. When a protected species is sighted, attempt to maintain a distance of 150 feet or greater between the animal and the vessel. Reduce speed and avoid abrupt changes in direction until the animal(s) has left the area.

5. When dolphins are bow- or wake-riding, maintain course and speed as long as it is safe to do so or until the animal(s) leave the vicinity of the vessel.

6. If a whale is sighted in the vessel's path or within 300 feet from the vessel, reduce speed and shift the engine to neutral. Do not engage the engines until the animals are clear of the area. *Please see below for additional requirements for North Atlantic right whales.*

7. If a whale is sighted farther than 300 feet from the vessel, maintain a distance of 300 feet or greater between the whale and the vessel and reduce speed to 10 knots or less. *Please see below for additional requirements for North Atlantic right whales.*

Injured or Dead Protected Species Reporting
Vessel crews should report sightings of any injured or dead protected species immediately regardless of whether the injury or death is caused by your vessel. Please see How to Report a Stranded or Injured Marine Animal (https://www.fisheries.noaa.gov/report) for the most up to date information for reporting injured or dead protected species.

If the injury or death is caused by your vessel, also report the interaction to NOAA Fisheries SERO PRD at takereport.nmfsser@noaa.gov. Please include the species involved, the circumstances of the interaction, the fate and disposition of the animal involved, photos (if available), and contact information for the person who can provide additional details if requested. Please include the project's Environmental Consultation Organizer (ECO) number and project title in the subject line of email reports if a consultation has been completed.

Reporting Violations
To report any suspected ESA or MMPA violation, call the NOAA Fisheries Enforcement Hotline. This hotline is available 24 hours a day, 7 days week for anyone in the United States.

NOAA Fisheries Enforcement Hotline: (800) 853-1964

Additional Transit and Reporting Requirements for North Atlantic Right Whales

1. Federal regulation prohibits approaching or remaining within 500 yards of a North Atlantic right whale (50 CFR 224.103 (c)). All whales sighted within North Atlantic right whale critical habitat should be assumed to be right whales. Please be aware and follow restrictions for all Seasonal Management Areas along the U.S. east coast. These areas have vessel speed restrictions to reduce vessel strikes risks to migrating or feeding whales. More information can be found at Reducing Vessel Strikes to North Atlantic Right Whales (https://www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-vessel-strikes-north-atlantic-right-whales).

2. Ships greater than 300 gross tons entering the WHALESOUTH reporting area are required to report to a shore-based station. For more information on reporting procedures consult 33 CFR Part 169, the Coast Pilot, or at Reducing Vessel Strikes to North Atlantic

Right Whales (https://www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-vessel-strikes-north-atlantic-right-whales).

3. From November through April, vessels approaching/departing Florida ports of Jacksonville and Fernandina Beach as well as Brunswick Harbor, Georgia are STRONGLY RECOMMENDED to use Two-Way Routes displayed on nautical charts. More information on Compliance with the Right Whale Ship Strike Reduction Rule can be found at (https://media.fisheries.noaa.gov/2021-06/compliance_guide_for_right_whale_ship_strike_reduction.pdf)

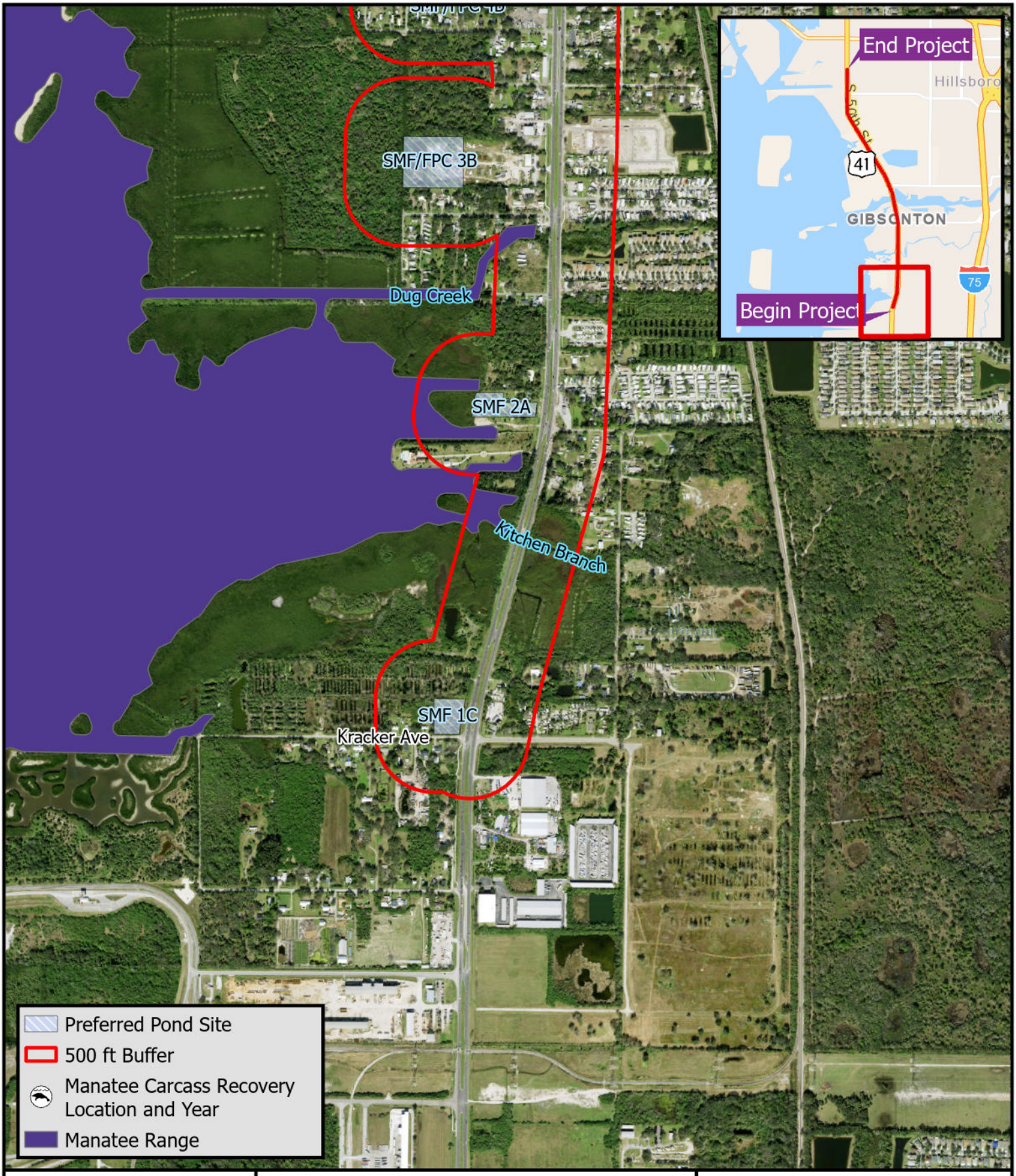
4. Mariners shall check with various communication media for general information regarding avoiding vessel strikes and specific information regarding North Atlantic right whale sighting locations. These include NOAA weather radio, U.S. Coast Guard Broadcast to Mariners, Local Notice to Mariners, and NAVTEX. Commercial mariners calling on United States ports should view the most recent version of the NOAA/USCG produced training CD entitled "A Prudent Mariner's Guide to Right Whale Protection" (contact the NOAA Fisheries SERO, Protected Resources Division for more information regarding the CD).

5. Injured, dead, or entangled right whales should be immediately reported to the U.S. Coast Guard via VHF Channel 16 and the NOAA Fisheries Southeast Marine Mammal Stranding Hotline at (877) WHALE HELP (877-942-5343).

For additional information, please contact NOAA Fisheries SERO PRD at:
NOAA Fisheries Service
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701
Visit us on the web at Protected Marine Life in the Southeast
(https://www.fisheries.noaa.gov/region/southeast#protected-marine-life)

