Natural Resources Evaluation Report

Florida Department of Transportation

District One

SR 35 (US 98) PD&E Study

Limits of Project: From North of West Socrum Loop Road to South of CR 54

Polk County, Florida

Financial Management Number: 436673-1-22-01

ETDM Number: 14334

Date: November 2021

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

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Project Development and Environment (PD&E) Study
From North of West Socrum Loop Road to South of CR 54

FPID 436673-1
ETDM Project No. 14334
Polk County, Florida

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Prepared for:

Florida Department of Transportation
District One

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November 2021

EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT) District One is conducting a Project Development and Environment (PD&E) study along State Road 35/US Highway 98 (US 98) in Polk County to evaluate roadway and safety improvements along the corridor. The study limits extend for 8.7 miles from north of West Socrum Loop Road to south of County Road 54 (CR 54), near the Pasco County line. The study will evaluate the effects of widening this section of US 98 from a two-lane undivided roadway to a four-lane divided roadway and will also assess existing and future traffic operations, access management, and freight mobility.

The PD&E study is supported by preliminary engineering design activities and will determine the proposed build alternative, which will be depicted on typical roadway sections and conceptual design plans. The build alternative and the no-build, or "no action," alternative will be evaluated and compared to assess potential effects to the natural and physical environment, to determine their ability to meet the project's Purpose and Need, to obtain and consider agency and public comments, and to ensure compliance with all applicable federal and state laws. The proposed build alternative will include the construction of stormwater management facilities (SMFs) and floodplain compensation (FPC) sites. The no-build alternative will assume no improvements are made to the facility beyond routine roadway maintenance. A Type 2 Categorical Exclusion (Type 2 CE) is being prepared as the environmental document for this study.

A Natural Resource Evaluation (NRE) has been prepared to document and summarize the potential impacts to natural resources including federal and state protected species, wetlands, and protected lands. This report also documents measures considered to avoid, minimize, and mitigate for potential impacts.

The proposed project was evaluated for potential occurrences of federally and state listed animal and plant species in accordance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended, the Fish and Wildlife Conservation Act, the Migratory Bird Treaty Act, Part 2, Chapter 16 of the FDOT PD&E Manual, and Chapters 5B-40 and 68A-27 Florida Administrative Code (F.A.C.). Based on this evaluation, a total of 29 federally listed species and 39 state listed species were identified as potentially occurring within the project study area. Additionally, three other species were included in the analysis due to the regulatory protections associated with those species. Coordination with the National Marine Fisheries Service (NMFS) during the Efficient Transportation Decision Making (ETDM) process indicated that the proposed project would not directly impact any NMFS trust resources (i.e., Essential Fish Habitat [EFH]). Therefore, EFH was not further evaluated. **Table ES-1, ES-2**, and **ES-3** provide summaries of the federally and state listed species and other protected species with a potential to occur within the project study area, along with their corresponding effect determinations. Upon completion of evaluating and selecting the preferred SMF and FPC sites, further assessment of potential impacts to listed species will be conducted of which the results will be provided in an addendum to this report.

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The project study area was also evaluated for the presence of federally designated Critical Habitat as defined by Congress in 50 Code of Federal Regulations (C.F.R.) 17. Based on this evaluation, it was determined that no federally designated Critical Habitat is present within the project study area.

Table ES-1 Summary of Federally Listed Species Effect Determinations

Project Impact Determination	Federal Species
May affect, not likely to adversely affect	Eastern Indigo Snake (*Drymarchon couperi*) Blue-tailed Mole Skink (*Plestiodon egregious lividus*) Sand Skink (*Plestiodon reynoldsi*) Eastern Black Rail (*Laterallus jamaicensis jamaicensis*) Wood Stork (*Mycteria americana*) Everglade Snail Kite (*Rostrhamus sociabilis*)
No effect	Florida Panther (*Puma concolor coryi*) Florida Grasshopper Sparrow (*Ammodramus savannarum floridanus*) Audubon's Crested Caracara (*Caracara cheriway*) Federally listed plants

Table ES-2 Summary of State Listed Species Effect Determinations

Project Impact Determination	State Species
No adverse effect anticipated	Gopher Tortoise (*Gopherus polyphemus*) Florida Pine Snake (*Pituophis melanoleucus mugitus*) Florida Sandhill Crane (*Antigone canadensis pratensis*) Florida Burrowing Owl (*Athene cunicularia floridana*) Little Blue Heron (*Egretta caerulea*) Tricolored Heron (*Egretta tricolor*) Southeast American Kestrel (*Falco sparverius paulus*)
No effect anticipated	Short-tailed Snake (*Lampropeltis extenuate*) Least Tern (*Sternula antillarum*) State listed plants

Table ES-3 Summary of Other Protected Species Effect Determinations

Project Impact Determination	Other Protected Species
No effect anticipated	Bald Eagle (*Haliaeetus leucocephalus*) Osprey (*Pandion haliaetus*) Florida Black Bear (*Ursus americanus floridanus*)

In accordance with Presidential Executive Order 11990 entitled *Protection of Wetlands*, US Department of Transportation Order 5660.1A, *Preservation of the Nation's Wetlands* and Part 2, Chapter 9 of the FDOT PD&E Manual, the project study area was assessed for the presence of wetlands that may be impacted by proposed project activities. Based on this evaluation, a total of 65 wetlands and 92 other surface water habitats were identified within the existing right-of-way (ROW) within the proposed project limits. These wetland and surface water habitats were classified using both Florida Land Use, Cover and Forms Classification System (FLUCFCS) (FDOT, 1999) and the United States Fish and Wildlife Service's (USFWS) *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, et

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al., 1979). **Table ES-4** lists the types of wetlands and other surface waters present within the project limits by FLUCFCS and USFWS classification, along with their corresponding acreages.

Table ES-4 Wetlands and Other Surface Waters within the Limits of Mainline Widening

FLUCFCS Code (USFWS Classification)	Acres
Federally Jurisdictional Wetlands	
617 – Mixed Wetland Hardwoods (PFO1C)	2.70
621 – Cypress (PFO2C)	0.87
630 – Forested Wetland Mix (PFO1/2C)	6.18
631 – Wetland Scrub (PSS1C)	0.28
641 – Freshwater Marsh (PEM1C)	13.45
Subtotal Federally Jurisdictional Wetlands	***23.48***
Federally Jurisdictional Other Surface Waters	
510 – Streams and Waterways (PEMx)	1.87
State-only Jurisdictional Other Surface Waters	
510 – Streams and Waterways (PEMx)	4.41
TOTAL	**29.76**

Notes: PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded; PEMx = Palustrine, Emergent, Excavated; PSS1C = Palustrine, Scrub-shrub, Broad-leaved Deciduous, Seasonally Flooded.
Sources: FDOT, 1999; Cowardin *et al.,* 1979; FDA, 2021.

An additional 18 wetlands and three other surface waters were identified within the preliminarily selected SMF and FPC sites during the evaluation of the SMF and FPC site alternatives. **Table ES-5** summarizes the wetland and other surface water types identified within these areas. Upon completion of evaluating and selecting the preferred SMF and FPC sites, further assessment and delineations will be conducted of which the results will be provided in an addendum to this report.

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Table ES-5 Wetlands and Other Surface Waters within the SMF and FPC Sites

FLUCFCS Code and Description	Acres
Federally Jurisdictional Wetlands	
617 – Mixed Wetland Hardwoods (PFO1C)	0.17
621 – Cypress (PFO2C)	1.71
630 – Forested Wetland Mix (PFO1/2C)	8.91
641 – Freshwater Marsh (PEM1C)	0.56
643 – Wet Prairie (PEM1C)	0.11
Subtotal Federally Jurisdictional Wetlands	***11.46***
State-only Jurisdictional Other Surface Waters	
530 – Reservoir (POWx)	5.26
510 – Streams and Waterways (PEMx)	0.11
Subtotal State-only Jurisdictional Other Surface Waters	***5.37***
TOTAL	**16.83**

Notes: PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded; POWx = Palustrine, Open Waters, Excavated.
Sources: FDOT, 1999; Cowardin *et al.,* 1979; FDA, 2021

Potential impacts to federally jurisdictional wetlands and other surface waters include:

- 23.48 acres of direct wetland impacts
- 17.07 acres of secondary wetland impacts
- 1.87 acres of temporary other surface water impacts

Potential impacts to state jurisdictional wetlands and surface waters include:

- 4.41 acres of temporary other surface water impacts

The Uniform Mitigation Assessment Method (UMAM) was used to assess proposed mainline widening impacts to federal and state jurisdictional wetlands which resulted in a functional loss of 14.93 units resulting from direct and secondary impacts. UMAM was not used to assess impacts to federal jurisdictional other surface waters that provide potential suitable foraging habitat for the Wood Stork because no net loss of suitable foraging habitat in other surface waters is anticipated as on-site replacement will occur. State jurisdictional surface waters do not require mitigation per Section 10.2.2.2 of Applicant's Handbook Volume I. Mitigation to compensate for impacts to wetlands will be in accordance with 373.4137, Florida Statutes (F.S.) to satisfy requirements of Part IV, Chapter 373, F.S. and 33 US Code (U.S.C) Section 1344. Once the final SMF/FPC sites are selected, further UMAM analyses will be conducted, and results will be provided in an addendum to this report. Anticipated mitigation requirements to offset wetland impacts resulting from the proposed mainline widening include a total of 2.52 credits (1.21 freshwater forested credits; 1.31 freshwater herbaceous credits) within the Withlacoochee Watershed and 12.41 credits (5.93 freshwater forested credits; 6.48 freshwater herbaceous credits) within the Hillsborough River Watershed. There are several private wetland

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mitigation banks available that service the Hillsborough River and Withlacoochee Watersheds, are state and federally permitted, and provide wood stork foraging habitat. Each wetland impact will be mitigated dependent on the watershed it occurs in to satisfy state and federal mitigation requirements.

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SECTION 1 INTRODUCTION

1.1 PROJECT DESCRIPTION

The Florida Department of Transportation (FDOT) District One is conducting a Project Development and Environment (PD&E) study to evaluate capacity and safety improvements along SR 35 (US 98) from north of West Socrum Loop Road to south of CR 54 in Polk County. Throughout the remainder of this document only the US 98 designation will be used. The project limits are shown in **Figure 1-1** and the total project length is approximately 8.7 miles. The purpose of this PD&E study is to evaluate and document the benefits, costs, and impacts of widening US 98 from the existing two-lane undivided roadway to a four-lane divided roadway. US 98 is not designated as a Strategic Intermodal System (SIS) facility. The portion from West Socrum Loop Road to just north of Rock Ridge Road is functionally classified as Urban Principal Arterial Other, while the portion from just north of Rock Ridge Road to CR 54 is functionally classified as Rural Principal Arterial Other.

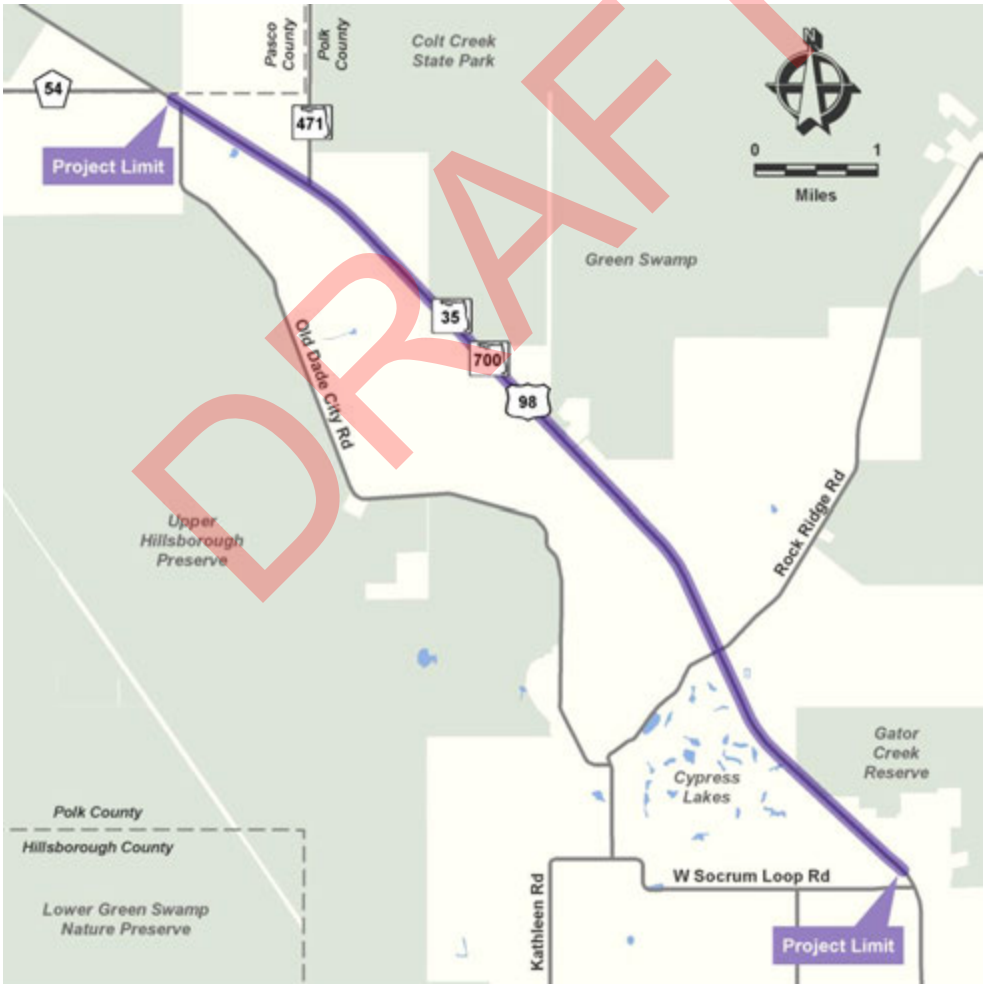


Figure 1-1 Project Location Map

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This PD&E study will aid FDOT District One and the FDOT Office of Environmental Management (OEM) in determining the type, preliminary design, and location of the proposed improvements. This improvement is necessary to provide additional capacity to accommodate the future year travel demand generated by the projected population and employment growth in both northwest Polk County and southeast Pasco County. US 98 is a major north-south roadway that extends from US 92 (Memorial Boulevard) in Lakeland to US 301 (Gall Boulevard) in Dade City and provides a critical regional connection between Polk and Pasco Counties. US 98 is a designated evacuation route and is also included in the Polk Transportation Planning Organization (TPO) Regional Freight Network.

This project was screened through the Efficient Transportation Decision Making (ETDM) process as ETDM Project Number 14334. The initial results were published in the *Preliminary Programming Screen Summary Report* on March 11, 2021, with comments provided by the Environmental Technical Advisory Team (ETAT). The ETAT evaluated the proposed project's effects on various natural, physical, and social resources. The Class of Action was determined to be a Type 2 Categorical Exclusion (Type 2 CE).

1.2 PROJECT PURPOSE AND NEED

The following Purpose and Need statement was documented in the March 11, 2021, Preliminary Programming Screen Summary Report*:*

The purpose of the project is to improve an existing traffic bottleneck along US 98 from north of West Socrum Loop Road to south of CR 54 within unincorporated Polk County. The need for the project is based on the following criteria:

AREA WIDE NETWORK/SYSTEM LINKAGE – Improve Transportation Network Connectivity

The US 98 corridor is an intraregional connecting link between Polk and Pasco Counties. The project segment of US 98 transitions from four lanes just north of West Socrum Loop Road to an undivided two-lane facility, creating a traffic bottleneck. The project is intended to enhance transportation network connectivity by:

- Maintaining a critical link to an SIS facility (i.e., I-4), and
- Providing a viable alternate route to parallel north-south arterials (i.e., Kathleen Road and Old Dade City Road).

CAPACITY/TRANSPORTATION DEMAND – Improve Operational Conditions

US 98 serves as a regional freight mobility corridor as it connects to I-4 (an SIS facility) and US 301 (a designated regional freight mobility corridor). Approximately 13.1 percent (%) of the Average Annual Daily Traffic (AADT) volume on US 98 is composed of trucks. Defined Freight Activity Centers (FAC's) in the area (clusters of industrial land parcels) include the Kathleen Road FAC, North Combee Road FAC and West Lakeland Industrial Area FAC. Not only does this roadway facilitate truck traffic and the distribution of goods to local activity areas, but it also functions as an important north-south corridor for commuters between Pasco and Polk Counties.

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According to Momentum 2040 (the Polk TPO's Long Range Transportation Plan (LRTP)), the northwest area of Polk County where the project corridor is located, is projected to increase in population by approximately 39,000 people and employment by approximately 11,000 employees by 2040.

Per the Polk TPO's 2020 Roadway Network Database and Momentum 2040:

2019 AADT

- From West Socrum Loop Road to Rock Ridge Road = 16,900 vehicles per day (vpd)
- From Rock Ridge Road to SR 471 = 11,900 vpd
- From SR 471 to CR 54 (Pasco County Line) = 10,400 vpd

Existing Level of Service (LOS)

- From West Socrum Loop Road to Rock Ridge Road = LOS "C"
- From Rock Ridge Road to SR 471 = LOS "C"
- From SR 471 to CR 54 (Pasco County Line) = LOS "D"

Existing Volume-to-Capacity Ratio

- From West Socrum Loop Road to Rock Ridge Road = 0.51
- From Rock Ridge Road to SR 471 = 0.64
- From SR 471 to CR 54 (Pasco County Line) = 1.11

2040 Volume-to-Capacity Ratio

- From West Socrum Loop Road to SR 471 = 1.25 – 1.50
- From SR 471 to CR 54 (Pasco County Line) = 1.00 – 1.25

It is important to note that a Volume-to-Capacity (V/C) ratio greater than 1.0 means the volume of vehicles on the roadway segment is greater than what the roadway was designed for when it was constructed. The existing V/C ratio on US 98 from SR 471 to CR 54 is 1.11. The 2040 V/C ratios for the project corridor are 1.25 – 1.50 from West Socrum Loop Road to SR 471 and 1.00 – 1.25 from SR 471 to CR 54. Conditions along the roadway are anticipated to worsen by 2040 if no improvements occur as the roadway will exceed its capacity and not be able to accommodate future travel demand. The project is anticipated to enhance operational conditions within the corridor by increasing its capacity.