Revised: May 2021

APPENDIX N Manatee Carcass Recoveries, Protection Zone, and Range Map



US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

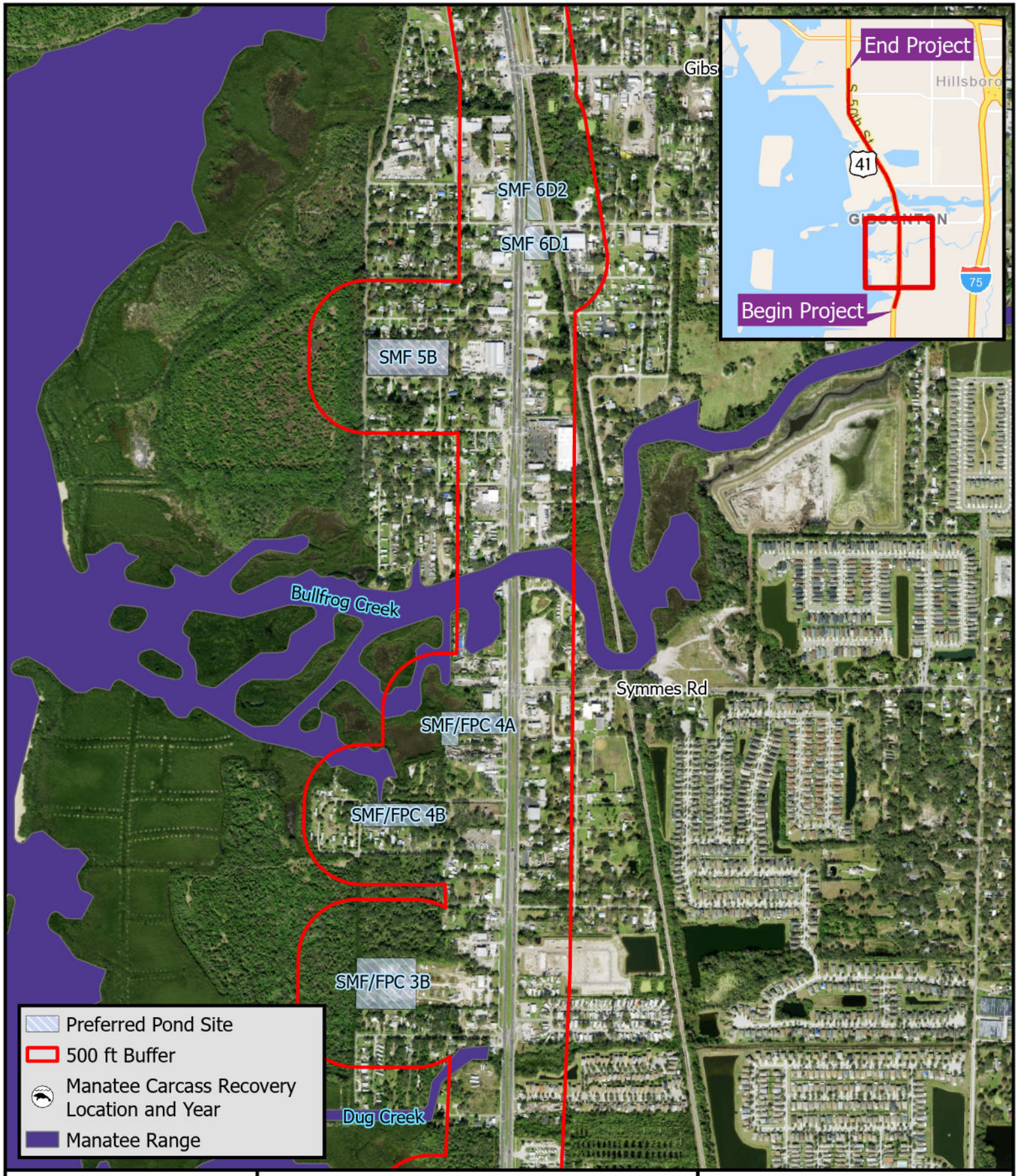
FPID: 430056-1-22-01

Hillsborough County, FL

Manatee Carcass Recovery & Range

N

0 750 1,500 Feet



US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

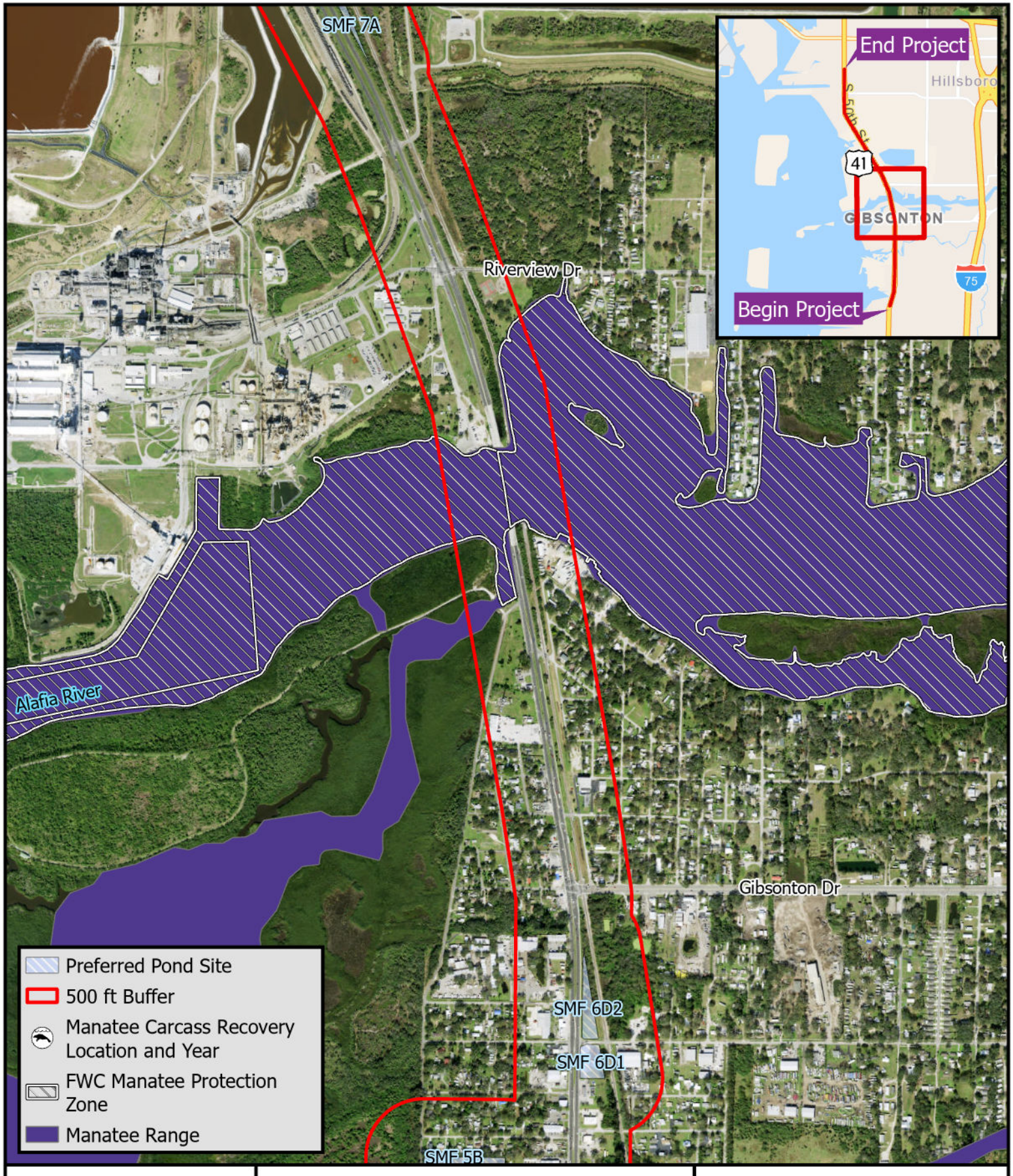
FPID: 430056-1-22-01

Hillsborough County, FL

Manatee Carcass Recovery & Range

N

0 750 1,500 Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

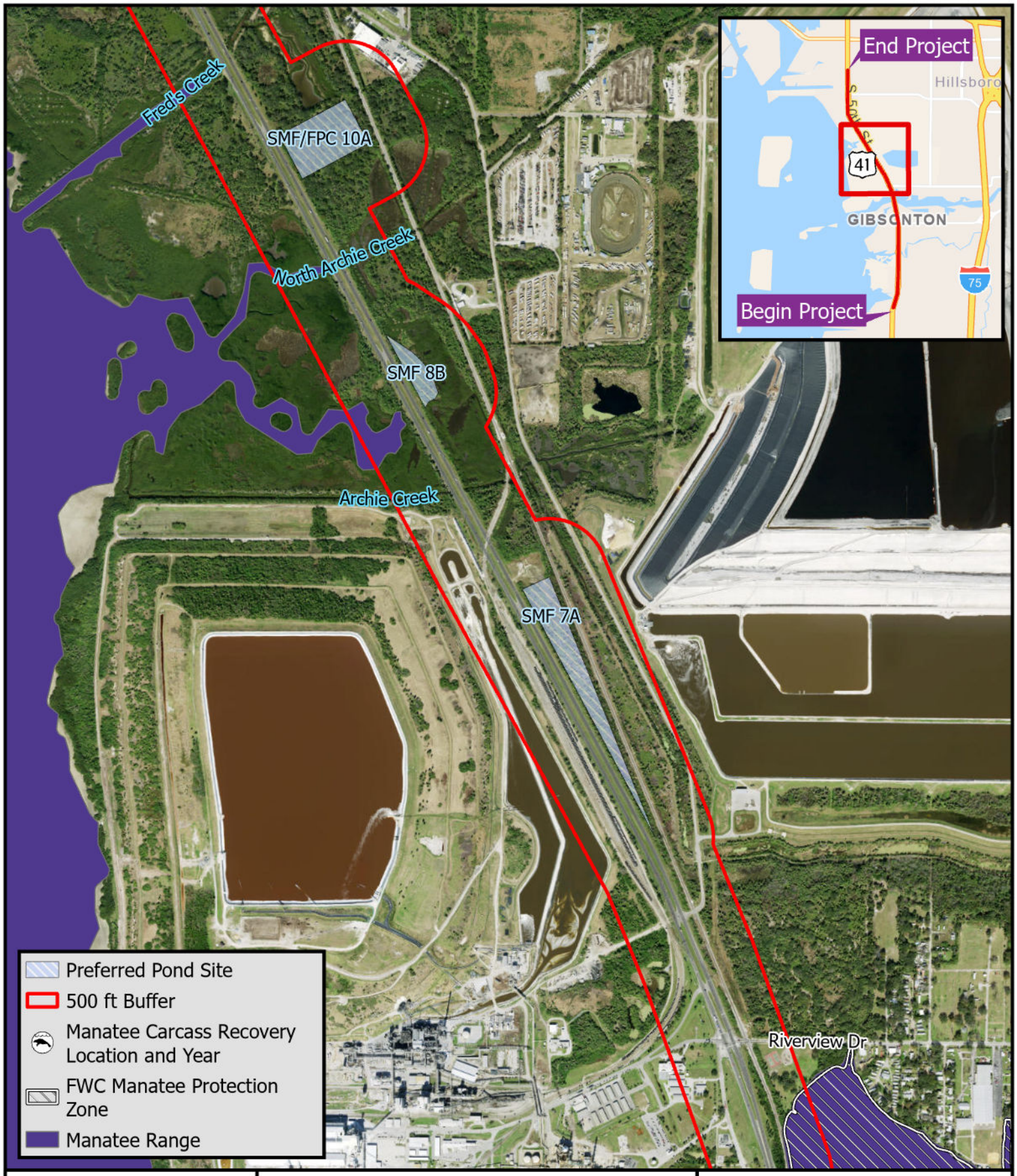
FPID: 430056-1-22-01

Hillsborough County, FL

Manatee Carcass Recovery & Range

N

0 750 1,500 Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

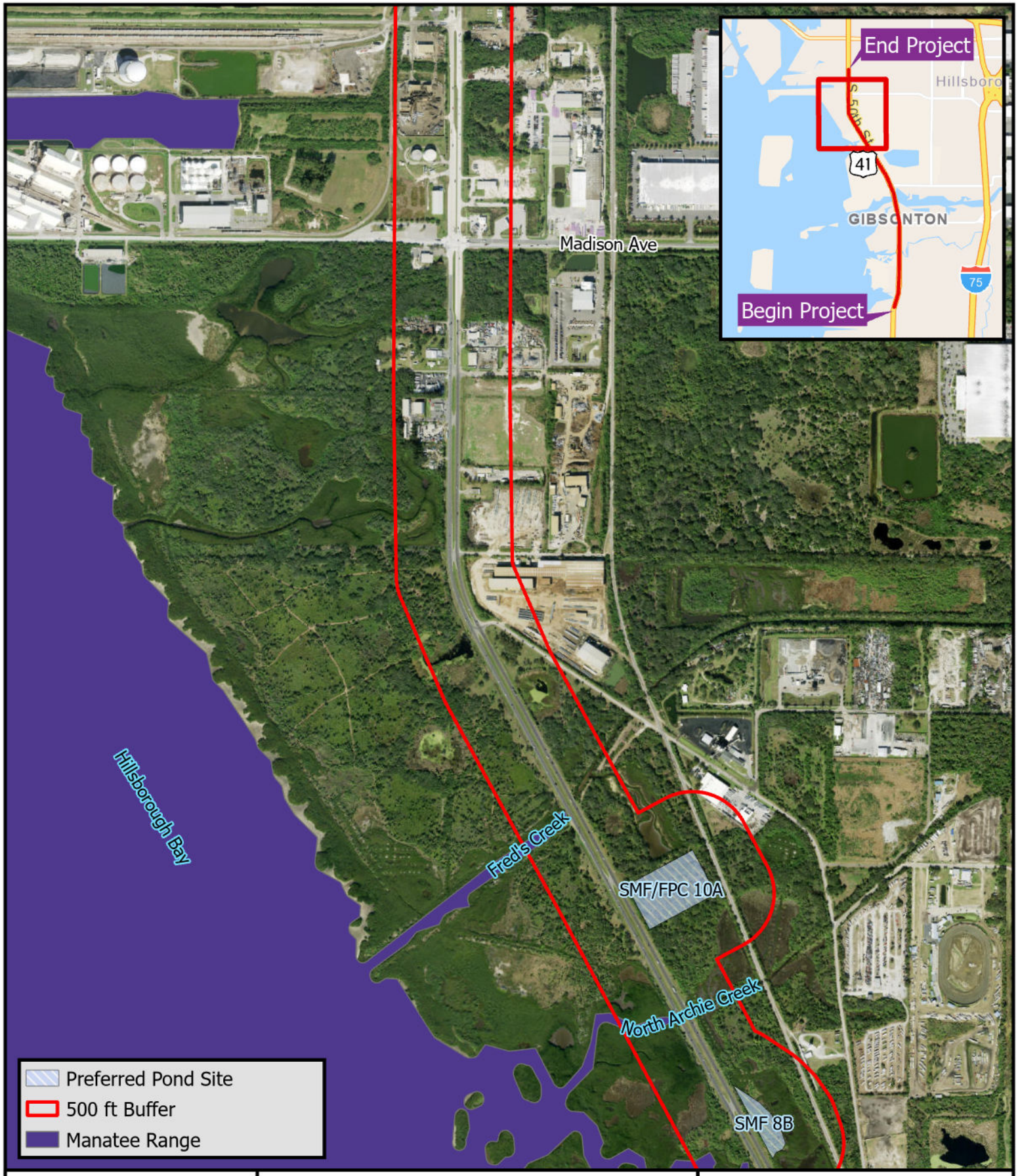
FPID: 430056-1-22-01

Hillsborough County, FL

Manatee Carcass Recovery & Range

N

0 750 1,500 Feet



US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

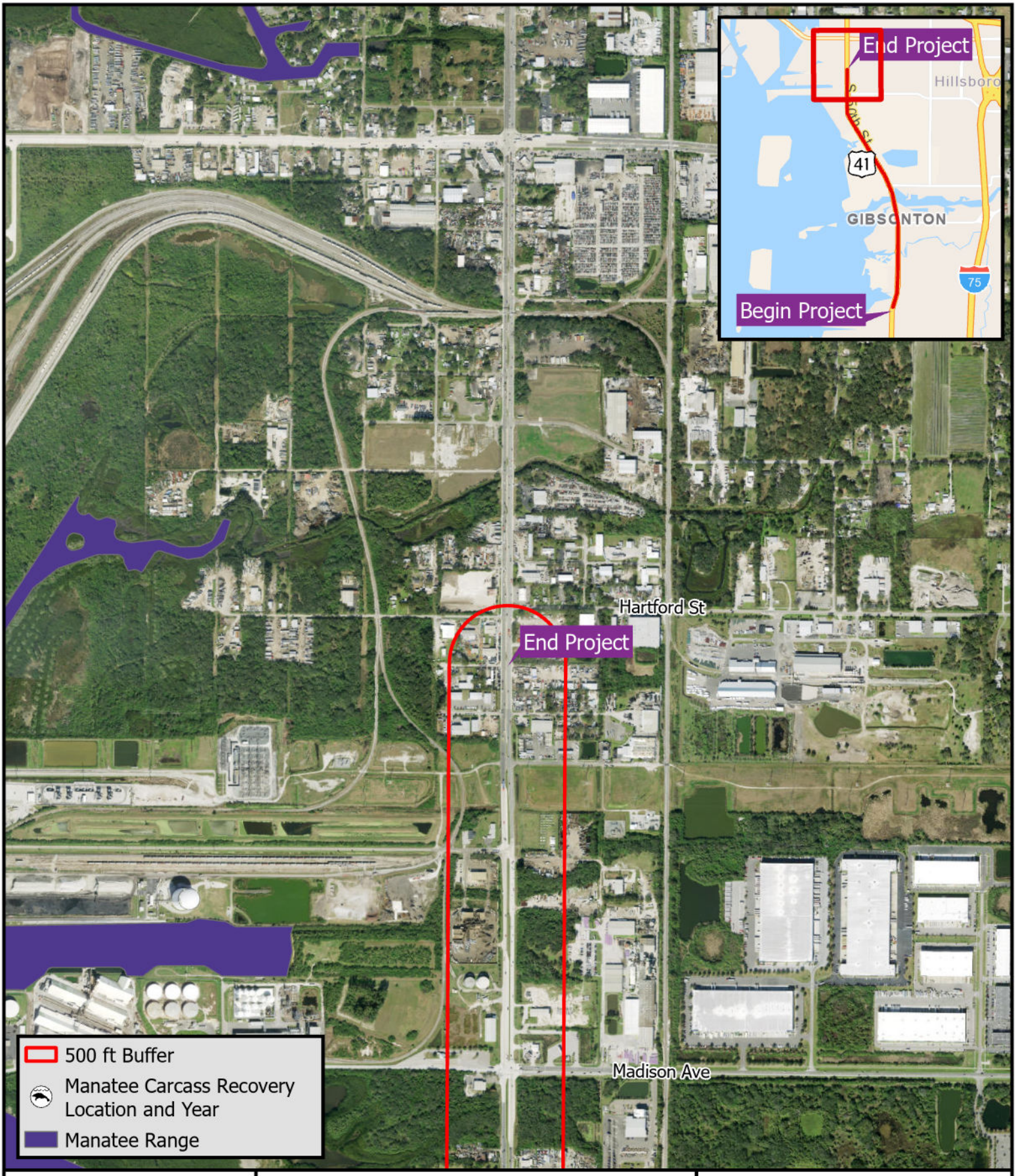
Hillsborough County, FL

Manatee Carcass Recovery & Range

N

0 750 1,500

Feet



US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

Hillsborough County, FL

Manatee Carcass Recovery & Range

N

0 750 1,500 Feet

APPENDIX O Standard Manatee Conditions for In-Water Work

STANDARD MANATEE CONDITIONS FOR IN-WATER WORK

2011

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

a. All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.

b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.

c. Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.

d. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.

e. Any collision with or injury to a manatee shall be reported immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1-888-404-3922. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-731-3336) for north Florida or Vero Beach (1-772-562-3909) for south Florida, and to FWC at ImperiledSpecies@myFWC.com

f. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Temporary signs that have already been approved for this use by the FWC must be used. One sign which reads *Caution: Boaters* must be posted. A second sign measuring at least 8 ½" by 11" explaining the requirements for "Idle Speed/No Wake" and the shut down of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities. These signs can be viewed at MyFWC.com/manatee. Questions concerning these signs can be sent to the email address listed above.

CAUTION: MANATEE HABITAT

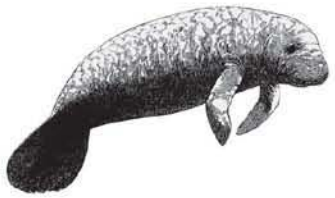
All project vessels

IDLE SPEED / NO WAKE

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

SHUT DOWN

Report any collision with or injury to a manatee:

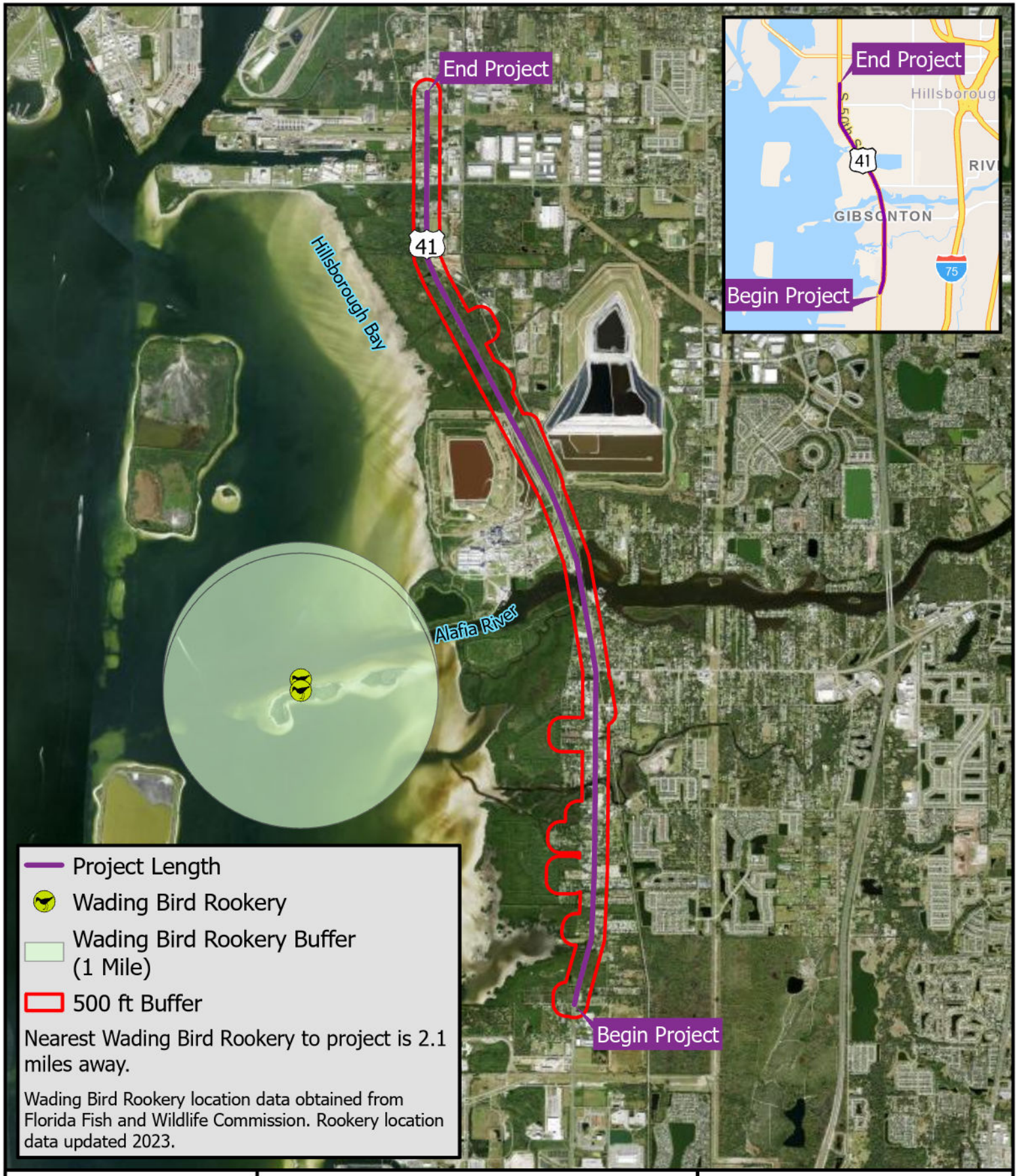


Wildlife Alert:

1-888-404-FWCC(3922)

cell *FWC or #FWC

APPENDIX P Wading Bird Rookeries Map



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

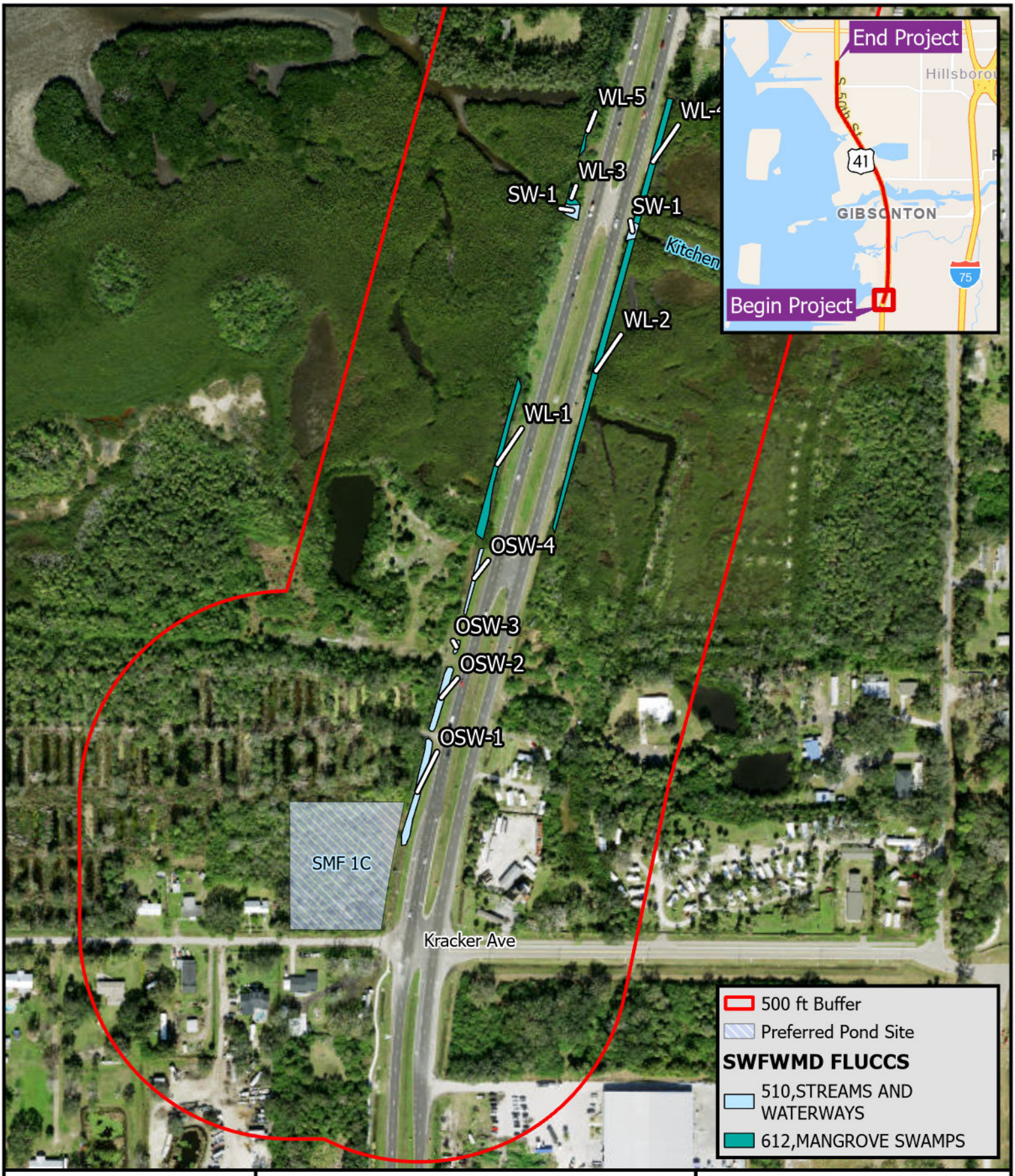
Hillsborough County, FL

N

Wading Bird Rookeries

0 0.5 1 Miles

APPENDIX Q Wetlands, Surface Waters, & Other Surface Waters Impact Map



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

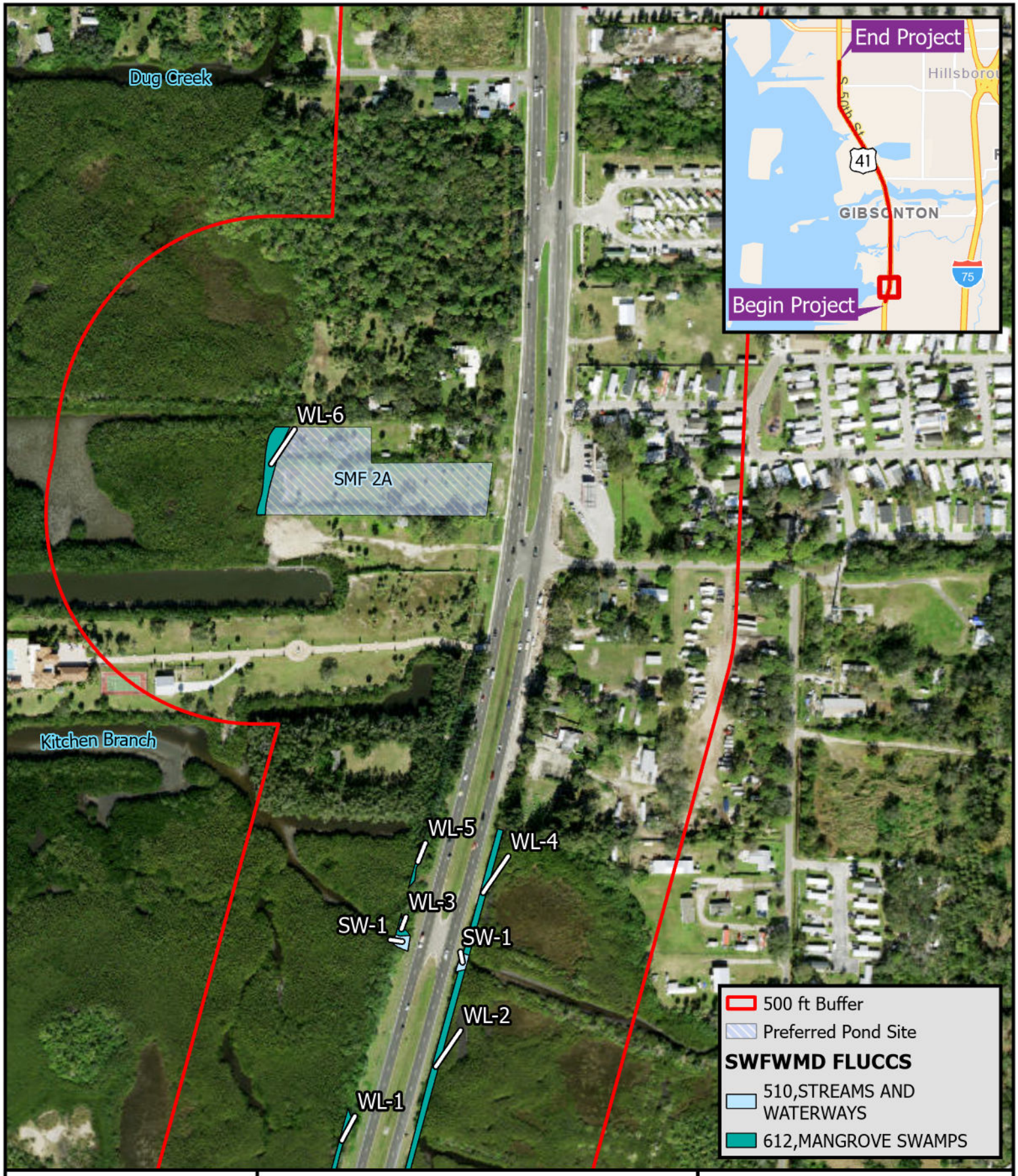
Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400

Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

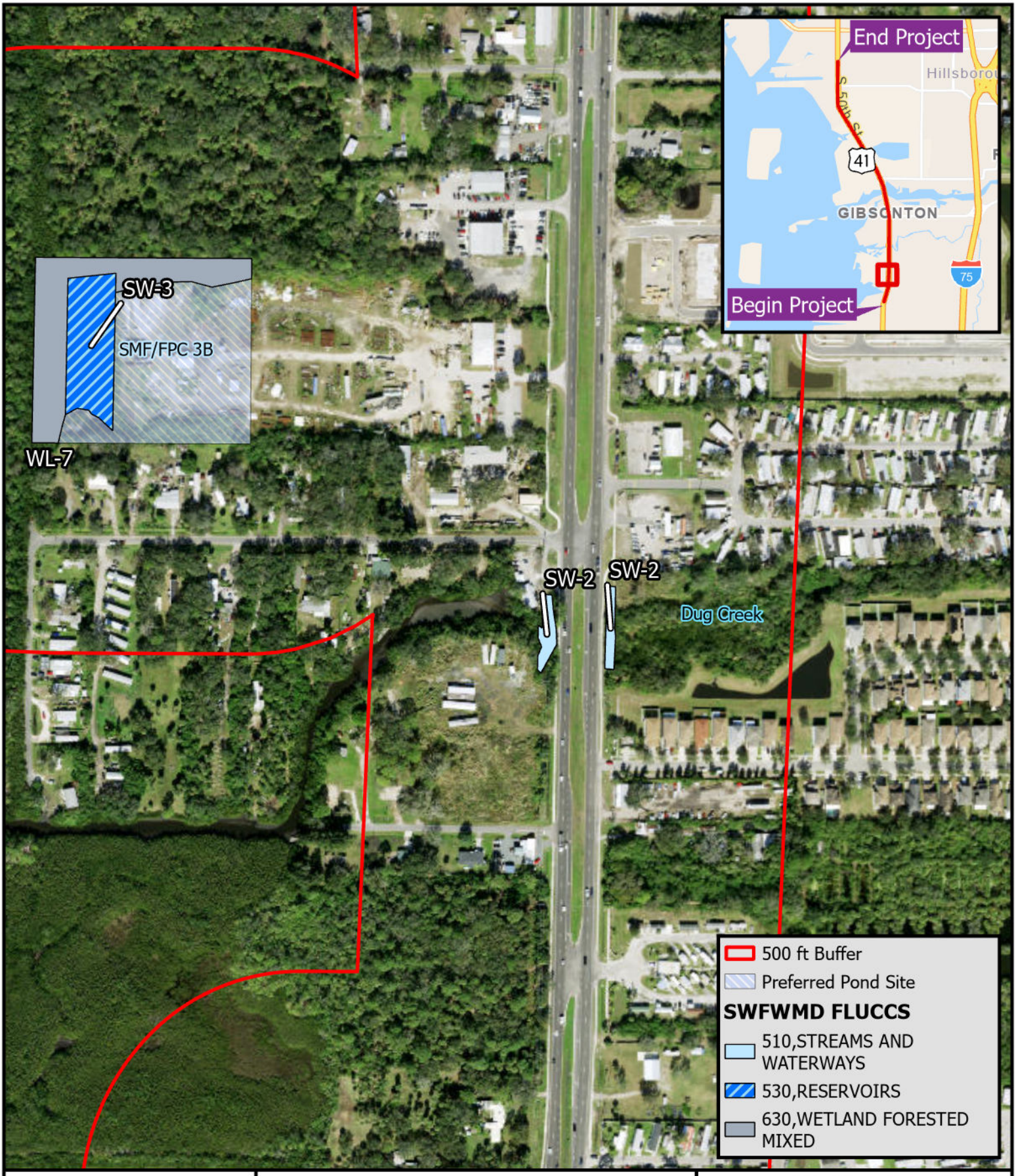
FPID: 430056-1-22-01

Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400 Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