SAFETY – Improve Safety Conditions

According to Polk TPO's 2020 Roadway Network Database, during the five-year period from 2014 - 2018, there were 167 total crashes. The total number of crashes per roadway segment, along with the statewide average crash rate for similar facility types, are provided below:

- From West Socrum Loop Road to Rock Ridge Road - 37 crashes
  - Actual crash rate = 0.471
  - Statewide average crash rate = 1.202 (Suburban 2-3 lanes - 2-way undivided)

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- From Rock Ridge Road to SR 471 – 93 crashes
  - Actual crash rate = 0.841
  - Statewide average crash rate = 0.768 (Rural 2-3 lanes - 2-way undivided)
- From SR 471 to CR 54 (Pasco County Line) – 37 crashes
  - Actual crash rate = 1.336
  - Statewide average crash rate = 0.768 (Rural 2-3 lanes - 2-way undivided)

The crash rates for two of the project roadway segments exceed the statewide average crash rate. The high number of crashes may be attributed to the current roadway's operational conditions. If no improvements are made to the existing roadway, the greater the probability for vehicle-to-vehicle conflicts to occur as traffic increases along the project corridor.

The proposed project is anticipated to improve safety conditions along the roadway by:

- Reducing congestion through the provision of additional capacity, and
- Enhancing a viable parallel alternate north-south route to Kathleen Road and Old Dade City Road that will aid in emergency access and response times.

1.3 EXISTING FACILITY AND PROPOSED IMPROVEMENTS

1.3.1 Existing Facility

US 98 is a two-lane undivided facility with a posted speed limit of 60 miles per hour (mph) throughout the project limits. The roadway is centered within 160 feet of existing right-of-way (ROW) and consists of one 12-foot travel lane in each direction and eight-foot outside shoulders (four feet paved). There are no existing designated bicycle or pedestrian facilities. Stormwater runoff is collected in roadside ditches that outfall to adjacent wetlands and ultimately convey to the Hillsborough and Withlacoochee River watersheds. There are 22 cross drains within the project limits, including bridge culverts at Main Stream, Fox Branch, and Cypress Run. The US 98 intersection with Rock Ridge Road is signalized and there is a flashing signal at the intersection with SR 471. Overhead utilities are located throughout the project limits and conservation lands are present along portions of the corridor. The assigned US 98 Context Classifications within the project limits are shown in **Table 1-1** and the existing typical roadway section is depicted in **Figure 1-2**.

Table 1-1 Existing Context Classification

Begin Limit	End Limit	Context Classification
North of West Socrum Loop Road	Rock Ridge Road	C3R – Suburban Residential
Rock Ridge Road	CR 54	C2 – Rural

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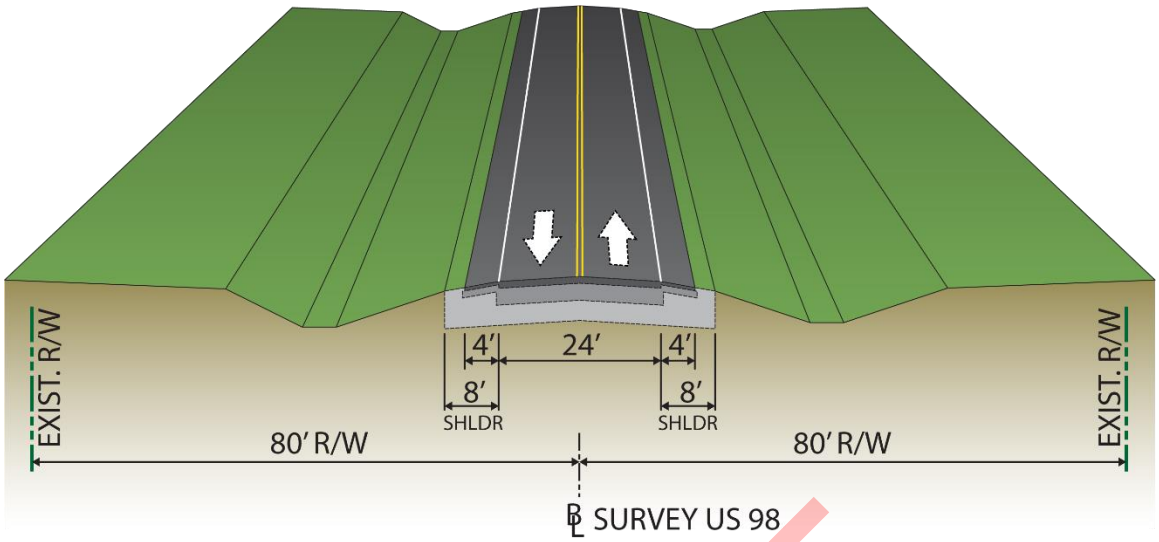


Figure 1-2 Existing US 98 Typical Section

1.3.2 Proposed Improvements

The proposed build alternative is a four-lane divided roadway throughout the project limits. The typical section for the portion of US 98 from north of West Socrum Loop Road to Rock Ridge Road includes 12-foot travel lanes, curb and gutter along the inside and outside edges of pavement, a 22-foot grassed median, and 10-foot shared use paths on both sides of the roadway, as shown in **Figure 1-3**. Design, target, and posted speeds of 45 mph are proposed for this 2.3-mile section of the project.

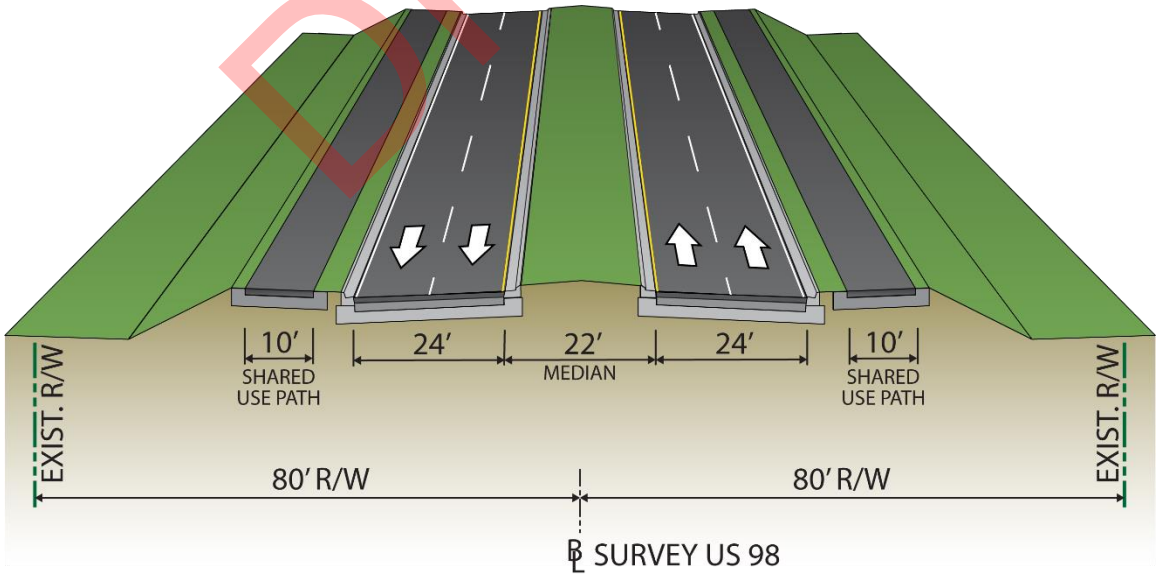


Figure 1-3 Proposed US 98 C3R (Suburban) Typical Section

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The typical section for the portion of US 98 from Rock Ridge Road to CR 54 includes 11-foot travel lanes, four-foot paved shoulders with curb and gutter on the inside, ten-foot outside shoulders (five feet paved), and a 30-foot grassed median, as shown in **Figure 1-4**. Design, target, and posted speeds of 55 mph are proposed for this 6.4-mile section of the project.

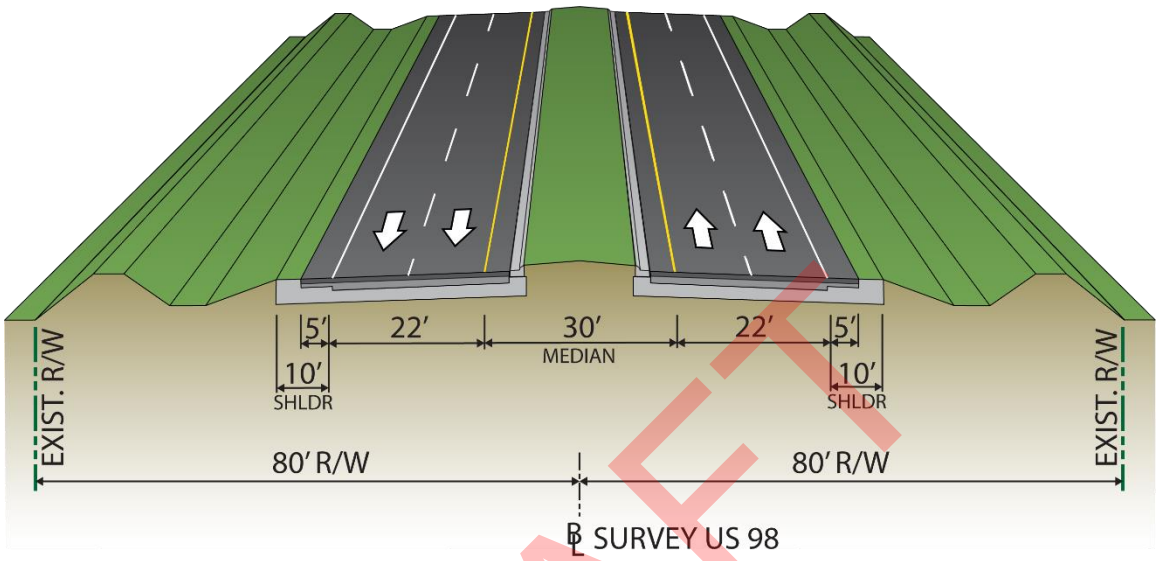


Figure 1-4 Proposed US 98 C2 (Rural) Typical Section

Both typical sections can be accommodated within the existing ROW. Stormwater runoff will be collected and conveyed to stormwater management facilities (SMFs) that will be constructed along the corridor and impacts to adjacent floodplains will be mitigated through the construction of floodplain compensation (FPC) sites.

1.4 PURPOSE OF THIS REPORT

A Natural Resource Evaluation (NRE) has been prepared to document and summarize the potential impacts to natural resources including federal and state protected species, wetlands, and protected lands. This report also documents measures considered to avoid, minimize, and mitigate for potential impacts. This NRE will provide an opportunity for agency review and concurrence of the findings. Coordination with the National Marine Fisheries Service (NMFS) during the ETDM process indicated that the proposed project would not directly impact any NMFS trust resources (i.e., Essential Fish Habitat [EFH]). Therefore, EFH was not further evaluated.

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SECTION 2 EXISTING CONDITIONS

2.1 INTRODUCTION

The project study area is situated in the northwest portion of Polk County. For purposes of this report, the project study area includes a 500-foot buffer extending from the centerline of the project limits (1,000 feet total). In addition to the 500-foot buffer, portions of the preliminarily selected SMF and FPC sites that extend beyond the 500-foot buffer are also included. The project study area encompasses approximately 1,142.6 acres. Upon completion of evaluating and selecting the preferred SMF and FPC sites, further assessment will be conducted of which the results will be provided in an addendum to this report.

2.2 METHODOLOGY

Agency Coordination

This proposed project was reviewed in the FDOT's ETDM under Project Number 14334 in March 2021. As part of their review of the project in the ETDM Programming Screen, agencies commented on the potential effects to natural, cultural, and community resources. The following summarizes the agency comments as it relates to potential effects to naturals resources:

- The Florida Department of Environmental Protection (FDEP) and Southwest Florida Water Management District (SWFWMD) commented that an Environmental Resource Permit (ERP) would be required to authorize the construction of stormwater management and impacts to wetland and surface waters resulting from the proposed project. In addition, the ERP application would be required to eliminate or reduce the proposed wetland resource impacts to the greatest extent possible. Impacts to the roadside ditches would be considered temporary impacts if the ditch is shifted to accommodate the proposed roadway widening and infrastructure improvements associated with the construction. However, the piping of these surface waters would be considered to be permanent impacts even though they may not require wetland mitigation pursuant to Subsection 10.2.2.2 or 10.2.2.1 of the ERP Applicant's Handbook Volume I.
- The NMFS stated that the proposed project does not appear to directly impact any NMFS resources but does cross several small creeks that drain into river systems that ultimately empty into Tampa Bay and the Gulf of Mexico. NMFS also stated that increased use of US 98, with the proposed widening, could result in an increase in the amount of sediment, oil, and grease, and other pollutants reaching estuarine and marine habitats utilized by marine fishery resources. NMFS noted that with stormwater management upgrades and best management practices (BMPs), any indirect impacts to downstream estuarine and marine habitats should be minimal.
- The Florida Fish and Wildlife Conservation Commission (FWC) stated that direct and indirect effects of the proposed project could be moderate, if wetland impacts are minimized and

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adequately mitigated; construction is limited to the maximum degree possible to the existing ROW; and BMPs are followed for treatment of stormwater runoff. FWC also recommended the following measures be implemented to conserve fish and wildlife that may occur within or adjacent to the project area: 1) conduct plant community mapping and wildlife surveys for the occurrence of federally and state listed wildlife species; 2) based on survey results, develop plan to address direct, indirect, and cumulative effects of the proposed project on wildlife and habitat resources, including listed species; 3) refer to the FWC's Gopher Tortoise Permitting Guidelines to address potential presence of gopher tortoises within the project area; 4) develop compensatory mitigation plan for the replacement of any wetland, upland, or aquatic habitat functional values for listed species that are lost as a result of the proposed project.

- The US Fish and Wildlife Service (USFWS) noted that the project corridor is located in the Core Foraging Area (CFA) of active nesting colonies of the wood stork and stated that the loss of wetlands within a CFA resulting from the proposed project would result in the loss of foraging habitat for the wood stork. To minimize adverse effects to the wood stork, the USFWS recommended that any lost foraging habitat be replaced within the CFA of the affected nesting colony or that wetland credits be purchased from an USFWS-approved mitigation bank outside of the CFA provided that the impacted habitat occur within the permitted service area of the bank. For impacts to wood stork foraging habitat totaling five or more acres, the USFWS requires a functional assessment be conducted in accordance to the USFWS *Wood Stork Foraging Analysis Methodology.* The USFWS also stated the following listed species have the potential to occur within or near the project site: Audubon's crested caracara, eastern indigo snake, Everglade snail kite, Florida scrub jay, wood stork, and federally listed plants.

Data Collection and Field Review

To determine the locations and boundaries of existing land use, vegetative cover and soils within the project study area, the following available site-specific data were collected and reviewed prior to field reviews:

- True color aerial imagery (ESRI, 2020);
- Soil Survey (Natural Resources Conservation Service [NRCS], 2021);
- Topgraphic Maps (U.S. Geological Survey [USGS], 2018); (USGS, 2021);
- Hydric Soils (Hurt, 2007);
- *Florida Land Use, Cover and Forms Classification System* (FLUCFCS) (FDOT, 1999);
- SWFWMD FLUCFCS Geographic Information System (GIS) Database (SWFWMD, 2017);
- USFWS Wetland Habitats Classifications (Cowardin *et. al*., 1979);
- USFWS, National Wetlands Inventory, Wetlands Online Mapper (USFWS, 2021a);

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- FDEP Map Direct Gateway (FDEP, 2021);
- Florida Conservation Lands (FNAI, 2021a);
- FDOT's ETDM Environmental Screening Report (#14334, published March 2021).

Environmental scientists familiar with Florida natural communities conducted field reviews of the project study area June through September 2021. Field reviews consisted of pedestrian transects throughout all habitat types found within the project study area. The purpose of these reviews was to verify and/or refine preliminary habitat boundaries and classification codes established through literature reviews and photo interpretation. During the field reviews, each upland and wetland community was visually inspected. Attention was given to identifying dominant plant species composition for each community.

2.3 EXISTING LAND USE AND VEGETATIVE COVER

Based on in-house and field reviews, 19 upland community types, eight wetland community types, and two other surface water community types are present within the project study area. All vegetative habitats and land uses within the project study area were classified using FLUCFCS (FDOT, 1999). Wetland and surface water habitats were also classified using the USFWS Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et. al., 1979). Within the existing ROW, land use consists of mostly Transportation (810) with open ditches and swales for drainage. **Figure A-1** in **Appendix A** depicts the land use/vegetative cover types within the project study area. **Table 2-1** summarizes the land use/vegetative cover types within the project study area. Adjacent land uses are predominately residential low density (FLUCFCS 110), commercial and services (FLUCFCS 140), open lands (FLUCFCS 190), cropland and pastureland (FLUCFCS 210), and upland and wetland forests.