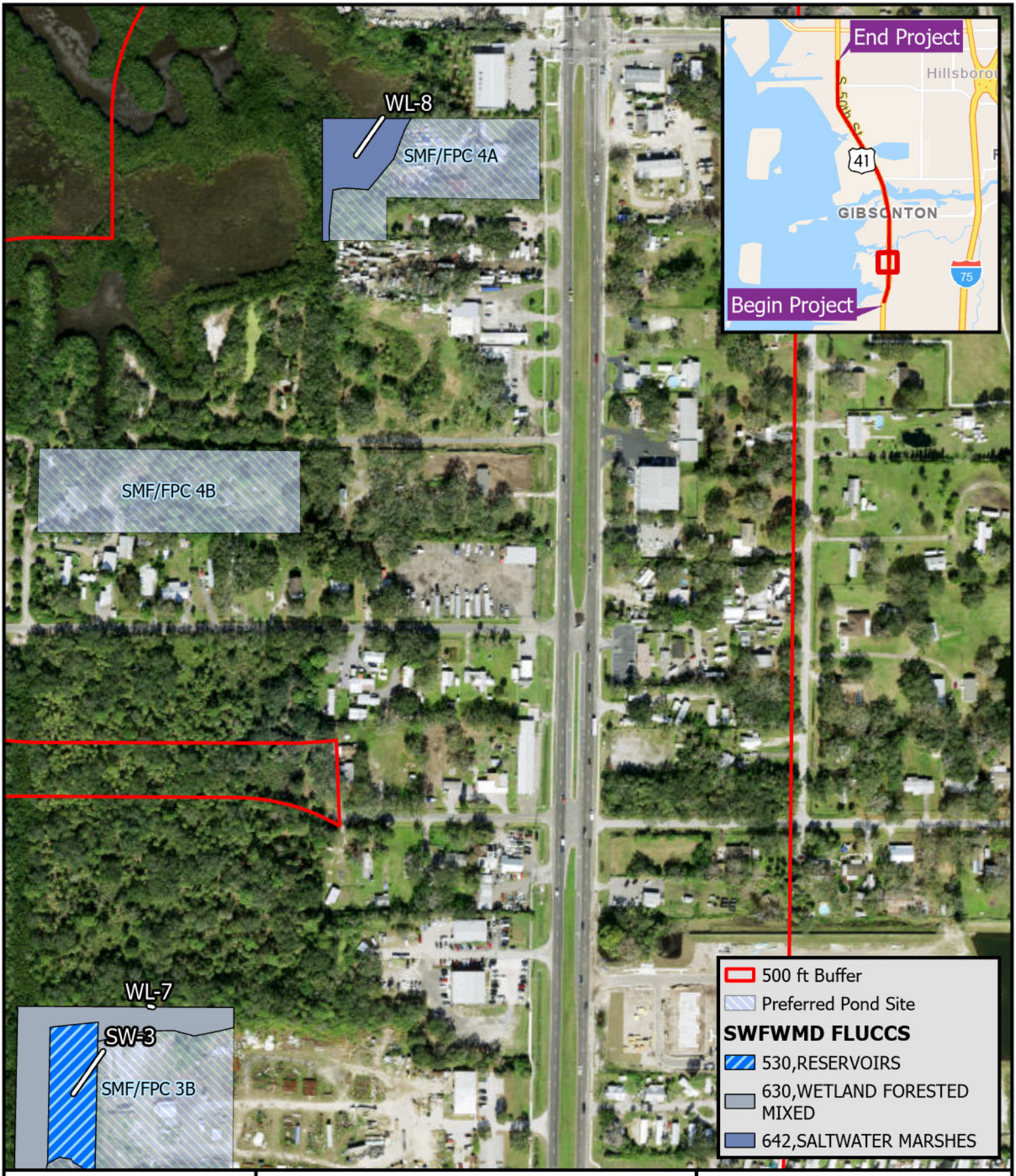
Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400

Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

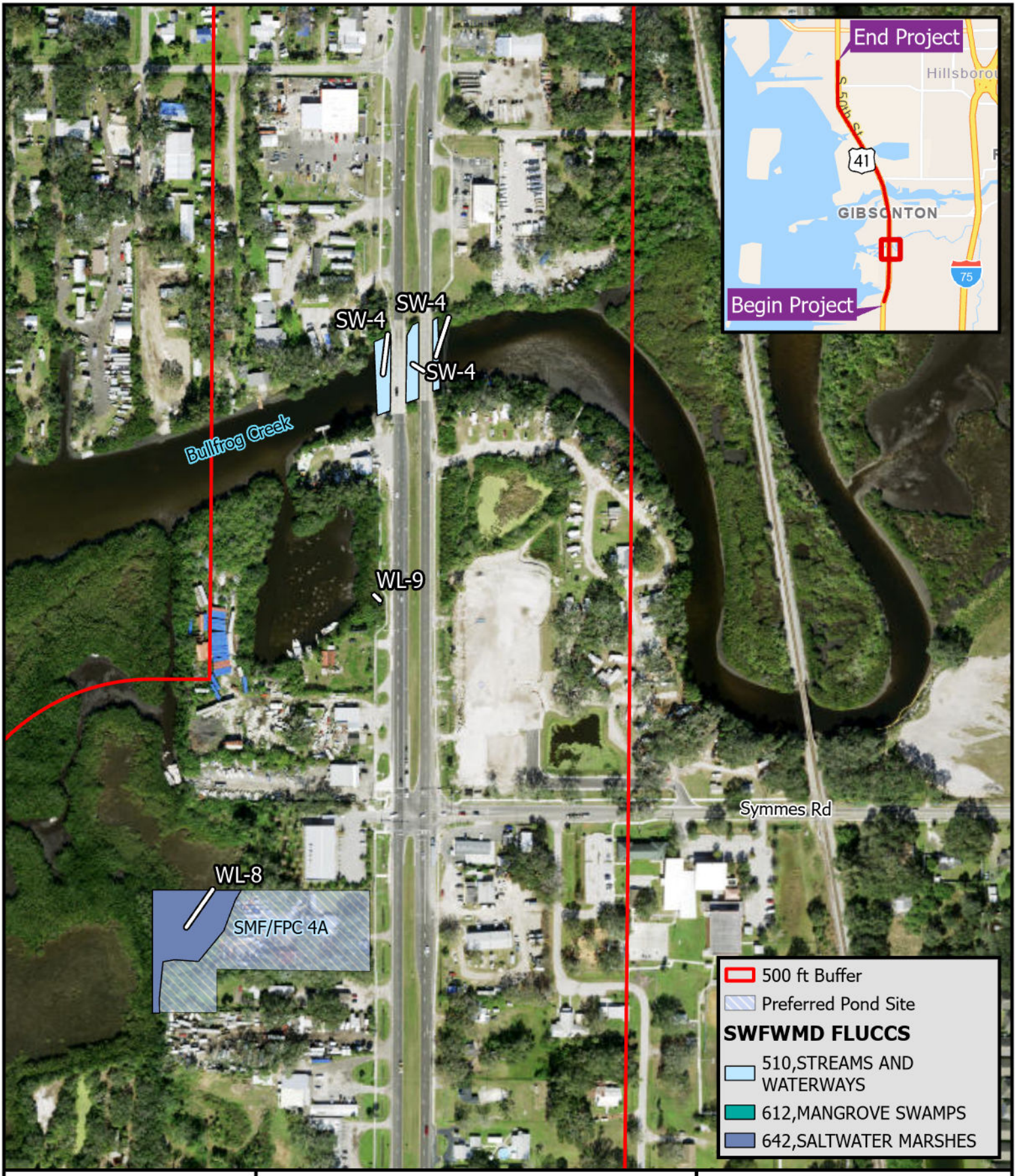
Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400

Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

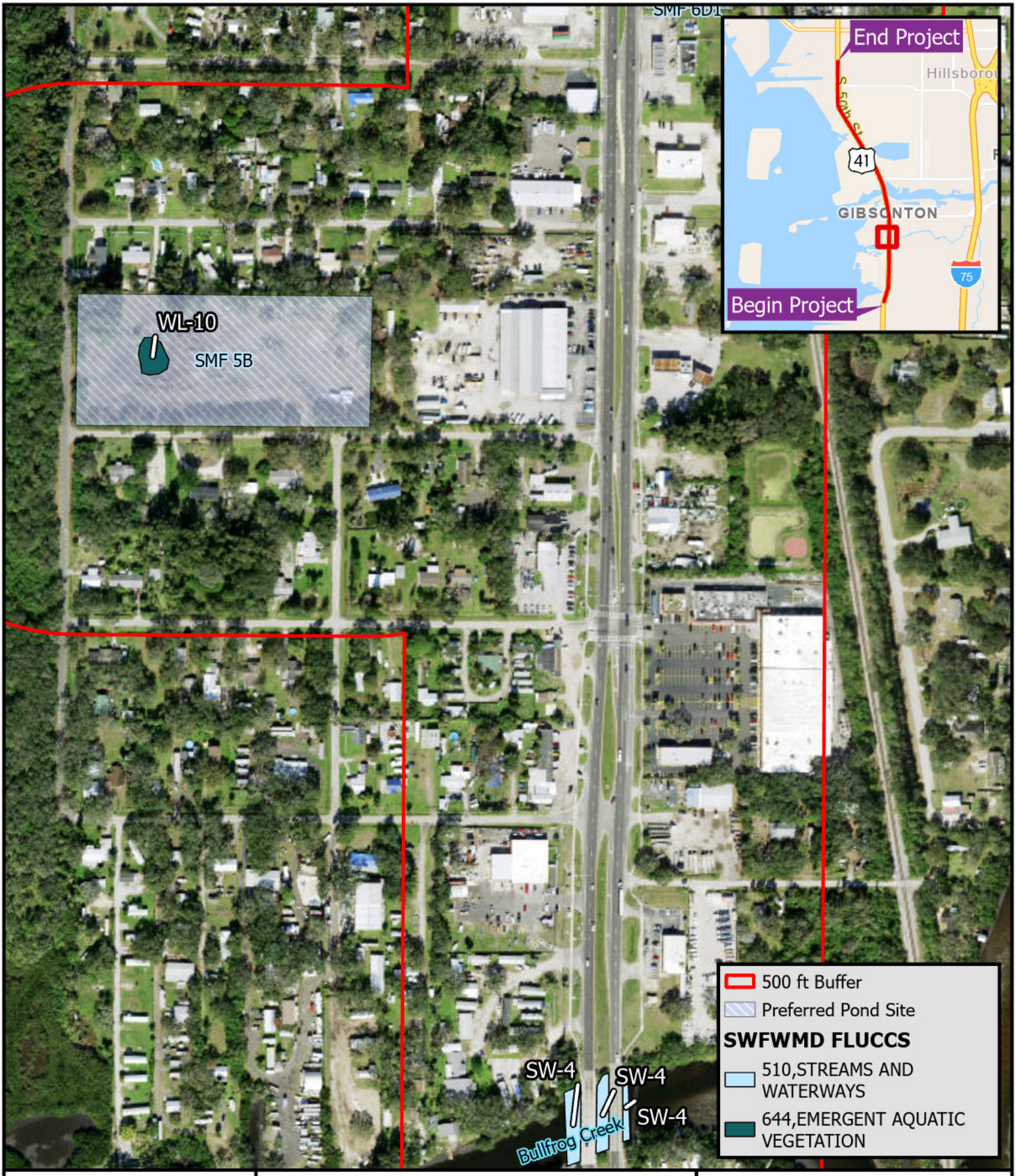
Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400

Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

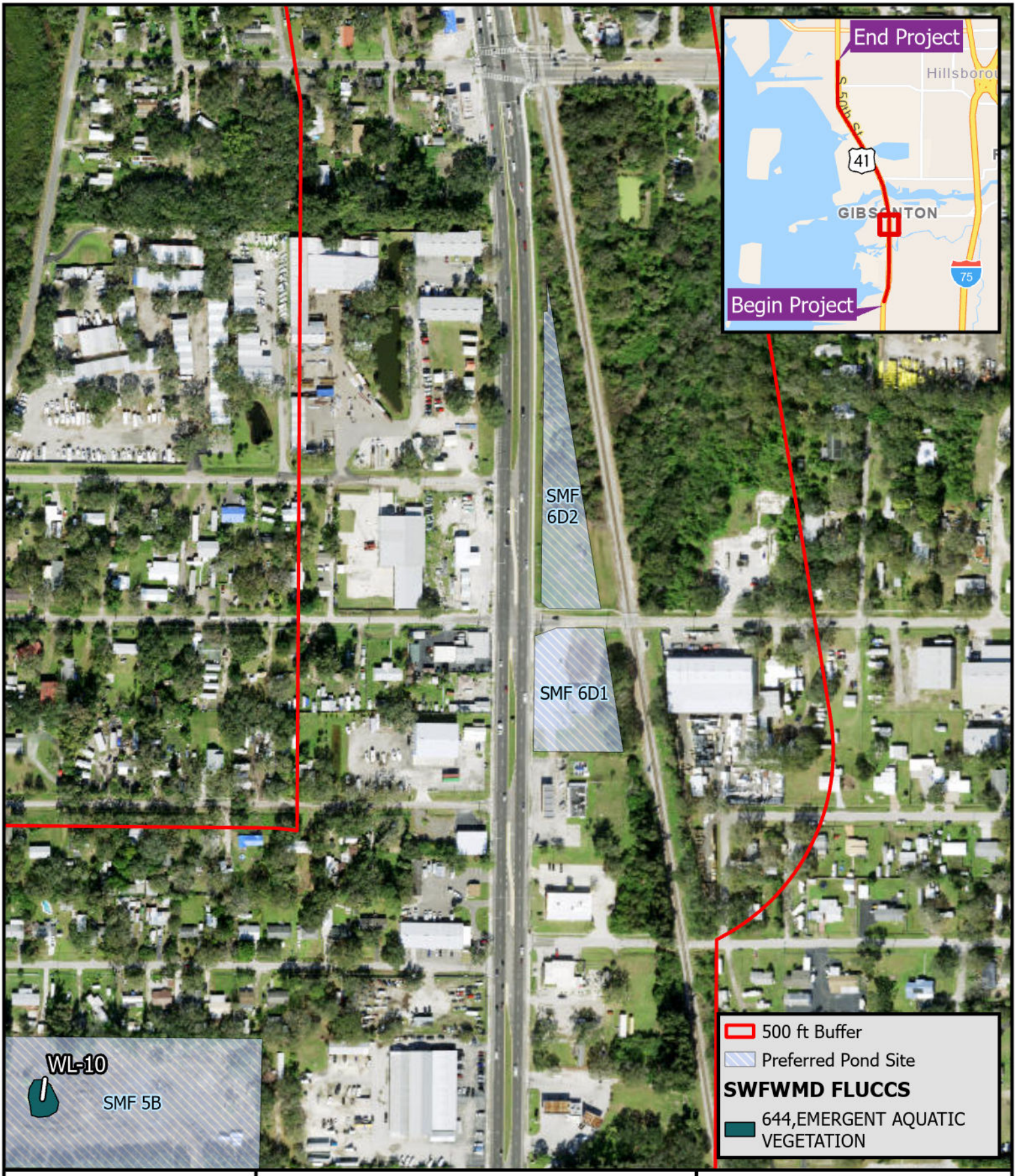
Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400

Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

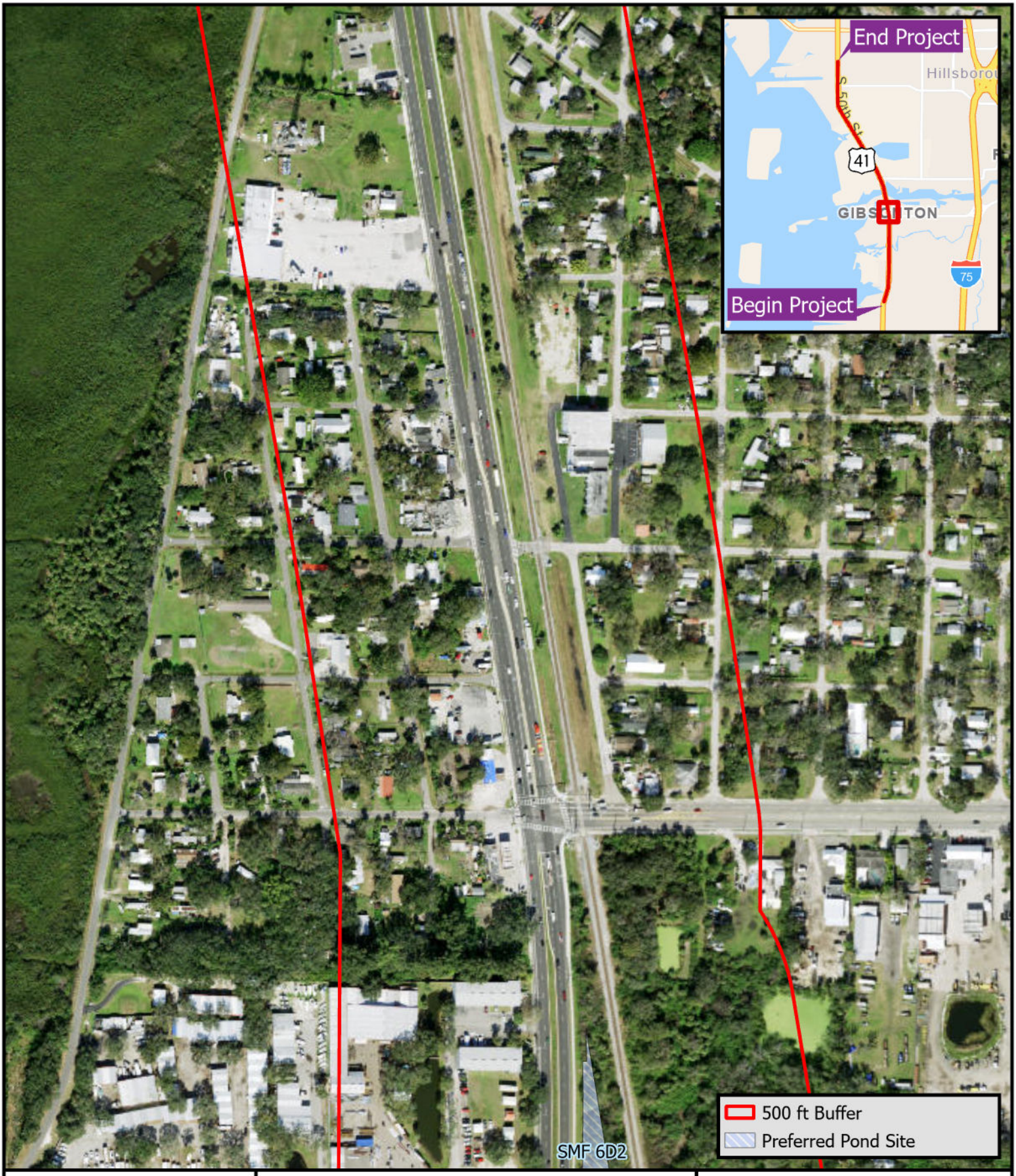
FPID: 430056-1-22-01

Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400 Feet



US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

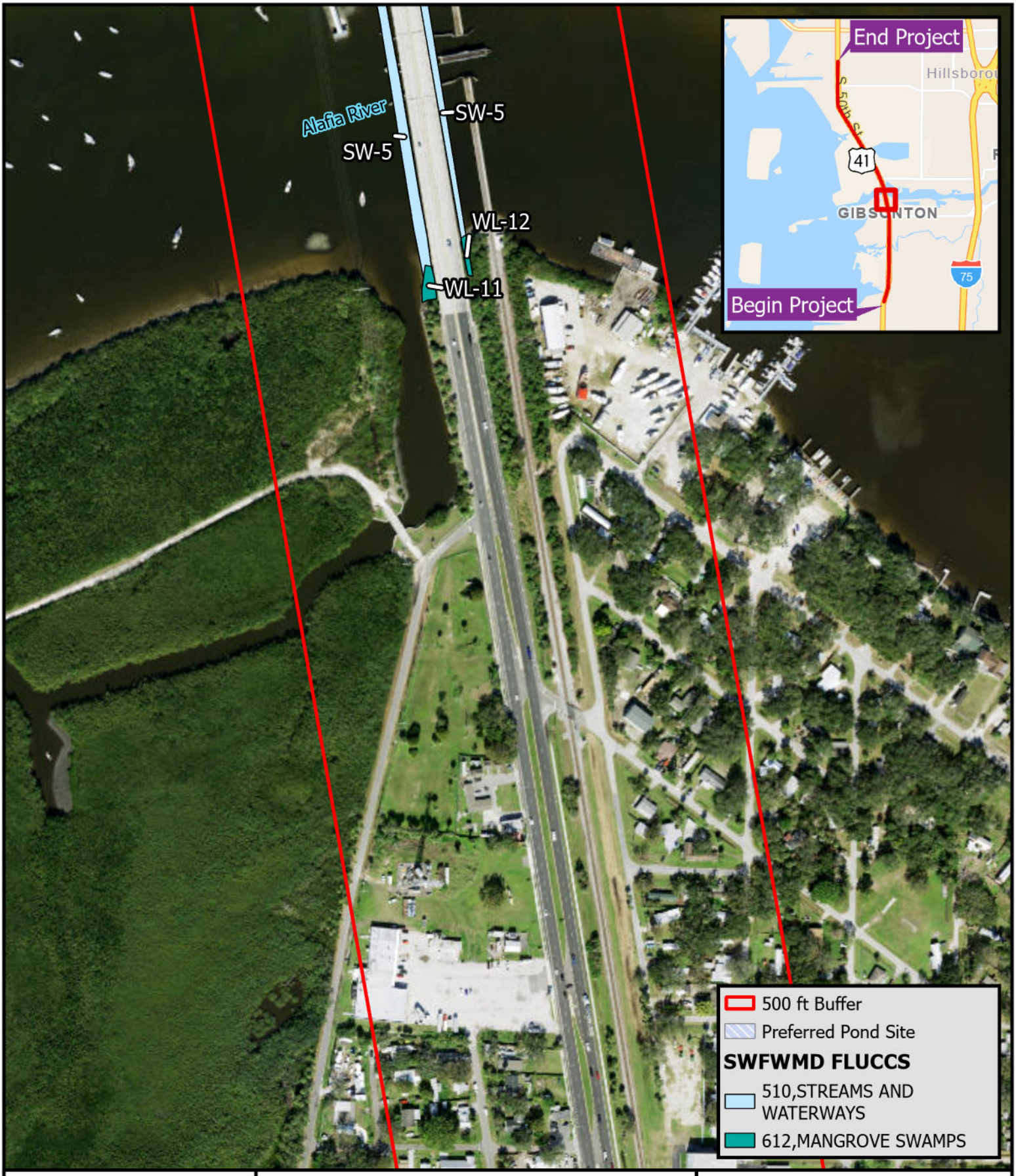
Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400

Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

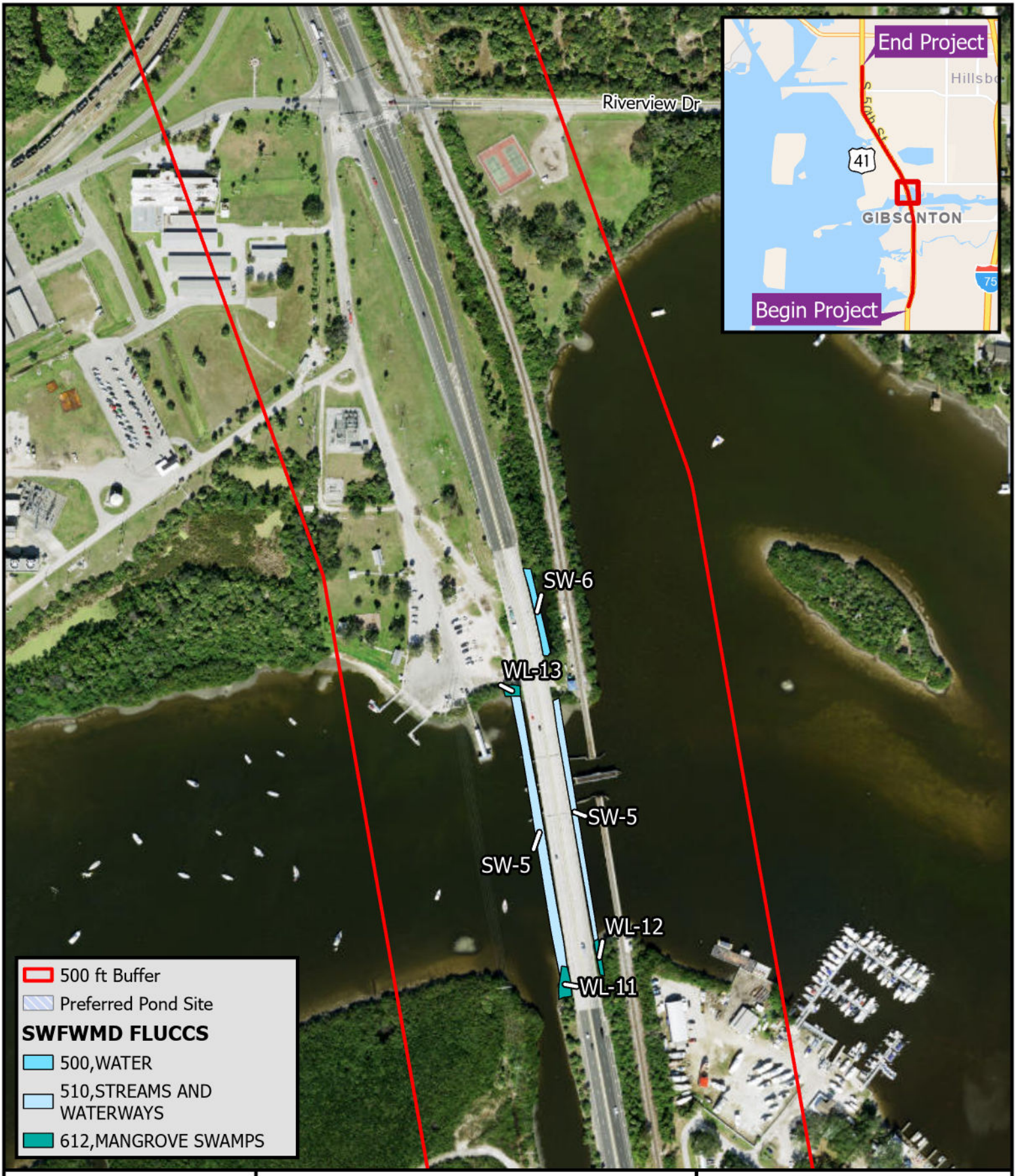
Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400

Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

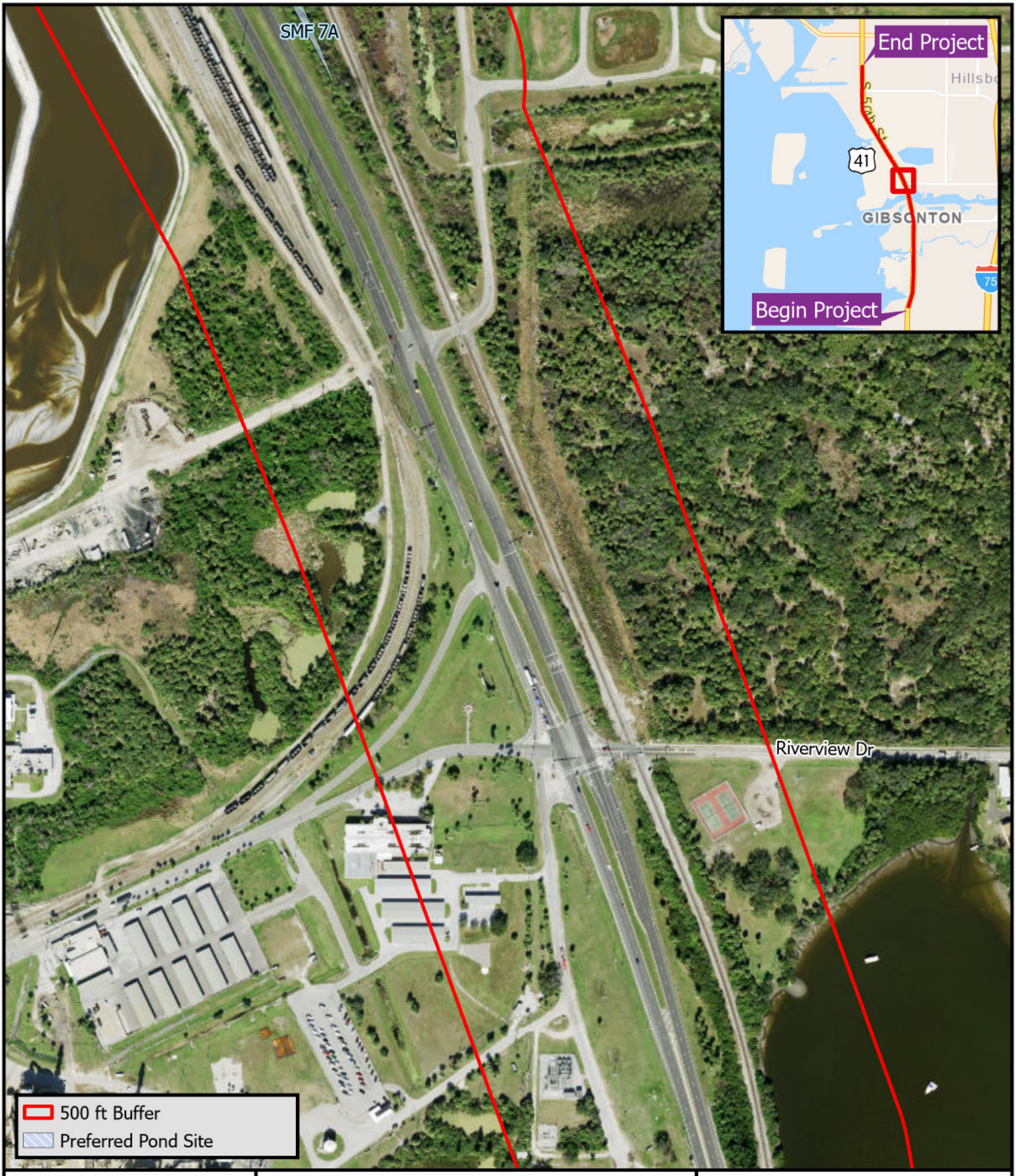
FPID: 430056-1-22-01

Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400 Feet



US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

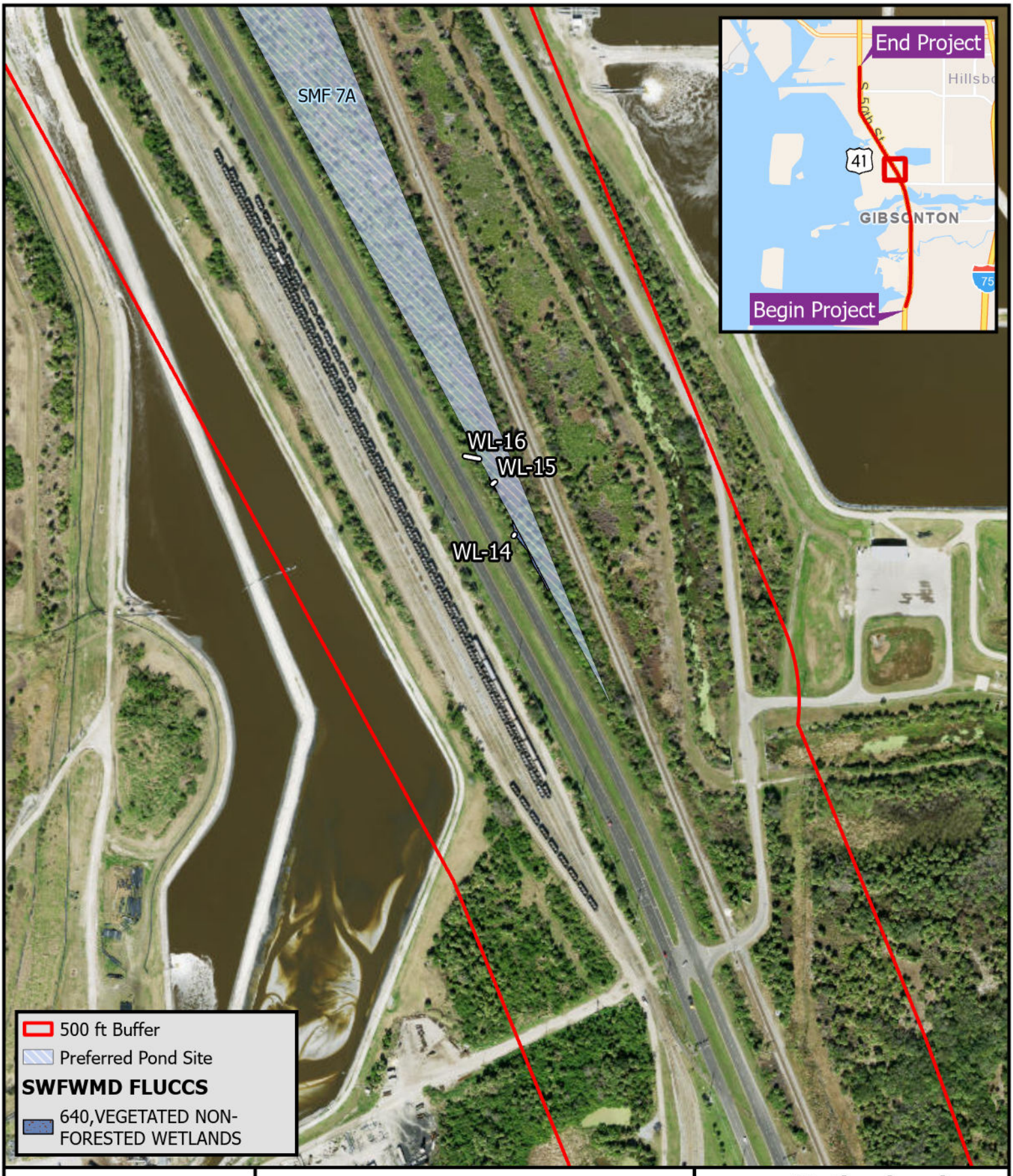
FPID: 430056-1-22-01

Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400 Feet



US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

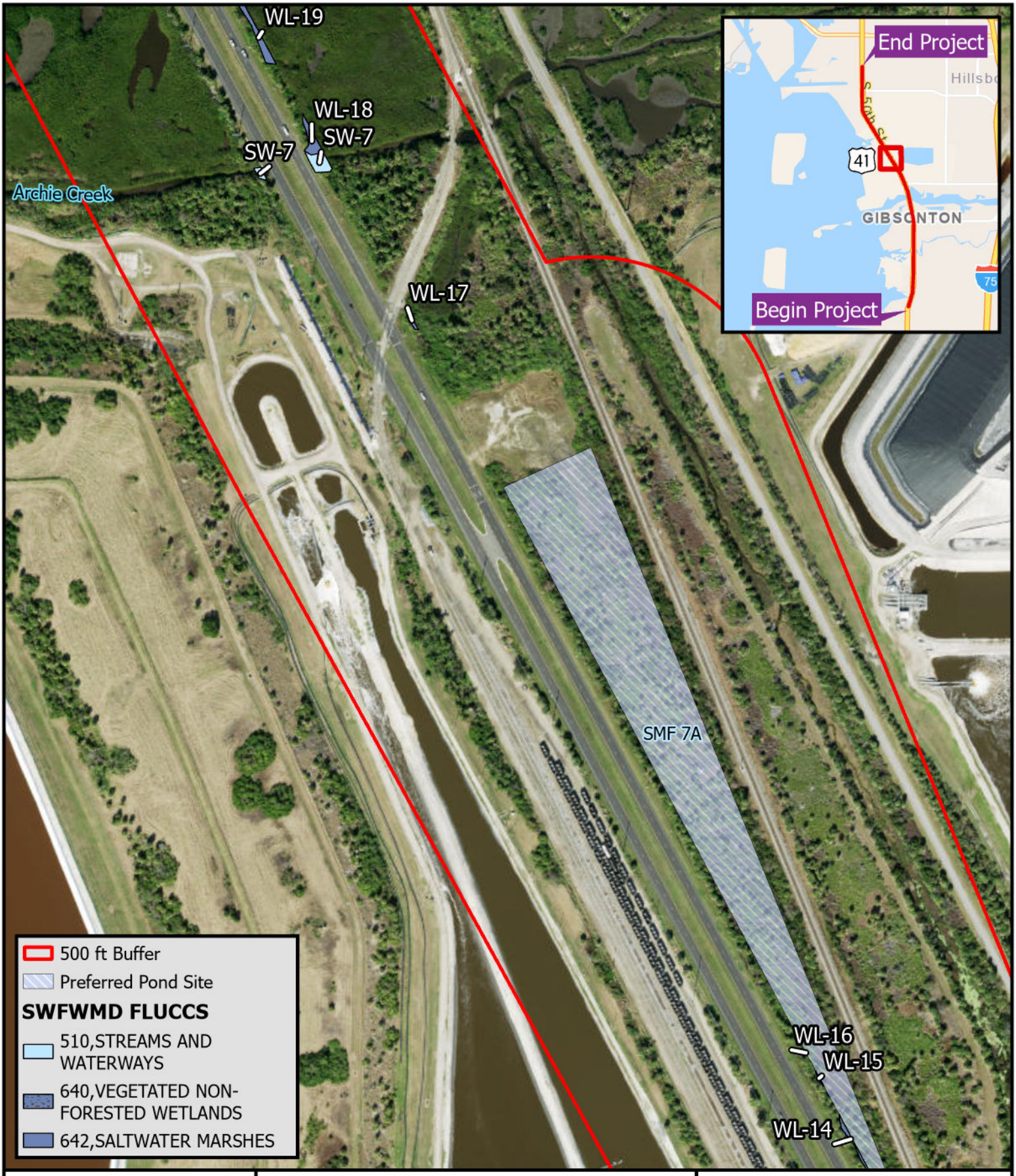
FPID: 430056-1-22-01

Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400 Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

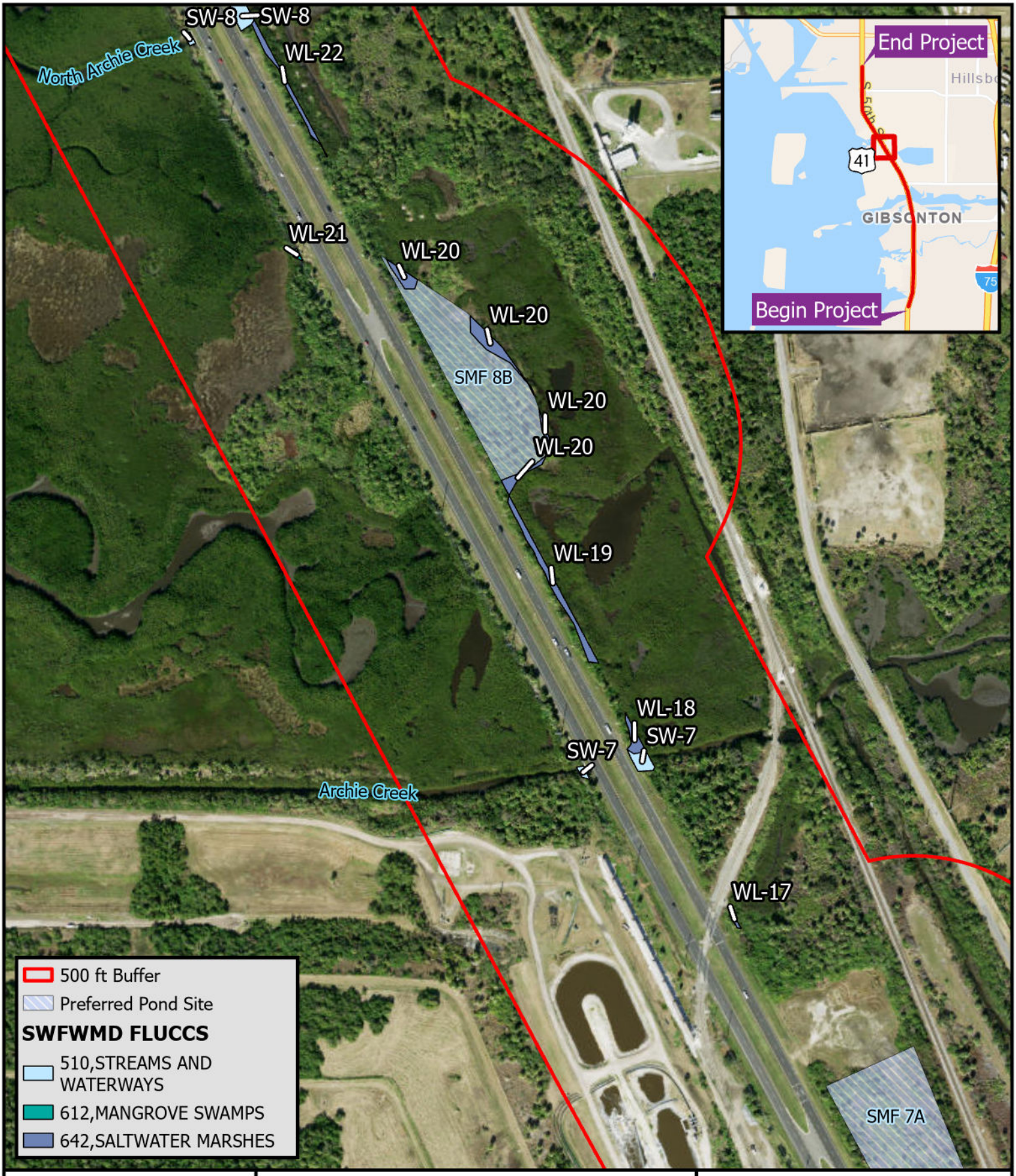
FPID: 430056-1-22-01

Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400 Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