Table 2-1 Existing Land Use/Vegetative Cover Types within Project Study Area

FLUCFCS Classification/Description	USFWS Classification	Acres	Percent of Project Study Area
Uplands			
110 – Residential Low Density	N/A	228.4	20.0
130 – Residential High Density	N/A	24.3	2.1
140 – Commercial and Services	N/A	17.1	1.5
150 – Industrial	N/A	9.9	0.9
182 – Golf Courses	N/A	19.3	1.7
190 – Open Land	N/A	9.3	0.8
210 – Cropland and Pastureland	N/A	278.8	24.4
240 – Nurseries and Vineyards	N/A	5.6	0.5
250 – Specialty Farms	N/A	0.9	0.1
260 – Other Open Lands	N/A	14.0	1.2
320 – Shrub and Brushland	N/A	8.8	0.8
410 – Upland Coniferous Forest	N/A	7.0	0.6
411 – Pine Flatwoods	N/A	44.2	3.9

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FLUCFCS Classification/Description	USFWS Classification	Acres	Percent of Project Study Area
434 – Upland Hardwood-Coniferous Mix	N/A	122.5	10.7
440 – Tree Plantation	N/A	8.7	0.8
740 – Disturbed Land	N/A	0.3	0.0
810 – Transportation	N/A	37.9	3.3
820 – Communication	N/A	3.0	0.3
830 - Utilities	N/A	7.1	0.6
Subtotal Uplands		*847.1*	*74.1*
Wetlands and Other Surface Waters			
520 – Lakes	POW	<0.1	<0.1
530 – Reservoirs	POWx	10.5	0.9
615 – Stream and Lake Swamps	PFO	23.7	2.1
620 – Wetland Coniferous Forests	PFO	0.5	0.0
621 – Cypress	PFO	77.0	6.7
630 – Wetland Forested Mixed	PFO	126.2	11.0
640 – Vegetated Non-forested Wetlands	PEM	0.2	<0.1
641 – Freshwater Marsh	PEM	52.7	4.6
643 – Wet Prairie	PEM	0.8	0.1
644 – Emergent Aquatic Vegetation	PEM	3.9	0.3
Subtotal Wetlands and Other Surface Waters		*295.5*	*25.9*
Total		**1,142.6**	**100.0**

Notes: PEM = Palustrine, Emergent; PFO = Palustrine, Forested; POW = Palustrine, Open Water; POWx = Palustrine, Open Water, Excavated.
Source: FDOT, 1999; SWFWMD, 2017; Cowardin, *et al.*, 1979.

2.4 SOILS

The *Soil Survey for Polk County* (NRCS, 2021) was reviewed to determine the soils mapped within the project study area. The *Hydric Soils of Florida Handbook* (Hurt, 2007) classifies 10 of the 24 soil types within the project study area as hydric. **Figure A-2** in **Appendix A** depicts the soils mapped within the project study area. **Table 2-2** provides a list of the soils mapped within the project study area, the hydric classification for each, the area of each within the project study area, and percent of each within the project study area.

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Table 2-2 Soil Types within Project Study Area

Map ID	Soil Name	Hydric	Acres	Percent of Project Study Area
2	POMONA FINE SAND	NO	9.6	0.8
6	EATON MUCKY FINE SAND, DEPRESSIONAL	YES	86.1	7.6
7	POMONA FINE SAND	NO	555.0	48.6
8	SELLERS MUCKY LOAMY FINE SAND	YES	1.0	0.1
9	LYNNE SAND	NO	31.7	2.8
10	MALABAR FINE SAND, 0 TO 2 % SLOPES	YES	2.3	0.2
13	SAMSULA MUCK, FREQUENTLY PONDED, 0 TO 1 % SLOPES	YES	7.3	0.7
14	SPARR SAND, 0 TO 5 % SLOPES	NO	48.2	4.2
15	TAVARES FINE SAND, 0 TO 5 % SLOPES	NO	11.8	1.0
16	ZEPHYR MUCK	YES	0.2	<0.1
17	SMYRNA AND MYAKKA FINE SANDS	NO	29.0	2.5
19	FLORIDANA MUCKY FINE SAND, FREQUENTLY PONDED, 0 TO 1 % SLOPES	YES	75.4	6.6
26	LOCHLOOSA FINE SAND	NO	12.4	1.1
31	ADAMSVILLE FINE SAND, 0 TO 2 % SLOPES	NO	1.6	0.1
32	KALIGA MUCK, FREQUENTLY PONDED, 0 TO 1 % SLOPES	YES	37.1	3.3
33	HOLOPAW FINE SAND, FREQUENTLY PONDED, 0 TO 1 % SLOPES	YES	34.6	3.0
35	HONTOON MUCK, FREQUENTLY PONDED, 0 TO 1 % SLOPES	YES	23.3	2.0
38	ELECTRA FINE SAND	NO	1.5	0.1
40	WAUCHULA FINE SAND	NO	142.7	12.5
47	ZOLFO FINE SAND, 0 TO 2 % SLOPES	NO	4.5	0.4
58	UDORTHENTS, EXCAVATED	NO	9.0	0.8
62	WABASSO FINE SAND	NO	3.4	0.3
76	MILLHOPPER FINE SAND, 0 TO 5 % SLOPES	NO	4.6	0.4
87	BASINGER FINE SAND	YES	6.6	0.6
99	WATER	UNRANKED	3.7	0.3
		Total	**1,142.6**	**100.0**

Source: NRCS, 2021; Hurt, 2007.

2.5 CONSERVATION LANDS

The Florida Natural Areas Inventory (FNAI) Florida Conservation Lands GIS database (FNAI, 2021) was used to determine the boundaries of the conservation lands shown in **Figure A-3** in **Appendix A**. Gator Creek Reserve, managed by Polk County, is located adjacent to the northbound US 98 ROW approximately 1.1 miles northwest of West Socrum Loop Road. The Green Swamp, managed by SWFWMD, is located adjacent to the northbound US 98 ROW approximately 1.3 miles southeast of SR 471. The Green Swamp is designated as an Area of Critical State Concern pursuant to Section 380.0551, Florida Statutes (F.S.). Gator Creek Reserve is also protected as an Area of Critical State Concern as it is

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located in the Green Swamp. This Green Swamp Area of Critical State Concern consists of approximately 322,690 acres with portions lying in both Polk and Lake counties. Both the Gator Creek Reserve and Green Swamp are located outside of the existing FDOT ROW. The widening of the mainline as part of the proposed project will take place entirely within the existing FDOT ROW. The proposed SMF and FPC sites are located outside of these areas. As a result, there are no impacts anticipated to the Green Swamp Area of Critical State Concern.

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SECTION 3 PROTECTED SPECIES AND HABITATS

3.1 INTRODUCTION

The analysis described in this section is consistent with Part 2, Chapter 16, Protected Species and Habitat of the PD&E Manual. Listed species are afforded special protective status by federal and state agencies. This special protection is federally administered by the United States Department of the Interior, USFWS, and NMFS pursuant to the Endangered Species Act of 1973, as amended (ESA). The USFWS administers the federal list of animal species (50 Code of Federal Regulations [CFR] 17.11(h), 2019) and plant species (50 CFR 17.12(h), 2019).

Administered by the FWC, the state of Florida affords special protection to animal species designated as State-designated Endangered or Threatened or State Species of Special Concern, pursuant to Chapter 68A-27, Florida Administrative Code (F.A.C.). Federally listed species are also considered state listed species. The state of Florida also protects and regulates plant species designated as endangered, threatened, or commercially exploited as identified on the Regulated Plant Index (5B-40.0055, F.A.C.), which is administered by the Florida Department of Agriculture and Consumer Services (FDACS), Division of Plant Industry, pursuant to Chapter 5B-40, F.A.C.

The following sections describe the methodology used to assess the potential for occurrence of protected species and to identify the effects that implementation of the proposed project alternatives may have on protected species.

3.2 METHODOLOGY

Agency Coordination

In addition to the ETDM summary review discussed in **Section 2.2**, an official species list was requested from the USFWS Information for Planning and Consultation (IPaC) database (consultation code 04EF2000-2021-SLI-0767), and an elemental occurrence report was requested from the FNAI (see **Appendix B**). Consultation with state and federal agencies is ongoing. Commitments as a result of consultation coordination will be included in the final documents.

Data Collection and Field Review

To determine federally and state listed protected plant and animal species that have the potential to occur within the project study area and to identify the approximate locations of existing upland and wetland communities, available site-specific data were collected and evaluated.

The literature and databases reviewed as part of this evaluation in addition to those listed in **Section 2.2** included:

- Endangered, Threatened and Commercially Exploited Plants of Florida, Chapter 5B-40.0055(2), F.A.C. (2020);
- Bald Eagle Nest Locator (FWC, 2021a);

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- Species Conservation Measures and Permitting Guidelines (FWC, 2021b);
- Florida's Endangered Species, Threatened Species, and Species of Special Concern, Chapter 68A-27 F.A.C. (FWC, 2021c);
- FNAI Element Occurrence Report (**Appendix B**) (FNAI, 2021b);
- FNAI Polk County Tracking List (FNAI, 2019);
- 2010 *Notes on Florida's Endangered and Threatened Plants: Botany Contribution* (FDACS, 2010);
- USFWS Information for Planning and Consultation Species List (**Appendix B**) (USFWS, 2021b);
- USFWS Critical Habitat (USFWS, 2021c);
- Endangered and Threatened Wildlife and Plants, 50 CFR 17.11 and 17.12, updated April 8, 2019 (USFWS, 2019a);
- Wood Stork Nesting Colonies Maps (USFWS, 2019b).

During the 2021 field reviews, additional attention was given to identifying wildlife and signs of wildlife usage in each wetland and upland community within the project study area.

3.3 RESULTS

Based upon background data collection and desktop reviews, as well as site-specific field reviews conducted, 29 federally listed, 39 state listed, and three protected species were identified as having the potential to occur within the project study area. **Tables 3-1** through **3-3** provide a complete listing of these protected species, their federal or state protection status, preferred habitat, and a ranking of potential for occurrence within the project study area. Each species was assigned a none, low, medium, or high potential for occurrence within the project study area based on the following:

- *None* – The project is outside of the species' known range or the project is within the species' range; however, no suitable habitat for or previous documentation of this species occurs within or adjacent to the project study area, and it was not observed during the field reviews;
- *Low* – The project is within the species' range, and minimal or marginal quality habitat exists within or adjacent to the project study area; however, there are no documented occurrences of the species in the vicinity of the project, and it was not observed during the field reviews;
- *Medium* – The project is within the species' range and suitable habitat exists within or adjacent to the project study area; however, there are no documented occurrences of the species, and it was not observed during the field reviews; or

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- *High* – The project is within the species' range, suitable habitat exists within or adjacent to the project study area, there is at least one documented occurrence of the species within the project study area, and/or the species was observed during the field reviews.

Table 3-1 Federally Listed Species Potentially Occurring within the Project Study Area

Species	Listing	Preferred Habitat	Potential to Occur
Federally Listed Mammals			
Florida Panther (*Puma concolor coryi*)	E	extensive blocks of forested communities and large wetlands	medium
Federally Listed Reptiles			
Eastern Indigo Snake (*Drymarchon couperi*)	T	scrub, sandhill, wet prairies, and mangrove swamps	high
Bluetail Mole Skink (CA) (*Eumeces egregious lividus*)	T	Well drained sandy uplands above 100 feet	medium
Sand Skink (*Neoseps reynoldsi*) (CA)	T	Xeric uplands with sand substrates	medium
Federally Listed Birds			
Florida Grasshopper Sparrow (CA) (*Ammodramus savannarum floridanus*)	E	large, frequently burned areas of dry prairie habitat with patchy open areas for foraging; pasture lands	none
Audubon's Crested Caracara (CA) (*Caracara cheriway*)	T	open country, including dry prairie and pasture lands with cabbage palms	medium
Eastern Black Rail (*Laterallus jamaicensis jamaicensis*)	T	estuarine and palustrine herbaceous wetlands with dense vegetative cover and overhead	medium
Wood Stork (CFA) (*Mycteria americana*)	T	forested wetlands, freshwater marshes, swamps, and ponds	high
Everglade Snail Kite (CA) (*Rostrhamus sociabilis plumbeus*)	E	freshwater marshes and the shallow vegetated edges of lakes	medium
Federally Listed Plants and Lichens			
Florida Bonamia (*Bonamia grandiflora*)	T	open or disturbed areas in white sand scrub	none
Pygmy Fringe-tree (*Chionanthus pygmaeus*)	E	scrub, sandhill, and xeric hammock on the Lake Wales Ridge	none
Florida Perforate Cladonia (*Cladonia perforata*)	E	white sands in sand pine scrub and rosemary scrub	none
Pigeon Wings (*Clitoria fragrans*)	T	scrub oak, scrubby high pine	low
Short-leaved Rosemary (*Conradina brevifolia*)	E	scrub on Lake Wales Ridge	none
Avon Park Harebells (*Crotalaria avonensis*)	E	bare patches of white sand in Lake Wales Ridge scrub; occasionally in disturbed areas or in partial shade	none
Scrub Mint (*Dicerandra frutescens*)	E	sand pine scrub and sandhill on the Lake Wales Ridge	none
Scrub buckwheat *(Eriogonum longifolium var. gnaphalifolium*)	T	sandhill, oak-hickory scrub on yellow sands; high pineland between scrub and sandhill, turkey oak barrens.	low

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Species	Listing	Preferred Habitat	Potential to Occur
Highlands Scrub Hypericum (*Hypericum cumulicola*)	E	open patches in white sand scrubs; occasionally in openings in scrubby flatwoods and oak scrub	none
Scrub Blazingstar (*Liatris ohlingerae*)	E	rosemary balds; scrubby flatwoods and disturbed scrub	low
Scrub Lupine (*Lupinus aridorum*)	E	openings in sand pine and rosemary scrub	none
Britton's Beargrass (*Nolina brittoniana*)	E	scrub, sandhill, scrubby flatwoods, and xeric hammock	low
Papery Whitlow-wort (*Paronychia chartacea*)	T	Lake Wales Ridge scrub	none
Lewton's Polygala (*Polygala lewtonii*)	E	oak scrub, sandhill, transition zones between high pine and turkey oak barrens	low
Wireweed (*Polygonella basiramia*)	E	bare patches within sand pine-evergreen oak scrub vegetation	none
Sandlace (*Polygonella myriophylla*)	E	open, sandy areas within scrub	low
Scrub Plum (*Prunus geniculata*)	E	sandhill and oak scrub	low
Wide-leaf Warea (*Warea amplexifolia*)	E	limited to sunny openings with exposed sand in longleaf pine/turkey oak/wiregrass sandhills	low
Carter's Mustard (*Warea carteri*)	E	sandhill, scrubby flatwoods, inland and coastal scrub	low
Florida Ziziphus (*Ziziphus celata*)	E	oak-hickory scrub, scrubby flatwoods, or sandhills	low

Notes: E = Endangered; T = Threatened; CA = USFWS Consultation Area; CFA = Core Foraging Area
Sources: USFWS, 2019; USFWS, 2021b; FNAI, 2019; FNAI, 2021b.

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Table 3-2 State Listed Species Potentially Occurring within the Project Study Area

Species	Listing	Preferred Habitat	Potential to Occur
State Listed Reptiles			
Gopher Tortoise (*Gopherus polyphemus*)	T	sandhills, scrubs, xeric oak hammocks, and dry pine flatwoods	high
Short-tailed Snake (*Lampropeltis extenuata*)	T	dry uplands, sandhill, xeric hammock, sand pine scrub	low
Florida Pine Snake (*Pituophis melanoleucus mugitus*)	T	relatively open canopies and dry sandy soils, especially sandhills and former sandhills	low
State Listed Birds			
Florida Sandhill Crane (*Antigone canadensis pratensis*)	T	prairies, freshwater marshes, and pastureland	high
Florida Burrowing Owl (*Athene cunicularia floridana*)	T	high, sparsely vegetated, sandy ground including dry prairie and sandhill; ruderal areas	low
Little Blue Heron (*Egretta caerulea*)	T	freshwater, brackish, and saltwater sites	high
Tricolored Heron (*Egretta tricolor*)	T	shallow freshwater, brackish, and saltwater sites	high
Southeastern American Kestrel (*Falco sparverius paulus*)	T	open pine habitats, woodlands edges, prairies, and pastures	high
Least Tern (*Sternula antillarum*)	T	coastal areas including beaches, lagoons, bays, and estuaries; occasionally nests on gravel rooftops, dredge spoil, construction sites, causeways, and mining lands.	low
State Listed Plants			
Incised Groove-bur (*Agrimonia incisa*)	T	sandy, dry-mesic, usually upland; longleaf pine-deciduous scrub oak, sandy or sandy loam; open pine woods or mixed pine-oak woods, bluffs, small clearings and old roads	low
Ashe's savory (*Calamintha ashei*)	T	dry pinelands and sand pine scrub in canopy openings and disturbed areas	low
Many-flowered Grass-pink (*Calopogon multiflorus*)	T	dry to moist flatwoods with longleaf pine, wiregrass, saw palmetto	none
Sand butterfly-pea (*Centrosema arenicola*)	E	mixed woodlands; pine thickets	low
Highlands Goldenaster (*Chrysopsis highlandsensis*)	E	sand pine scrub, scrubby flatwoods	none
Piedmont Jointgrass (*Coelorachis tuberculosa*)	T	karst areas; margins or shallow of lakes and ponds or in wet savanna swales	low
Cutthroat Grass (*Coleataenia abscissa*)		temporary pool; herbaceous wetland; scrub-shrub wetland	low
Hartwrightia (*Hartwrightia floridana*)	T	seepage slopes, edges of baygalls and springheads, wet prairies, and flatwoods with wet, peaty soils	low
Edison's Ascyrum (*Hypericum edisonianum*)	E	depressions in scrub, cutthroat seeps, flatwoods ponds, lake margins, wet	low

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Species	Listing	Preferred Habitat	Potential to Occur
		prairies	
Star Anise (*Illicium parviflorum*)	E	banks of spring-run or seepage streams, bottomland forest, hydric hammock, baygall dominated by red maple and sweet bay	low
Nodding Pinweed (*Lechea cernua*)	T	fire-maintained scrub	none
Pine Pinweed (*Lechea divaricata*)	E	scrubby flatwoods	none
Tall Twayblade (*Liparis nervosa*)	E	cypress swamps, hammocks	low
Florida Spiny-pod (*Matelea pubiflora*)	E	sandhills, scrubs	none
Celestial Lily (*Nemastylis floridana*)	E	wet flatwoods, prairies, marshes, cabbage palm hammocks	low
Hand Fern (*Ophioglossum palmatum*)	E	on cabbage palms in hydric hammocks, strand swamps	low
Plume Polypody (*Pecluma plumula*)	E	tree branches or limestone in hammocks, wet woods, and limesinks	low
Swamp Plume Polypody (*Pecluma ptilota var. bourgeauana*)	E	rockland hammocks, strand swamps, and wet woods; often on tree bases and fallen logs	low
Low Peperomia (*Peperomia humilis*)	E	shell mounds and limestone outcrops in mesic hammocks, coastal berms, cypress swamps	none
Yellow Fringeless Orchid (*Platanthera integra*)	E	wet pine flatwoods, wet prairies, seepage slopes, organic black sandy peat. marshes, swamps, acid bogs	low
Lewton's Polygala (*Polygala lewtonii*)	E	oak scrub, sandhill, and transition zones between high pine and turkey oak barrens	low
Giant Orchid (*Pteroglossaspis ecristata*)	T	sandhill, scrub, pine flatwoods, pine rocklands, and occasionally in old fields	none
Large-plumed Beaksedge (*Rhynchospora megaplumosa*)	E	scrubby flatwoods	none
Florida Willow (*Salix floridana*)	E	bottomland forests, floodplains, hydric hammocks, swamps, edges of spring-runs, and streams	low
Scrub Bluestem (*Schizachyrium niveum*)	E	white sand patches in rosemary scrub, sand pine scrub and oak scrub	none
Scrub Stylisma (*Stylisma abdita*)	E	scrub and sandhills	none
Toothed Maiden Fern (*Thelypteris serrata*)	E	floodplains, cypress sloughs, swamps	low
Wide-leaved Triphora (*Triphora latifolia*)	E	hardwood hammocks	low
Tampa Vervain (*Verbena tampensis*)	E	flatwoods, hammocks	low
Simpson's Zephyr-lily (*Zephyranthes simpsonii*)	T	wet pinelands and pastures, wet roadsides	low

Notes: E = Endangered; T = Threatened

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Sources: FWC, 2021c; FDACS, 2010; FNAI, 2019; FNAI, 2021b.