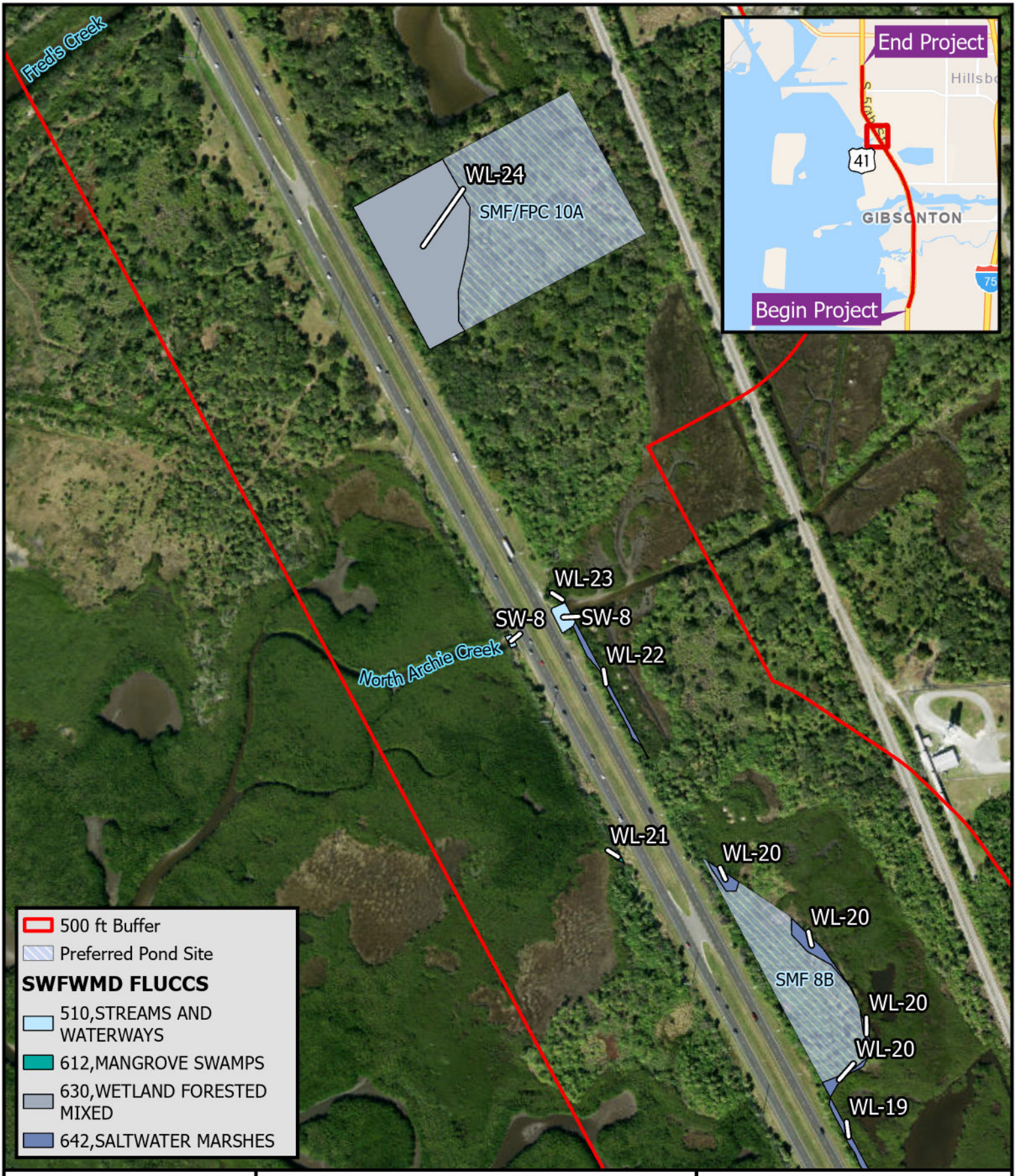
Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400

Feet



US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

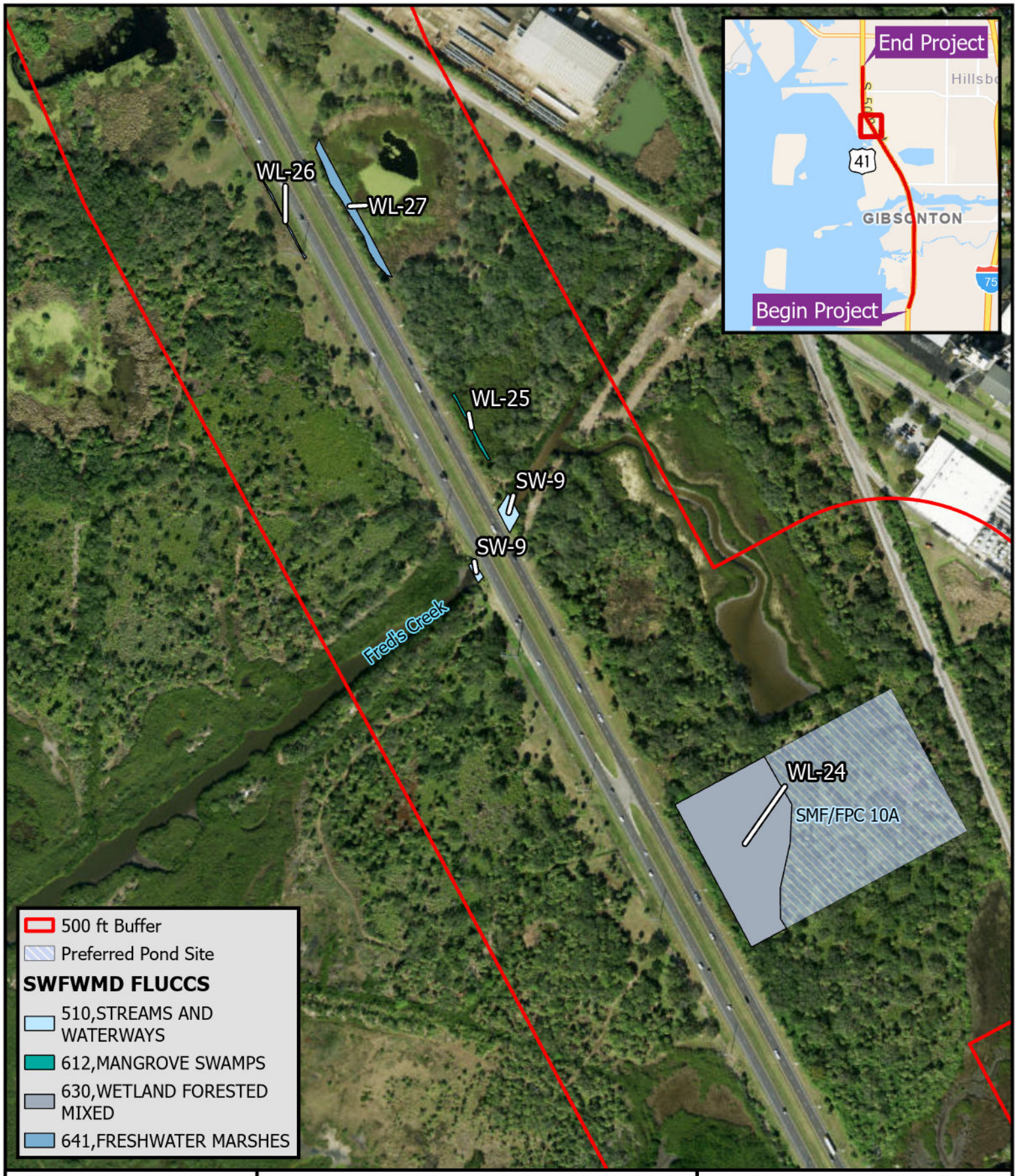
FPID: 430056-1-22-01

Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400 Feet



US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

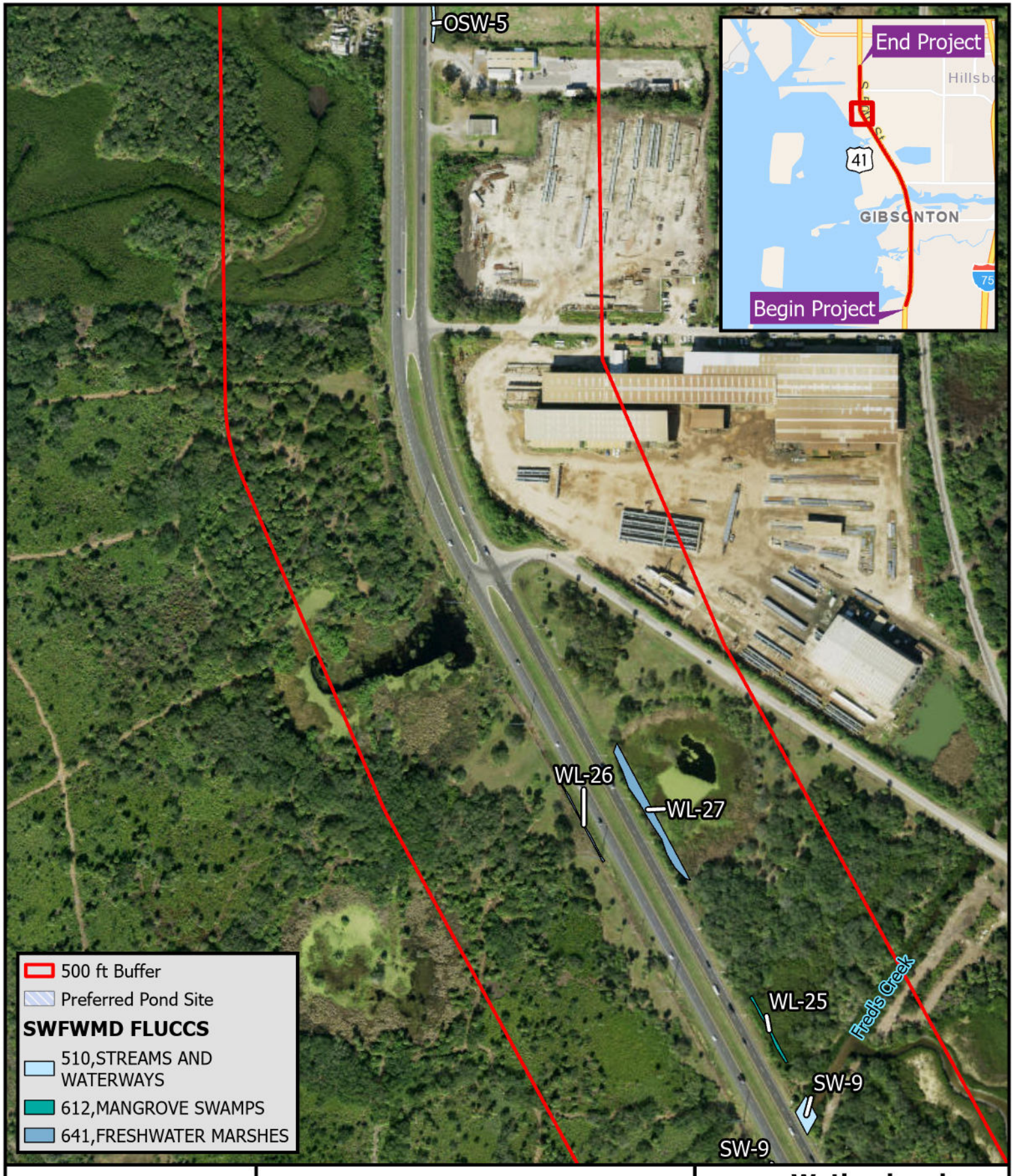
Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400

Feet



US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

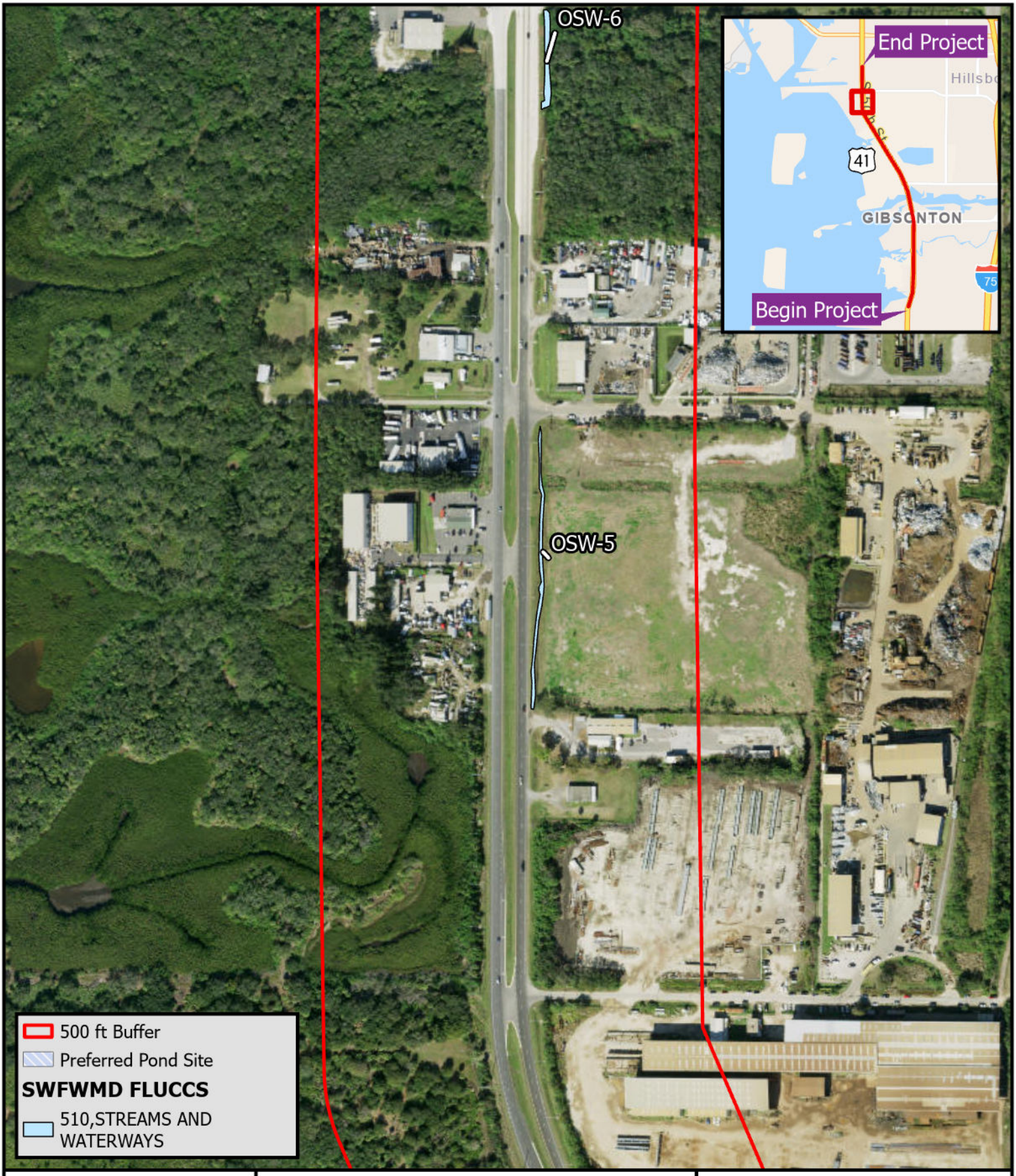
FPID: 430056-1-22-01

Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400 Feet



US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

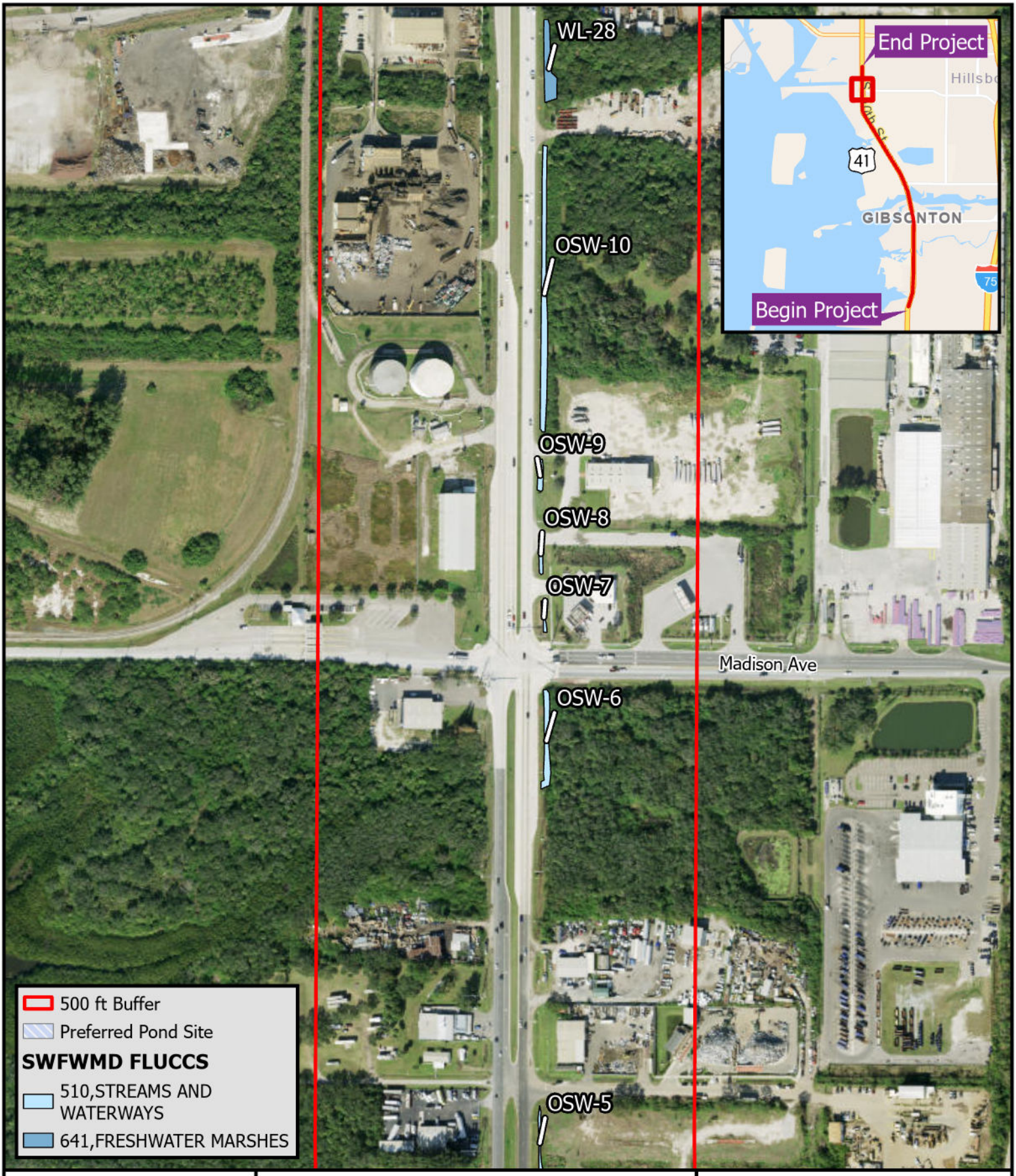
FPID: 430056-1-22-01

Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400 Feet



US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

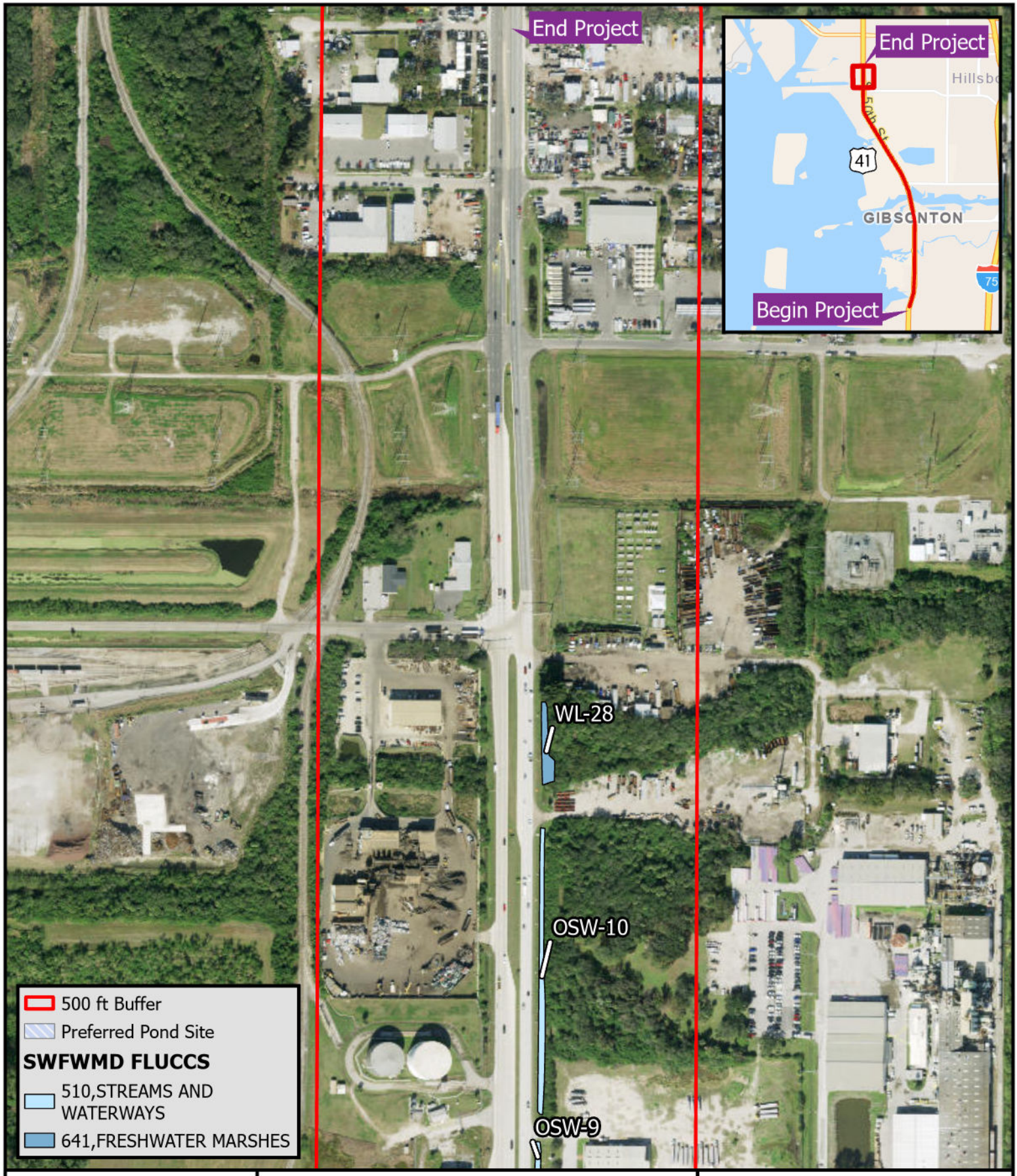
Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400