Table 3-3 Other Protected Species Potentially Occurring within the Project Study Area

Species	Listing	Preferred Habitat	Potential to Occur
Other Protected Birds			
Bald Eagle (*Haliaeetus leucocephalus*)	None[1]	coastal areas, bays, rivers, lakes, etc. w/concentrated food source	Low
Osprey (*Pandion haliaetus*)	None[2]	on or near large lakes, rivers, and coastal areas where suitable nesting sites can be	High
Other Protected Mammals			
Florida Black Bear (*Ursus americanus floridanus*)	None[3]	wide variety of forested communities including forested wetlands for diurnal cover	Low

[1] Protected by Migratory Bird Treaty Act (16 U.S.C. 703-712), the Federal Bald and Golden Eagle Act, and the State Bald Eagle Management Plan (FWC, 2008).
[2] Protected by Migratory Bird Treaty Act (16 U.S.C. 703-712) and State-protected by Chapter 68A, F.A.C.
[3] State-protected by Chapter 68A-4.009, F.A.C. (2015) and the Florida Black Bear Management Plan (FWC, 2019).

3.3.1 Federally Designated Critical Habitat and Listed Species

Critical Habitat

The project study area was evaluated for the occurrence of Critical Habitat as defined by the ESA and 50 CFR part 402. The USFWS is the authority, as a federal agency, to protect from destruction or adverse modification the biological or physical constituent elements essential to the conservation of listed species. Critical Habitat is defined as the specific areas within the geographical area occupied by a species on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection. No Critical Habitat was identified within the project study area.

Florida Panther

Status: Endangered

The Florida panther (*Puma concolor coryi*) prefers a variety of habitats, including upland forests, prairies, wetlands, stands of saw palmetto and swamps. The project study area does not fall within the USFWS Consultation Area, Panther Focus Area, or the "Primary" or "Secondary" Zones for this species. Though this species has been documented within Polk County, the FWC panther telemetry database (updated March 2021), does not document panthers within approximately 25 miles of the project study area. Suitable habitat occurs adjacent to the proposed project along US 98 and near the proposed pond sites. As a result, the potential for occurrence of the Florida panther within the project study area has been determined to be **medium**.

Though suitable habitat for the Florida panther occurs adjacent to the proposed project, majority of disturbance from the proposed project will occur within existing, maintained, and mostly fenced-in FDOT ROW. If a live Florida panther is found in a construction area, all work will cease and will resume only after the panther is allowed to leave the area on its own. Live sightings will be reported to the FDOT

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District Environmental Administrator or the Construction Environmental Coordinator and the Engineer. Should a dead panther be observed within the project site, or if a collision with a panther occurs (including injury), this shall be reported immediately to the FWC via the wildlife alert line and the fore mentioned FDOT personnel shall be immediately notified as well. Based on the information presented above, it has been determined that the proposed project will have **no effect** on the Florida panther.

Eastern Indigo Snake

Status: Threatened

The eastern indigo snake (*Drymarchon couperi*) can be found in a range of habitats, from scrub and sandhill to wet prairies and mangrove swamps. It may be found in gopher tortoise burrows in sandy uplands but forages in more hydric habitats. This species requires very large tracts to survive. Suitable habitat does occur throughout the project study area and gopher tortoise burrows were observed within the southern portion of the project study area. According to the FNAI Elemental Occurrence report (**Appendix B**), a dead eastern indigo snake was documented within one mile of the project study area in 1983. There are no other documented occurrences within or adjacent to the project study area and none were observed during field reviews. As a result, the potential for occurrence of the eastern indigo snake within the project study area has been determined to be **high**.

To minimize potential impacts to the eastern indigo snake, FDOT will commit to use the USFWS-approved *Standard Protection Measures for the Eastern Indigo Snake* (updated August 2013) (see **Appendix C**) as part of the proposed project. In addition, the proposed project will impact less than 25 acres of xeric habitat. The most recent USFWS Eastern Indigo Snake Programmatic Effect Determination Key (USFWS, 2017), provided in **Appendix D**, was used to evaluate potential effects on this species. Based on this evaluation, it was determined that the proposed project **may affect, but is not likely to adversely affect** the eastern indigo snake.

Blue-tailed Mole Skink and Sand Skink

Status: Threatened

The blue-tailed mole skink (*Eumeces egregious lividus*) and sand skink (*Neoseps reynoldsi*) are found in xeric upland habitats of the Lake Wales Ridge and requires loose sand in open spaces with scattered shrubby vegetation. The project study area is located within the USFWS Consultation Area for these species. Based on the presence of suitable habitat, the potential for occurrence of the blue-tailed mole skink and sand skink within the project study area was determined to be **medium**.

Based on a skink soils survey, three areas within the project limits of the proposed mainline widening, located approximately 0.4 mile north of Socrum Loop Road, were identified as containing appropriate skink soils within the US 98 ROW. From April 23 to May 13, 2021, these areas were surveyed in accordance with the USFWS' *Sand Skinks and Blue-tailed Mole Skinks Survey Protocol Peninsular Florida* (updated July 31, 2020) (i.e., Survey Protocol) to determine the presence of these skinks within the project limits along the mainline of US 98. This survey included both pedestrian and coverboard survey methodology per the Survey Protocol. During the survey period, no skink tracks were observed and no

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direct observation of sand or blue-tailed mole skinks was encountered. There is no suitable habitat or soils within the proposed SMF or FPC sites and no further skink surveys are anticipated. **Appendix E** provides a report summarizing the methodology and results of this survey.

Pursuant to the Survey Protocol and based on the results of skink survey, it was determined that the proposed project **may affect, but is not likely to adversely affect** the blue-tailed mole and sand skinks.

Florida Grasshopper Sparrow

Status: Endangered

The southern half of the project study area is located within the USFWS Consultation Area for the Florida grasshopper sparrow (*Ammodramus savannarum floridanus*). This species requires large areas of frequently burned dry prairie habitat, with patchy open areas sufficient for foraging and may persist in pasture lands that have not been intensively managed so as to remove all the vegetation clumps. There are no large areas of frequently burned dry prairie within the project study area and pasture lands within the project study area are managed for agricultural uses. There are no documented historic occurrences of the grasshopper sparrow within the project study area and none were observed during field reviews. As a result, it has been determined that the potential for occurrence of the Florida grasshopper sparrow within the project study area is **none.**

Proposed habitat impacts related to the construction will take place mostly within existing FDOT-owned ROW which is mowed and maintained and does not provide suitable habitat for the grasshopper sparrow. Preferred pond sites related to the proposed project do not consist of any suitable habitat for the Florida grasshopper sparrow. As a result, is has been determined that the proposed project will have **no effect** on the Florida grasshopper sparrow.

Audubon's Crested Caracara

Status: Threatened

The project study area is located within the USFWS Consultation Area for the crested caracara (*Caracara cheriway*). Preferred habitat for this species includes open country that may include dry prairie, pasture lands with cabbage palm, cabbage palm/live oak hammocks, and shallow ponds and sloughs. Caracaras prefer cabbage palms for nesting and secondarily may use live oaks. According to the FNAI, the crested caracara has been documented within Polk County, but not within one mile of the project study area. Based on the presence of suitable habitat, the potential for occurrence of crested caracara within the project study area was determined to be **medium**.

As part of the PD&E study, a survey was conducted within the project study area, pursuant to the USFWS Crested Caracara Draft Survey Protocol (provided for the 2016-2017 Breeding Season), from January 7, 2021, through April 30, 2021. A description of the 2021 survey methodology and results is provided in **Appendix F**. A caracara survey will be conducted during the 2022 survey season within the selected SMF and FPC sites, as necessary, of which results will be provided in an addendum to this report.

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No crested caracara individuals or caracara nesting activity were observed within the survey area during the 2021 survey. Also, no caracaras were observed at any time during the additional field surveys that were conducted within the project limits during the same timeframe. Based on the results of the survey and pursuant to the caracara survey protocol, it has been determined that the proposed project will have **no effect** on the crested caracara.