Feet



US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

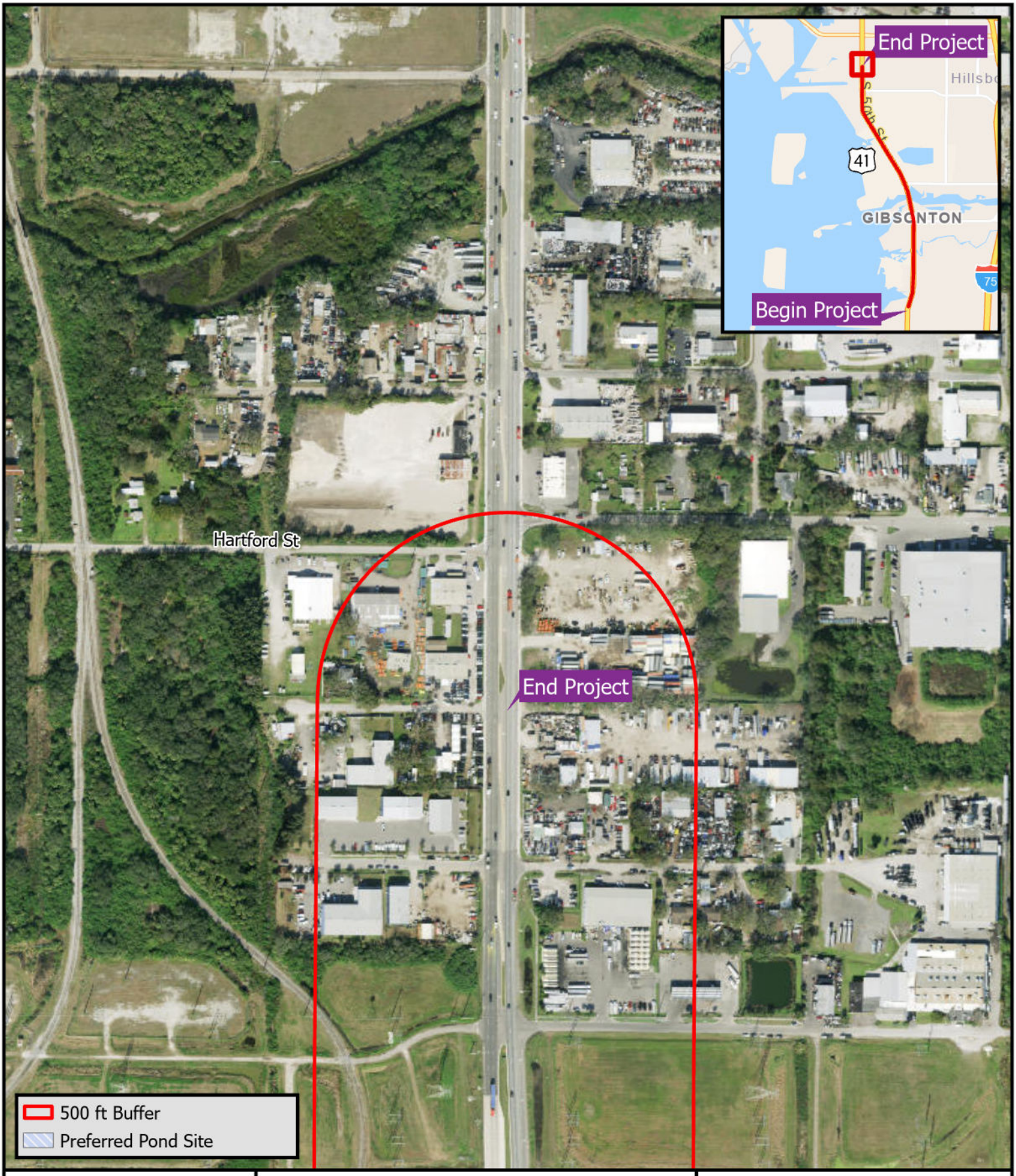
Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400

Feet



US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

Hillsborough County, FL

Wetland and Surface Water Impacts

N

0 200 400

Feet

APPENDIX R

Representative Habitat Photographs

Other Surface Water – FLUCCS 510

Surface Water – FLUCCS 510

Mangrove Swamp – FLUCCS 612

Forested Mixed Wetland – FLUCCS 630

Vegetated Non-Forested – FLUCCS 640

APPENDIX S

Representative UMAMs

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 500

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
500	Roadway Impact	Impact	0.1

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Alafia River	3F	N/A

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

This impact is a borrow pit that has filled with marine waters and is connected to the Alafia River via a culvert.

Assessment area description

This area is a borrow pit that has filled with marine waters.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The Alafia River into which this impact connects.	Borrow ponds are common. This is more uncommon for its marine conditions.

Functions	Mitigation for previous permit/other historic use
This small pond can serve as refugia for fry or other fauna.	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)
Fish, insects, avifauna	Wading birds

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

Additional relevant factors:

N/A

Assessment conducted by:	Assessment date(s):
Sophi Hayes and Greg White	24-Dec

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 500
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Sophi Hayes and Greg White	Dec-24

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	This impact is a borrow pit that has filled with marine waters and is connected to the Alafia River via a culvert.	8	8
.500(6)(b)Water Environment (n/a for uplands)	This area is a borrow pit that has filled with marine waters.	8	8
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	This small pond can serve as refugia for fry or other fauna.	9	9

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.83	0.83

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

For impact assessment areas
FL = delta x acres = 0

Delta = [with-current]
0

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

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

Form 62-345.300(2) [effective date 02-04-2004]
Incorporated by reference in paragraph 62-345.300(3)(b), F.A.C.

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 510

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
510	E1UBL	Impact	1.48

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Alafia River	3F	N/A

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

The surface water impacts are shading and new bulkheads.

Assessment area description

The streams are meandering, brackish, and salt gradients vary with the tide. Some have been impacted by excavation and channelization to service residential and industrial developments.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The streams meander through mangrove swamps and drain into the Hillsborough Bay lobe of Tampa Bay.	These types of brackish streams commonly move through the mangroves, and into now developed lands.

Functions	Mitigation for previous permit/other historic use
Provides drainage of uplands, stormwater into the bay. Fish habitat. Wildlife support to faunal species.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Wading birds, alligators.	Wading birds

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

A bald eagle was observed soaring over Bullfrog Creek.

Additional relevant factors:

N/A

Assessment conducted by:	Assessment date(s):
Sophi Hayes and Greg White	24-Dec

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 510
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Sophi Hayes and Greg White	Dec-24

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

.500(6)(a) Location and Landscape Support	w/o pres or current: 8	with: 8
The streams are brackish snd meandering, with salinity gradients that vary with tide and weather. Streams meander through mangrove swamps, adjoining low technology commercial operations and residential areas, and drains into the Hillsborough Bay lobe of Tampa Bay.		
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 8	with: 8
Provides drainage of uplands, stormwater into the bay. The salinity gradients vary with tide and weather.		
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 9	with: 9
This system provides fish habitat and wildlife support to faunal species. Expected species include wading birds and alligators.		

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.83	0.83

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

For impact assessment areas
FL = delta x acres = 0 x 1.48 = 0

Delta = [with-current]
0

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

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 510 OSW

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
510	Roadway Impact OSW	Impact	0.76

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Alafia River	3F	N/A

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

These impacts are to roadside ditches. They are predominantly covered with cattails (*Typha latifolia*).

Assessment area description

These are roadside ditches, created to move surface stormwater runoff, with some small retention volume.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
There is an adjacent transmission and local power line, on a berm. There are mangroves to the west.	This is not unique.

Functions	Mitigation for previous permit/other historic use
This provides some stormwater storage, residence time allows some sedimentation and nutrient removal, though the latter is minimal.	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)
Wading birds, small mammals, insects	Wading birds

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

Additional relevant factors:

N/A

Assessment conducted by:	Assessment date(s):
Sophi Hayes and Greg White	24-Dec

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 510 OSW
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Sophi Hayes and Greg White	Dec-24

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

	w/o pres or current	with	
.500(6)(a) Location and Landscape Support	2	0	These are roadside ditches. There are adjacent transmission and local power lines, on a berm. There are mangroves to the west.
.500(6)(b)Water Environment (n/a for uplands)	2	0	These are roadside ditches to move surface stormwater runoff, with some small retention volume.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	5	0	These ditches are predominantly covered with cattails (*Typha latifolia*).

510

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.30	0

Delta = [with-current]
0.3

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

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

For impact assessment areas
FL = delta x acres = 0.3 X 0.76 = 0.23

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

Form 62-345.300(2) [effective date 02-04-2004]
Incorporated by reference in paragraph 62-345.300(3)(b), F.A.C.

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 530

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
500	Roadway Impact	Impact	0.87

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Alafia River	3F	N/A

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

This impact is a pond that is hydrologically connected to bay waters through a series of dug canals. It is also connected to neighboring wetlands.

Assessment area description

This pond receives stormwater from the roadway and well drilling business to the east. It has an area of higher elevation with some small shrub species on the southern end.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Dug creek to the south	This pond is not unique to the area.

Functions	Mitigation for previous permit/other historic use
This small pond can serve as refugia for fry or other fauna.	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)
Fish, insects, avifauna	Wading birds

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

Additional relevant factors:

N/A

Assessment conducted by:	Assessment date(s):
Sophi Hayes and Greg White	24-Dec

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 540
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Sophi Hayes and Greg White	Dec-24

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

.500(6)(a) Location and Landscape Support	w/o pres or current: 5	with: 0	The pond is hydrologically connected to bay waters through a series of dug canals.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 3	with: 3	This pond receives stormwater from the roadway and well drilling business to the east. The water quality would be diminished due to impacts from the neighboring business and road runoff.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 2	with: 0	There is an area of higher elevation with some small shrub species on the southern end of the pond. The edges are lined by wetland on the north, west, and southern side.

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.33	0.1

Delta = [with-current]
0.23

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

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

For impact assessment areas
FL = delta x acres = 0.20

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 612

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
612	Pond Impacts	Impact	0.12

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Alafia River	3F	N/A

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

This impact is the edge of a continuous mangrove swamp that has been divided by historical ditches for stormwater and flood control, as well as mosquito control. This mangrove patch has large areas excavated both north (20-ft x 330-ft) and south (70-ft x 800-ft).

Assessment area description

This impact area is natural mangrove forest. The system is stressed by surrounding excavation, being the upland side of the mangrove swamp.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The regional patch of mangroves, of which this impact is a part; is a significant landscape feature.	This mangrove system is not unique and is relatively continuous on natural coastlines in this region.

Functions	Mitigation for previous permit/other historic use
The area of impact is slightly more elevated than the system as you move west. This limits some of the functions that mangroves provide relative to water values. The systems provide a physical buffer to storms, soil retention, and habitat.	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)
Warblers, vireos, use mangrove swamps. No wading bird nests, or rookeries, were observed.	Wading birds

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

A bald eagle was observed soaring over Bullfrog Creek.

Additional relevant factors:

N/A

Assessment conducted by:	Assessment date(s):
Sophi Hayes and Greg White	24-Dec

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 612
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Sophi Hayes and Greg White	Dec-24

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

.500(6)(a) Location and Landscape Support w/o pres or current: 7 — with: 0	This impact is the edge of a continuous mangrove swamp that has been divided by historical ditches for stormwater and flood control, as well as mosquito control. This mangrove patch has large areas excavated both north (20-ft x 330-ft) and south (70-ft x 800-ft). The system is stressed by surrounding excavation, being the upland side of the mangrove swamp.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current: 7 — with: 0	The area of impact is slightly more elevated than the system as you move west. This limits some of the functions that mangroves provide relative to water values. At high tide, these mangroves are marine systems. They are exposed at low tide; depending on the weather (mid June-September), these systems become freshwater from groundflow.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current: 5 — with: 0	Warblers, vireos, use mangrove swamps. No wading bird nests, or rookeries, were observed. Mangoves are infected with CNP.

Score = sum of above scores/30 (if uplands, divide by 20)	If preservation as mitigation,	For impact assessment areas
current or w/o pres: 0.63 — with: 0	Preservation adjustment factor =	FL = delta x acres = 0.63 x 0.12 = 0.076
	Adjusted mitigation delta =	

Delta = [with-current]	If mitigation	For mitigation assessment areas
0.63	Time lag (t-factor) =	RFG = delta/(t-factor x risk) =
	Risk factor =	

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 630

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
630	Pond Impacts	Impact	3.41

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Alafia River	3F	N/A

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

These impacts are to wetlands that are on the edge of a mangrove gorest and within a larger wetland forested system.

Assessment area description

These systems are mixed wetland forests with live oaks (*Quercus virginiana*), sabal palms (*Sabal palmetto*), and saw palmetto (*Serenoa repens*), and Brazilian pepper (*Schinus terebenthifolia*).

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Mangroves to the west have extensive ditching for mosquito control. The eastern edges are either medium density, low income, residential or the phosphate mining operation.	This wet forest system is less common along the project study area, as it naturally merges into uplands, which have been developed.

Functions	Mitigation for previous permit/other historic use
This wet forest functions in water quality protections, flood and storm protection, wildlife function, with a population of small 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)
This forest has a good population of songbirds and small mammals.	N/A

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

Additional relevant factors:

N/A

Assessment conducted by:	Assessment date(s):
Sophi Hayes and Greg White	24-Dec

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 630
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Sophi Hayes and Greg White	Dec-24

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	These impacts are to part of a larger mixed forested wetland system and the edge of a mangrove forest. There is an extensive mangrove system to the west, towards the bay, and to the east is medium density, low income residential housing, as well as phosphate mining operations.	8	0
.500(6)(b)Water Environment (n/a for uplands)	These systems are seasonally inundated and flood during high rainfall events. Standing water does not last long, and the systems become drier when transitioning to upland.	8	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	These systems have a mix of live oaks (*Quercus virginiana*), sabal palms (*Sabal palmetto*), with Brazilian pepper (*Schinus terebinthifolia*) on the upland edge. There is minimal herbaceous layer. This forest has a good population of songbirds and small mammals. This impact is in a mixed wetland forest with live oaks *(Quercus virginiana*), sabal palms (*Sabal palmetto*), and saw palmetto (*Serenoa repens*).	5	0

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.70	0

Delta = [with-current]
0.7

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

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

For impact assessment areas
FL = delta x acres = 0.70 x 3.41 = 2.4

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 640

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
640	Roadway Impact	Impact	0.03

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Alafia River	3F	N/A

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

These systems are just off the toe of slope for the roadside berm. The areas slope into a low point as the result of excavation for road and railroad 100-ft away.

Assessment area description

This impact areas have occasional sabal palms (*Sabal palmetto*), and dominantly Brazilian pepper (*Schinus terebinthifolia*).

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
There is a railroad to the east, used for moving materials for phosphate extraction. The system continues to the south narrowing and the roadway and rail get closer, until all the land is managed. To the north the system widens until it ends at a mowed area with well heads.	This is not a unique landscape elements. It exists because of the elevation changes associated with the bridge construction and soil laced outside abutments.

Functions	Mitigation for previous permit/other historic use
This impact area is de minimis in function it provides because of size and the low quality of the system.	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)
Songbirds, lizards, and small mammals use this system for forage and cover.	Wading birds

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

Additional relevant factors:

N/A

Assessment conducted by:	Assessment date(s):
Sophi Hayes and Greg White	24-Dec

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 640
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Sophi Hayes and Greg White	Dec-24

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	These wetland impacst are just off the toe of slope for the roadside berm. The areas slope into a low point as the result of excavation for road and railroad 100-ft away. There is a railroad to the east, used for moving materials for phosphate extraction. The system continues to the south narrowing and the roadway and rail get closer, until all the land is managed. To the north the system widens until it ends at a mowed area with well heads.	3	0
.500(6)(b)Water Environment (n/a for uplands)	This systems are inundated seasonally and at king tide.	3	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	This impact areas are either covered with Brazilian pepper (*Schinus terebinthifolia*) or have occasional sabal palms (*Sabal palmetto*) mized into the Brazilian pepper.	1	0

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.23	0

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

For impact assessment areas
FL = delta x acres = 0.23 x 0.03 = 0.007

Delta = [with-current]
0.23

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

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

Form 62-345.300(2) [effective date 02-04-2004]
Incorporated by reference in paragraph 62-345.300(3)(b), F.A.C.

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 641

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
641	Roadway Impact	Impact	0.31

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Alafia River	3F	N/A

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

The impact areas are either dominated by Brazilian pepper (*Schinus terebenthifolia*) or have a mix of Brazilian pepper and young cabbage palms (*Sabal palmetto*). Some systems are shallow ditches dug for drainage purposes.

Assessment area description

These systems are predominantly Brazilian pepper, with occasional young sabal palms and emergent vegetation.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
There is mixed wetland forest immediately east, and phosphate mining operation 1,400 ft east.	The systems are part of a larger patch along the roadway or isolted within pasture. The system is not unique within the region.

Functions	Mitigation for previous permit/other historic use
This system offers support to songbirds, small mammals, lizards, crabs, and insects.	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)
Songbirds, small mammals, lizards, crabs, and insects.	Wading birds

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

Additional relevant factors:

N/A

Assessment conducted by:	Assessment date(s):
Sophi Hayes and Greg White	24-Dec

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 641
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Sophi Hayes and Greg White	Dec-24

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	These impact areas have a mixf Brazilian pepper (*Schinus terebinthifolia*), and young sabal palms (*Sabal palmetto*), at the top of slope going down to wetland shrubs. There are neighboring depressional ponds, wetland forests, and mining lands. One system was dug for drainage of adjoining lands historically used for cattle and is continuously maintained.	4	0
.500(6)(b)Water Environment (n/a for uplands)	These systems vary in inundation periods. The water quality is most probably degraded due to runoff from the abutting roadway.	4	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	These impact areas have a mix of Brazilian pepper (*Schinus terebinthifolia*), young sabal palms (*Sabal palmetto*), and emergent vegetation going to wetland shrubs. There are mangroves to the northeast of the impact. These systems provide forage and wildlife support to small mammals, birds, lizards, reptiles, and insects.	3	0

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.37	0

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

For impact assessment areas
FL = delta x acres = 0.37 x 0.32 = 0.12

Delta = [with-current]
0.37

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

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

Form 62-345.300(2) [effective date 02-04-2004]
Incorporated by reference in paragraph 62-345.300(3)(b), F.A.C.

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 642

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
642	Roadway Impact	Impact	0.31

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Alafia River	3F	N/A

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

These wetlands either have a mix of, or are dominated by, Brazilian pepper (*Schinus terebenthifolia*). They are off the toe slopes for roadside berms or at the edge of remnant mixed forests. They connect into marsh and mangroves towards the bay.

Assessment area description

The impact areas are covered with Brazilian pepper (*Schinus terebinthifolia*), and occasional sabal palm (*Sabal palmetto*).

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Railroad and phosphate mining operations to the east, the bay to the west.	This system is not unique.

Functions	Mitigation for previous permit/other historic use
These impact areas are *de minimis* in function it provides because of size and the low quality of the system.	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)
Songbirds, lizards, and small mammals use this system for forage and cover.	Wading birds

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

Additional relevant factors:

N/A

Assessment conducted by:	Assessment date(s):
Sophi Hayes and Greg White	24-Dec

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 642
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Sophi Hayes and Greg White	Dec-24

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

.500(6)(a) Location and Landscape Support	w/o pres or current: 3	with: 0
This impact is to FLUCCS mapped Saltwater Marshes. These wetland systems are mostly off the toe of slope for the roadside berms, where the areas slope into a low point as the result of excavation for the road and railroads close by. These wetlands are nearby to phosphate mining operations.		
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 3	with: 0
These areas are only inundated during high rainfall events.		
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 2	with: 0
The impact areas are covered with Brazilian pepper (*Schinus terebinthifolia*), and occasional sabal palm (*Sabal palmetto*). Songbirds, lizards, and small mammals use this system for forage and cover.		

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres: 0.27	with: 0

Delta = [with-current]
0.27

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

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

For impact assessment areas
FL = delta x acres = 0.27 X 0.312 = 0.084

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

Form 62-345.300(2) [effective date 02-04-2004]
Incorporated by reference in paragraph 62-345.300(3)(b), F.A.C.

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 642

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
642	Pond Impacts	Impact	0.93

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Alafia River	3F	N/A

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

The systems are at the edges of remnant mixed forests and going into saltwater rivulets and ponds, and a wandering landscape of mangroves.

Assessment area description

The impact areas are either a majoritively mesic to salt system or comprised of Brazilian pepper (*Schinus terebinthifolia*) and occasional sable palms (*Sabal palmetto*). The eastern edges move into upland, with oaks (*Quercus spp* .). Trees are mature. Due to spring tides overflooding this system, there is naturally no herbaceous layer.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
There is a truck and tractor repair facility immediately east. The continuous mangrove and marsh systems are north, south, and west. The phosphate mining is to the east.	This is not unique.

Functions	Mitigation for previous permit/other historic use
This system provides storm protection, shoreline stabilization, and wildlife habitats. Impacts are *de minimis* in function due to the size and low quality.	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)
Warblers, vireos, use mangrove swamps. No wading bird nests, or rookeries, were observed.	Wading birds

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

Additional relevant factors:

N/A

Assessment conducted by:	Assessment date(s):
Sophi Hayes and Greg White	24-Dec

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 642
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Sophi Hayes and Greg White	Dec-24

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

.500(6)(a) Location and Landscape Support	w/o pres or current: 9	with: 0	Impacts are to edges of remnant mixed forest and active mixed forest. There are truck and tractor repair facilities and phosphate mining operations east of these impacts. Impact areas are surrounded by saltwater rivulets, ponds and a wandering landscpae of mangroves, as well as a drainage canal.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 8	with: 0	This system is inundated with the king tide and seasonal high water levels. Abutting phosphate mining operations and drainage canals decrease the water quality and function.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 6	with: 0	Warblers, vireos, use mangrove swamps. No wading bird nests, or rookeries, were observed. This impact area is to a majoritively mesic to salt system. The eastern edge moves into upland, with oaks (*Quercus spp*.). Trees are mature. Due to spring tides overflooding this system, there is naturally no herbaceous layer. There is Brazilian pepper (*Schinus terebenthifolia*) within the systems.

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres: 0.77	with: 0

Delta = [with-current]
0.77

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

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

For impact assessment areas
FL = delta x acres = 0.77 x 0.93 = 0.72

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 644

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
644	Roadway Impact	Impact	0.52

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Alafia River	3F	N/A

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

This impact is a constructed pond, originally to assist in stormwater drainage from adjacent properties.

Assessment area description

The system has emergent plants such as pickerel weed (*Pontederia cordata*), some willow (*Salix spp*.), and sabal palms (*Sabal palmetto*) on its edges. The system is highly eutrophic with robust algae.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
This impact is within a mixed forest of live oak (*Quercus virginiana*) and sabal palm, from which it has been cleared.	There are several similarly constructed ponds within the surrounding development.

Functions	Mitigation for previous permit/other historic use
Due to the elevated population of algae this impact area may provide a source for insects laying aquatic eggs, but not any birds or mammal support.	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)
Insects	Wading birds

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

A bald eagle was observed soaring over Bullfrog Creek.

Additional relevant factors:

N/A

Assessment conducted by:	Assessment date(s):
Sophi Hayes and Greg White	24-Dec

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 644
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Sophi Hayes and Greg White	Dec-24

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

.500(6)(a) Location and Landscape Support	w/o pres or current: 3	with: 0	This impact is a constructed pond, originally to assist in stormwater drainage from adjacent properties. This impact is within a mixed forest of live oak (*Quercus virginiana*) and sabal palm (*Sabal palmetto*), from which it has been cleared.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 2	with: 0	This system is highly eutrophic with robust algae. There are expected low levels of dissolved oxygen, which suffocates aquatic species and prevents growth of SAV.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 1	with: 0	Due to the elevated population of algae this impact area may provide a source for insects laying aquatic eggs, but not any birds or mammal support. The system has emergent plants such as pickerel weed (*Pontederia cordata*), some willow (*Salix spp*.), and sabal palms on its edges. The system is highly eutrophic with robust algae.

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres: 0.2	with: 0

Delta = [with-current]
0.2

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

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

For impact assessment areas
FL = delta x acres = 0.2 x 0.15 = 0.03

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 644

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
644	Pond Impact	Impact	0.11

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Alafia River	3F	N/A

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

This wetland impact is a low point in a cleared and scraped piece of property. The land has been continuously cleared of even herbaceous vegetation since 2023.

Assessment area description

This wetland has less than 20% invasive pioneer vegetation. It is a low point in a cleared piece of property.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
There is mangrove swamp to the west. Medium density residential north and south.	This property being stripped of all vegetation is unique, but offers no landscape support.

Functions	Mitigation for previous permit/other historic use
No ecological functions.	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)
The hedges on the edges of the property may offer cover for songbirds and small lizards.	Wading birds

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

Additional relevant factors:

N/A

Assessment conducted by:	Assessment date(s):
Sophi Hayes and Greg White	24-Dec

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 from Kracker Ave to south of SR 676	Unsubmitted	FLUCCS 644
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Sophi Hayes and Greg White	Dec-24

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

.500(6)(a) Location and Landscape Support w/o pres or current: 1 — with: 0	This wetland impact is a low point in a cleared and scraped piece of property. The land has been continuously cleared of even herbaceous vegetation since 2023. There is mangrove swamp to the west. Medium density residential north and south.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current: 1 — with: 0	This low spot is inundated most of the year, though water quality is low due to the aggressive development of the surrounding areas.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current: 0 — with: 0	This wetland has less than 20% vegetauon cover, the remainder being exposed soils. The soils are not developed wetland soils, and the first sverl inches is particualte wash-in from surrouding activity. The dominant vegetion is invasive pioneer species. It is a shallow depression in a cleared piece of property, that has been scraped to expsoed soils.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.07	0

Delta = [with-current]
0.07

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

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

For impact assessment areas
FL = delta x acres = 0.07 x 0.11 = 0.0077

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

Mitigation Determination Formulas
(See subsection 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)

If the acreage of mitigation proposed is known:

(FG) Functional Gain = Relative Functional Gain X Mitigation acres

(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 Areas	RFG	X	Acres	=	Credits
SW 1					
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 assess accordance with this rule, is equal to the summation of the calculated functional loss for each impact ass

Impact Assesment Area	FL	=	Credits needed
Wetlands	3.52		3.52
Surface Waters	0.37		0.37
Other Surface Waters	0		0
total	**3.89**		**3.89**

(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).

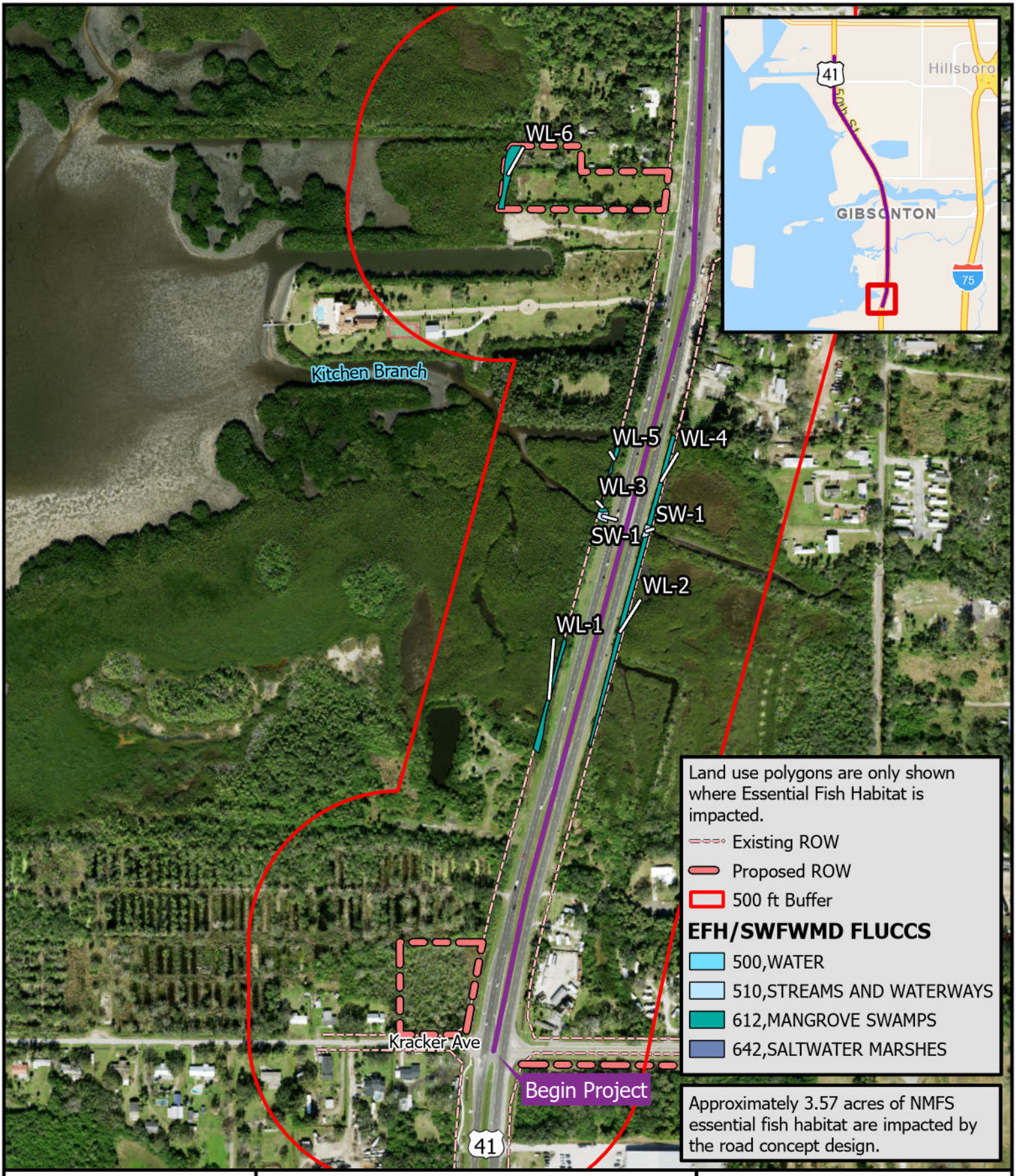
	FL	/	RFG	=	Acres of Mitigation
example SW 1					

If there are multiple impact assessment areas and/or multiple mitigation assessment areas to offset thos the proposed mitigation acreage is a given, then the summation of the appropriate functional gain (FG) m to or greater than the summation of respective functional losses (FL)

	example	FL	<	FG
impact	SW 1			
mitigation				
summation				

Form 62-345.300(3) [effective date 09-12-2007]
Incorporated by reference in paragraph 62-345.300(3)(

APPENDIX T EFH Map



US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

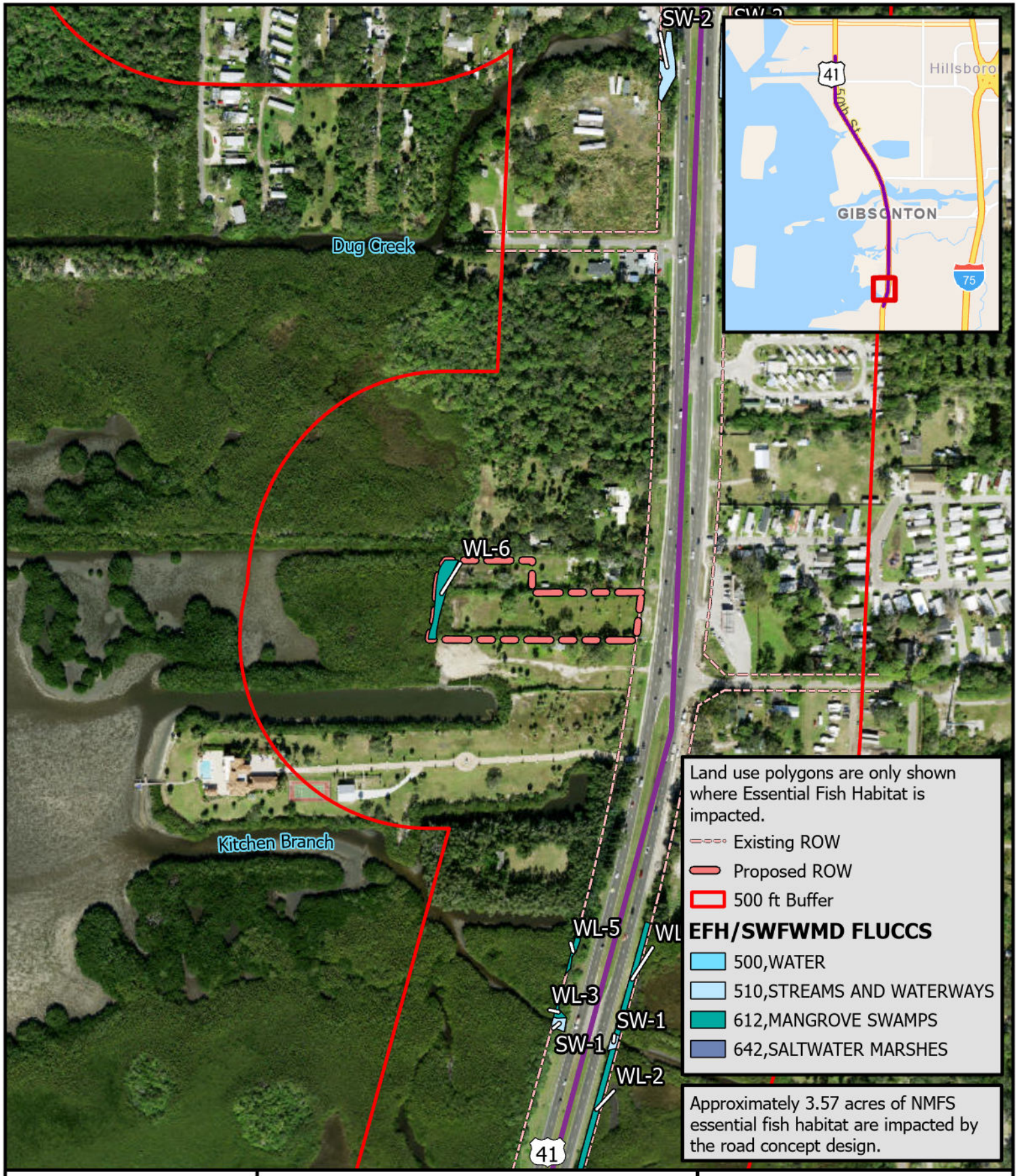
Hillsborough County, FL

NMFS Essential Fish Habitat

N

0 150 300

Feet



FDOT

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from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

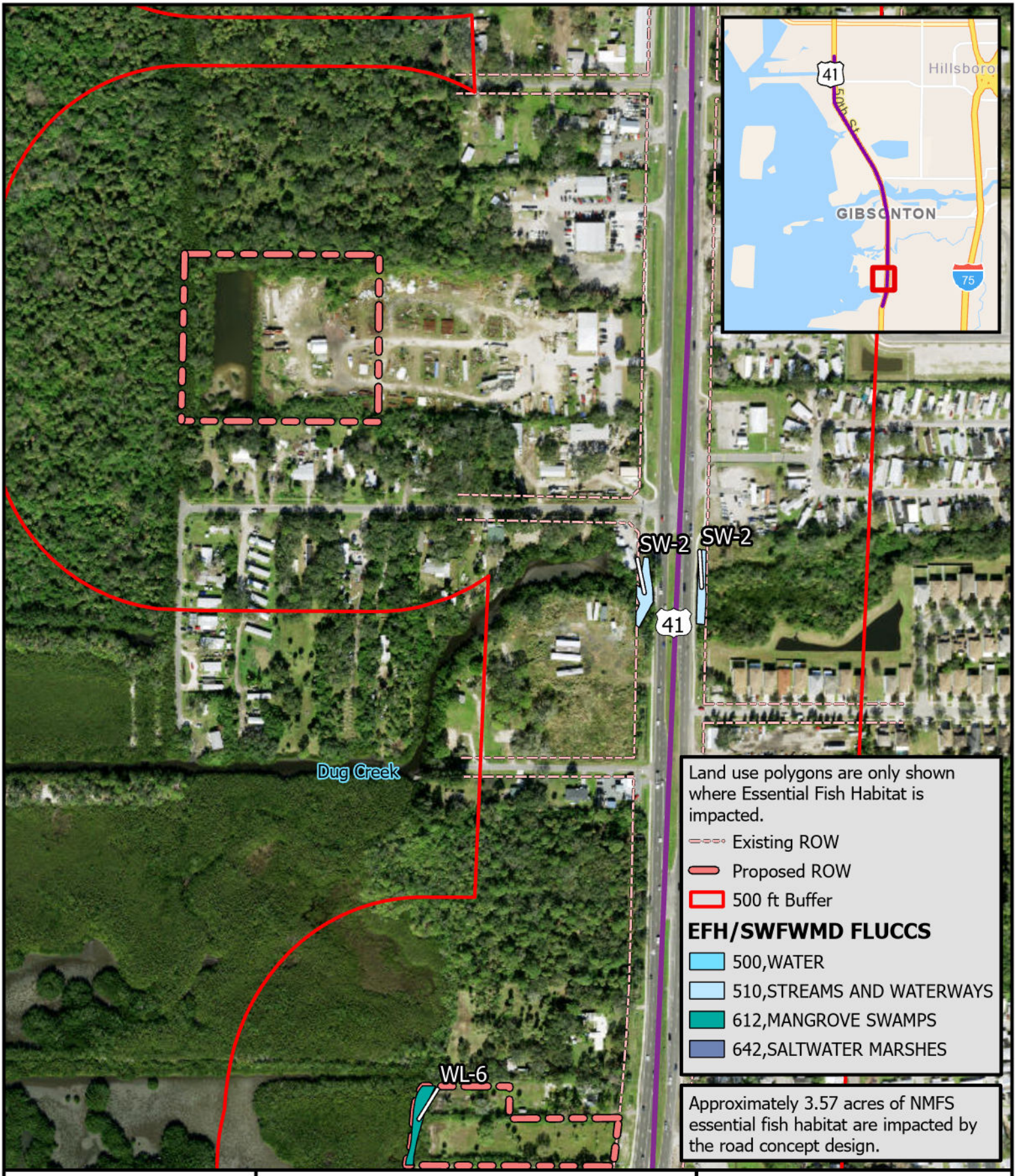
Hillsborough County, FL

NMFS Essential Fish Habitat

N

0 150 300

Feet



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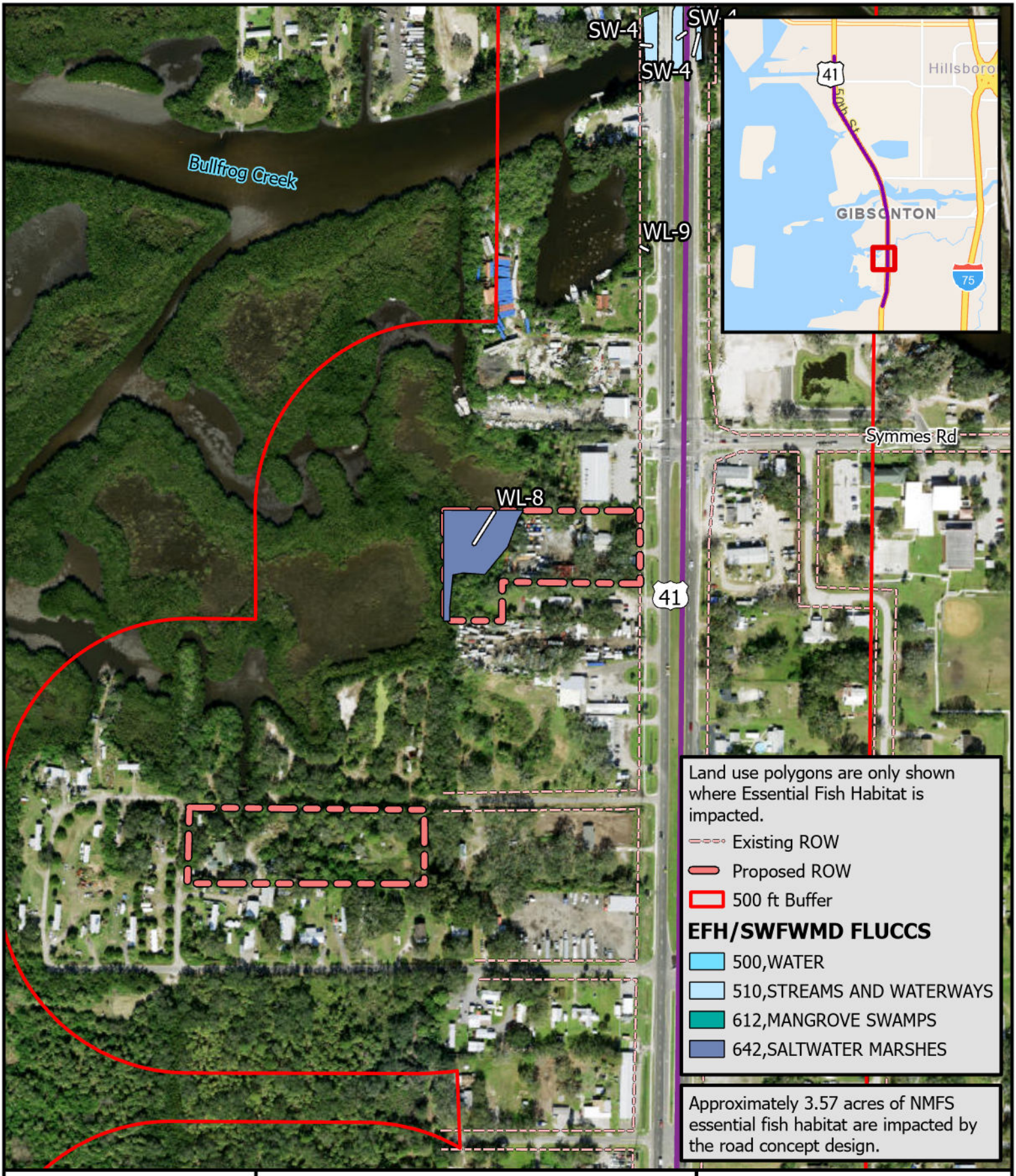
Hillsborough County, FL

NMFS Essential Fish Habitat

N

0 150 300

Feet



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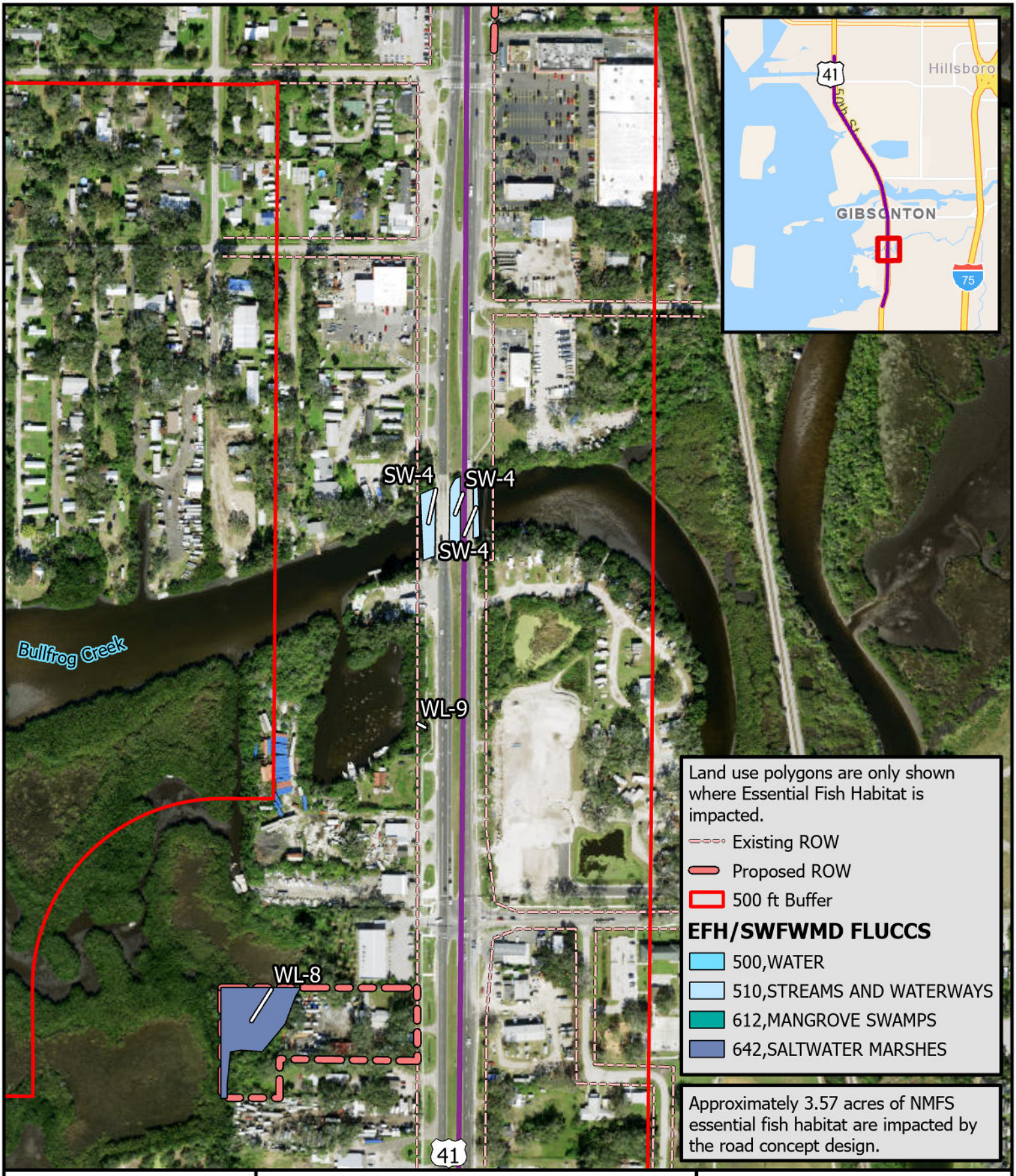
Hillsborough County, FL

NMFS Essential Fish Habitat

N

0 150 300

Feet



FDOT

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from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

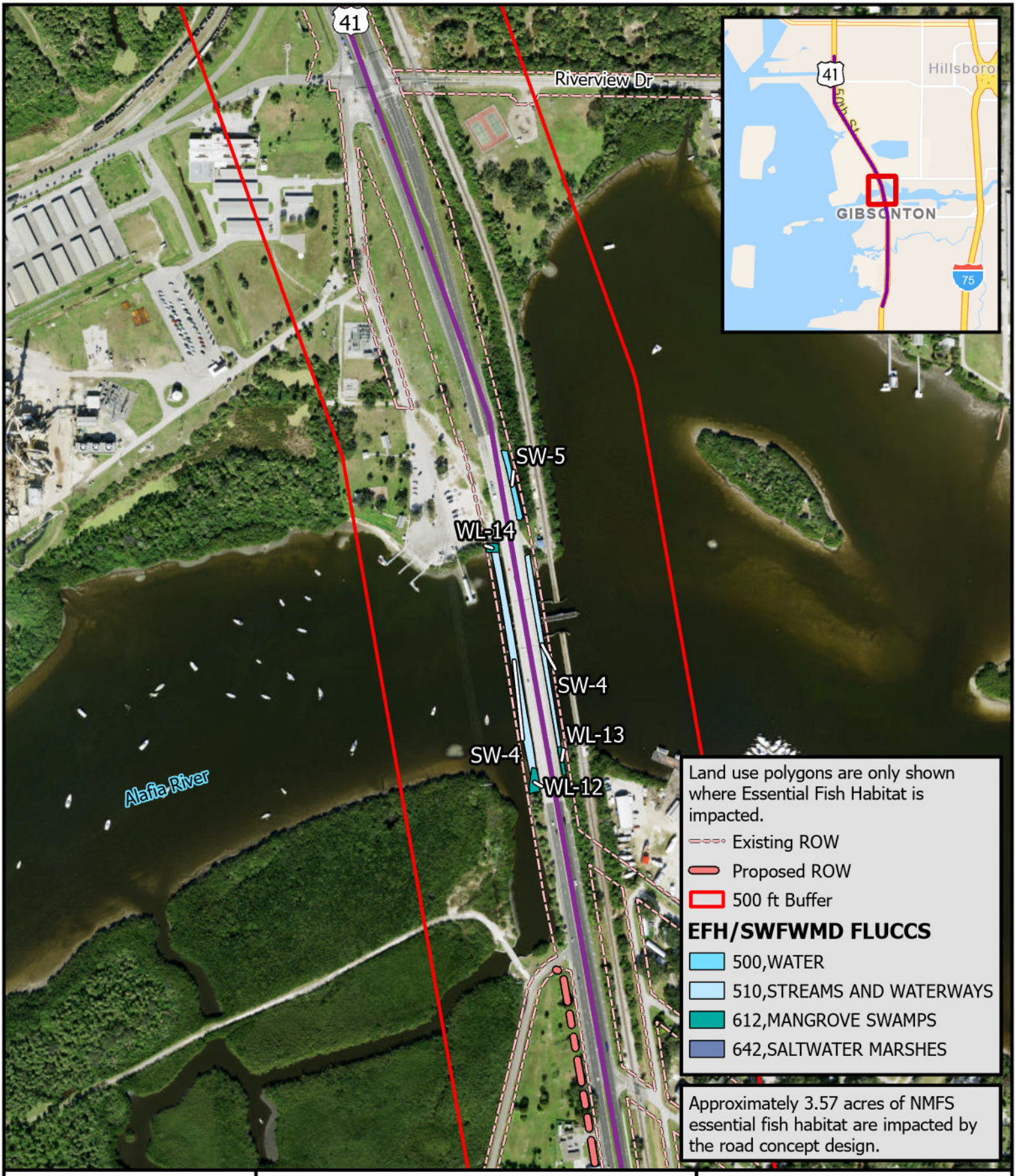
Hillsborough County, FL

NMFS Essential Fish Habitat

N

0 150 300

Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

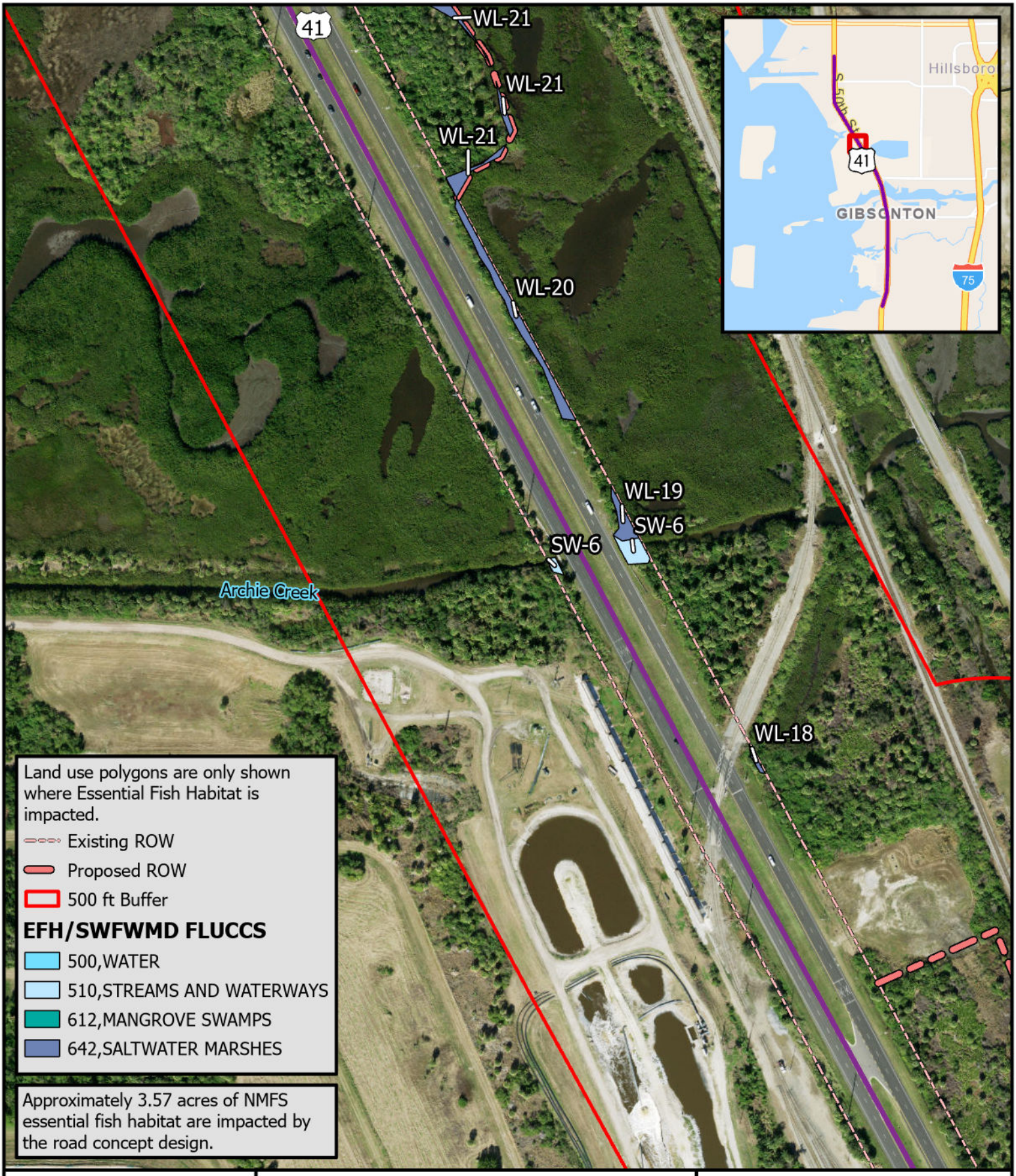
Hillsborough County, FL

NMFS Essential Fish Habitat

N

0 150 300

Feet



FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

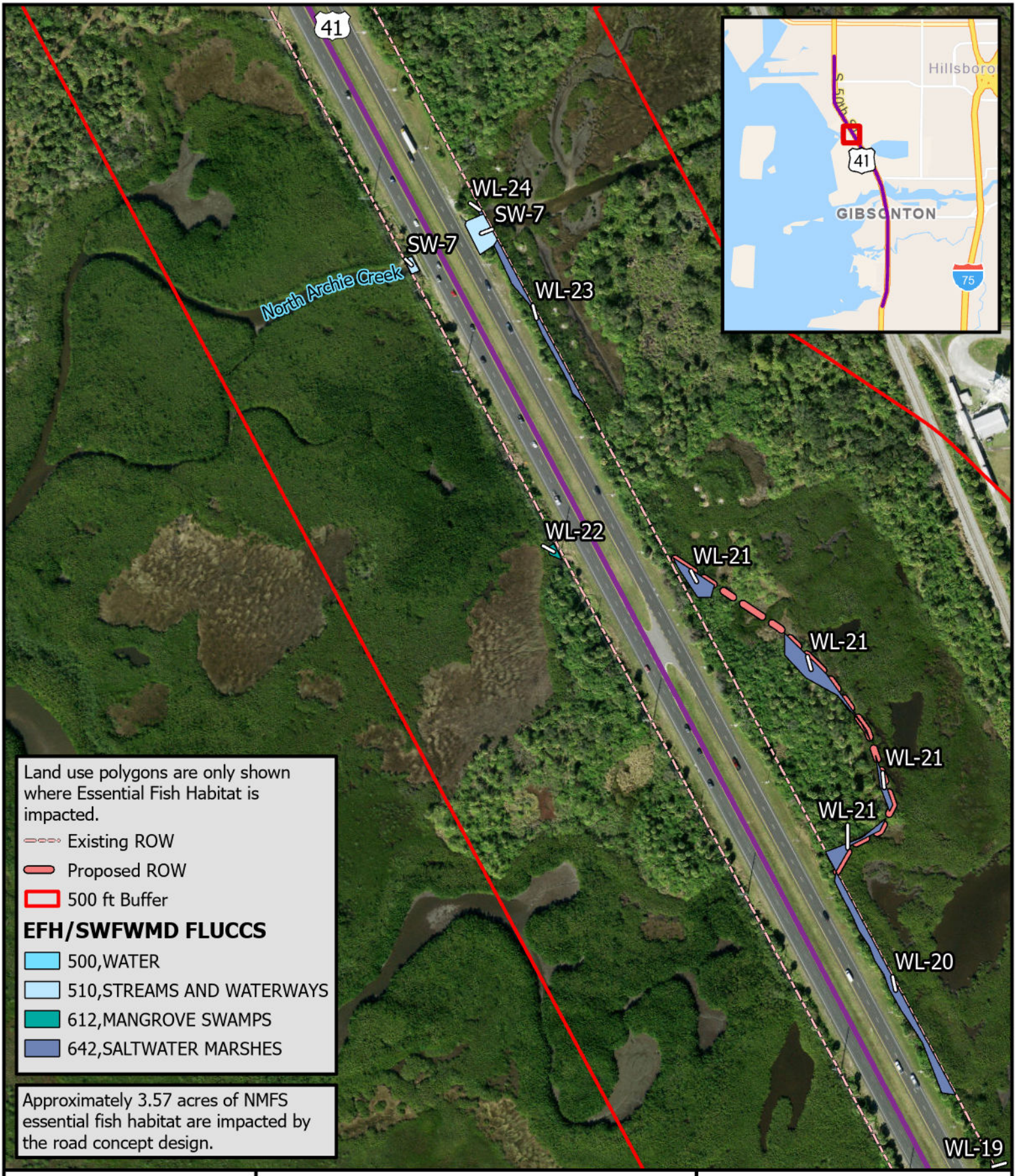
Hillsborough County, FL

NMFS EFH Impacts

N

0 150 300

Feet



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FPID: 430056-1-22-01

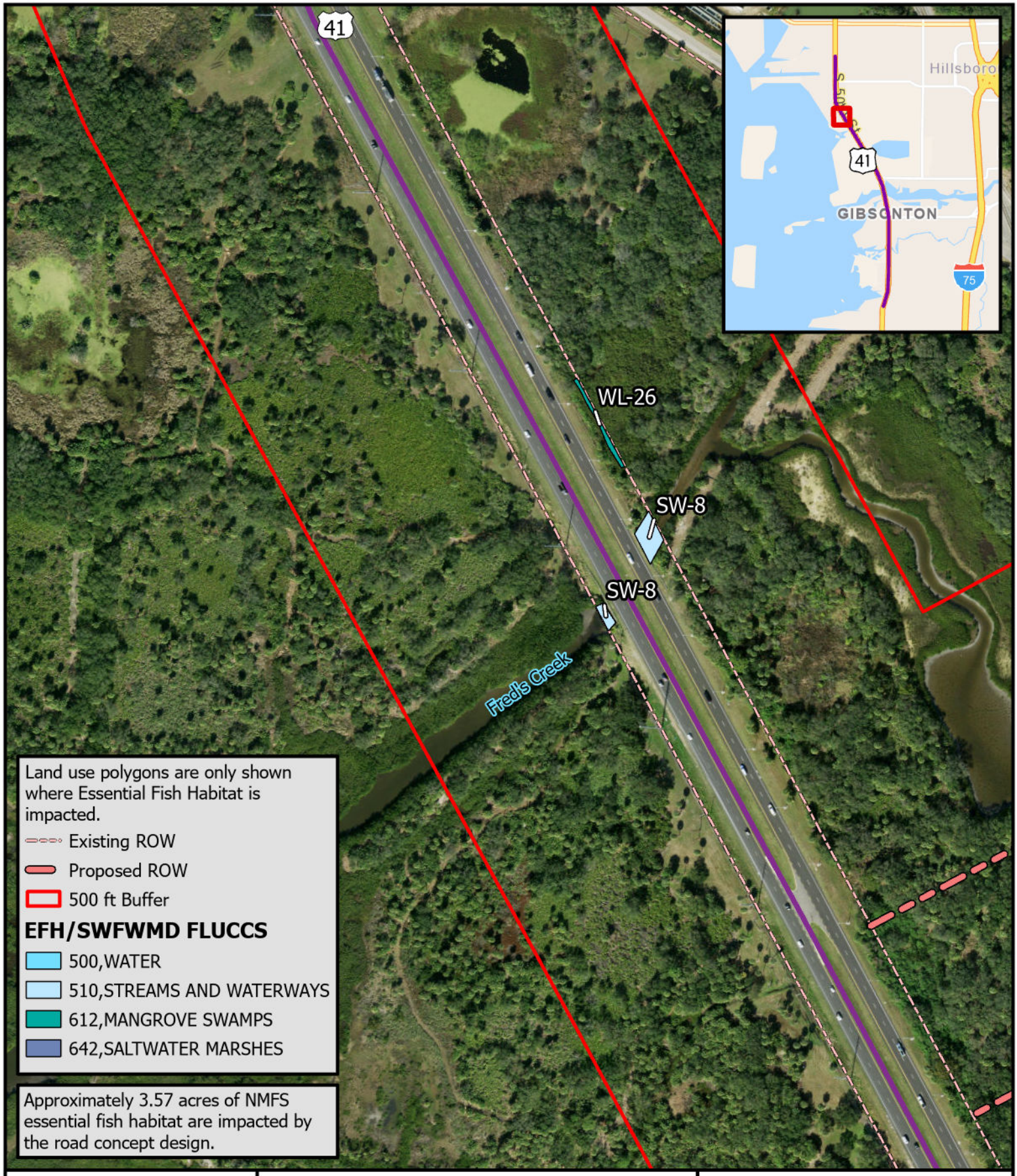
Hillsborough County, FL

NMFS EFH Impacts

N

0 150 300

Feet



Land use polygons are only shown where Essential Fish Habitat is impacted.

- Existing ROW
- Proposed ROW
- 500 ft Buffer

EFH/SWFWMD FLUCCS

- 500,WATER
- 510,STREAMS AND WATERWAYS
- 612,MANGROVE SWAMPS
- 642,SALTWATER MARSHES

Approximately 3.57 acres of NMFS essential fish habitat are impacted by the road concept design.

FDOT

US 41 PD&E Study

from Kracker Ave to South of Causeway Blvd

FPID: 430056-1-22-01

Hillsborough County, FL

N

NMFS EFH Impacts

0 150 300 Feet