Eastern Black Rail

Status: Threatened

The eastern black rail (*Laterallus jamaicensis jamaicensis*) is found in marsh habitat that can be tidally or non-tidally influenced and ranges in salinity from saltwater to brackish to freshwater. Along portions of the Gulf Coast, the black rail can be found in higher elevation wetland zones with some shrubby vegetation. The black rail requires dense overhead vegetation for cover during all stages of their life cycle. There are no documented historic occurrences of the eastern black rail within the project study area and none were observed during field reviews. Suitable habitat within and adjacent to the project study area is limited as majority of the herbaceous wetlands within the project study area are not heavily vegetated. As a result, it has been determined that the potential for occurrence of the eastern black rail within the project study area is **medium.**

As part of the proposed project, impacts to wetland habitat within the project area will be mitigated in accordance to the requirements of Part IV, Chapter 373 F.S and 33 U.S. Code (U.S.C.) Section 1344 to prevent a net loss of wetland habitat functions and values. Based on this information, it has been determined that the proposed project **may affect, but is not likely to adversely affect** the eastern black rail.

Wood Stork

Status: Threatened

The wood stork (*Mycteria americana*) nests colonially in a variety of inundated forested wetlands, including cypress strands and domes, mixed hardwood swamps, sloughs, and mangroves. Foraging habitat includes shallow water in freshwater marshes, swamps, lagoons, ponds, tidal creeks, flooded pastures, and ditches where fluctuating water levels concentrate food sources.

The USFWS has defined the CFA for the wood stork in Polk County as an 18.6-mile radius from breeding colonies. Based on information provided by the USFWS, the project study area is located within the 18.6-mile radius CFA of four active wood stork nesting colonies. The nearest colony, Little Gator Creek in Pasco County, is located approximately 3.3 miles northwest of the project study area. Wood storks were observed within and adjacent to the project study area during the field reviews and there is suitable foraging habitat present within some of the wetlands and other surface waters throughout the project study area. As a result, the potential for occurrence of the wood stork in the project study area has been determined to be **high**.

In an effort to gather the information needed to determine the amount of compensation required to offset the loss of suitable wood stork foraging habitat associated with the proposed mainline widening,

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a Wood Stork Foraging Analysis was prepared per the USFWS's *Wood Stork Foraging Habitat Assessment Methodology* (USFWS, 2012). The Methodology includes calculations of prey-base analysis, loss of suitable foraging habitat, and compensation required to offset the loss of suitable habitat. The methodology and results of the analysis conducted for this PD&E study are summarized in **Appendix G.** Based on the results of the analysis, the proposed project will result in a total biomass loss of 12.25 kilograms. Compensation for suitable foraging habitat will be provided within the service area of an USFWS-approved wetland mitigation bank (preferably located within the CFA of wood stork foraging habitat lost) that will offset the 12.25 kilograms of short hydroperiod forage biomass loss. In addition, only temporary impacts to existing other surface waters (i.e. ditches) will occur to accommodate the proposed project as they are proposed to be replaced in-kind; therefore, no net loss of suitable foraging habitat is anticipated as a result of proposed temporary impacts to other surface waters. Pursuant to the 2010 USFWS Wood Stork Effect Determination Key (USFWS, 2010), provided in **Appendix D**, the proposed project is not located within 2,500 feet (0.47 mile) of an active nesting wood stork colony, and suitable foraging habitat will be compensated in accordance with Section 404(b) of the Clean Water Act (CWA) and the USFWS Habitat Management Guidelines for the Wood Stork in the Southeast Region through the purchase of federal credits at a USFWS-approved mitigation bank. Therefore, it was determined that the proposed project **may affect, but is not likely to adversely affect** the wood stork. Upon completion of evaluating and selecting the preferred SMF and FPC sites, further assessment of the potential loss of suitable wood stork foraging habitat resulting from the SMF and FPC sites will be conducted of which the results will be provided in an addendum to this report.

Everglade Snail Kite

Status: Endangered

The project study area is located within the USFWS Consultation Area for the Everglade Snail Kite (*Rostrhamus sociabilis plumbeus*) but is not located within designated critical habitat. This species prefers large open freshwater marshes and lakes with shallow water and feeds exclusively on apple snails (*Pomacea paludosa*). Suitable foraging habitat is present within and adjacent to the project study area within the freshwater marshes and apple snails were observed in these areas during the field reviews. There are no documented occurrences of the Everglade snail kite within one mile of the project study area and no individuals were observed during the field reviews. Therefore, the potential for occurrence of the Everglade snail kite within the project study area has been determined to be **medium**.

As part of the proposed project, impacts to wetland habitat within the project area will be mitigated in accordance to the requirements of Part IV, Chapter 373 F.S. and 33 U.S.C. Section 1344 to prevent a net loss of wetland habitat functions and values. Based on this information, it has been determined that the proposed project **may affect, but is not likely to adversely affect** the Everglade snail kite.

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Federally Listed Plant Species

Federally listed plant species, their habitat, and potential for occurrence have been provided in **Table 3-1**. The majority of the proposed project improvements will take place within existing FDOT-owned ROW that is largely mowed and maintained. Additionally, preferred habitat of the federally listed species potentially occurring within the project study area is limited to sandhill scrub typically occurring on the Lake Wales Ridge. In September 2021, a pedestrian survey for listed scrub plant species with a fall flowering/survey season was conducted within the areas of suitable and marginally suitable habitat occurring within the project limits. No suitable habitat for listed scrub plant species occur within the preliminarily selected SMF/FPC sites. During the fall survey, no listed plant species were identified. For listed scrub plant species with a spring flowering/survey season, a pedestrian survey will be conducted within the areas of suitable and marginally suitable habitat occurring within the project limits in March 2022 to further determine the absence/presence of federally listed scrub plant species. The results of the March 2022 spring survey will be included in an addendum to this report. **Table 3-4** lists the federally listed scrub plants, survey season, and preferred habitat. Based on the results of the 2021 survey and due to the minimal presence of suitable habitat within the project study area, it was determined that the proposed project will have **no effect** on federally listed plant species.

Table 3-4 Federally Listed Scrub Plants Survey

Species	Listing	Preferred Habitat	Survey Season
Federally Listed Plants			
Florida Bonamia (*Bonamia grandiflora*)	T	open or disturbed areas in white sand scrub	Spring
Pygmy Fringe-tree (*Chionanthus pygmaeus*)	E	scrub, sandhill, and xeric hammock on the Lake Wales Ridge	Spring
Pigeon Wings (*Clitoria fragrans*)	T	scrub oak, scrubby high pine	Spring
Short-leaved Rosemary (*Conradina brevifolia*)	E	scrub on Lake Wales Ridge	Spring or Fall
Avon Park Harebells (*Crotalaria avonensis*)	E	bare patches of white sand in Lake Wales Ridge scrub; occasionally in disturbed areas or in partial shade	Spring
Scrub Mint (*Dicerandra frutescens*)	E	sand pine scrub and sandhill on the Lake Wales Ridge	Fall
Scrub buckwheat *(Eriogonum longifolium var. gnaphalifolium*)	T	sandhill, oak-hickory scrub on yellow sands; high pineland between scrub and sandhill, turkey oak barrens.	Fall
Highlands Scrub Hypericum (*Hypericum cumulicola*)	E	open patches in white sand scrubs; occasionally in openings in scrubby flatwoods and oak scrub	Fall
Scrub Blazingstar (*Liatris ohlingerae*)	E	rosemary balds; scrubby flatwoods and disturbed scrub	Fall
Scrub Lupine (*Lupinus aridorum*)	E	openings in sand pine and rosemary scrub	Spring
Britton's Beargrass (*Nolina brittoniana*)	E	scrub, sandhill, scrubby flatwoods, and xeric hammock	Spring
Papery Whitlow-wort	T	Lake Wales Ridge scrub	Fall

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Species	Listing	Preferred Habitat	Survey Season
(*Paronychia chartacea*)			
Lewton's Polygala (*Polygala lewtonii*)	E	oak scrub, sandhill, transition zones between high pine and turkey oak barrens	Spring
Wireweed (*Polygonella basiramia*)	E	bare patches within sand pine-evergreen oak scrub vegetation	Fall
Sandlace (*Polygonella myriophylla*)	E	open, sandy areas within scrub	Spring or Fall
Scrub Plum (*Prunus geniculata*)	E	sandhill and oak scrub	Spring
Wide-leaf Warea (*Warea amplexifolia*)	E	limited to sunny openings with exposed sand in longleaf pine/turkey oak/wiregrass sandhills	Fall
Carter's Mustard (*Warea carteri*)	E	sandhill, scrubby flatwoods, inland and coastal scrub	Fall
Florida Ziziphus (*Ziziphus celata*)	E	oak-hickory scrub, scrubby flatwoods, or sandhills	Spring

Sources: FNAI, 2021; FDACS, 2010.
Notes: E = Endangered; T = Threatened

3.3.2 State Listed Species

Gopher Tortoise

Status: Threatened (Federal Status: Candidate)

The gopher tortoise (*Gopherus polyphemus*) is typically found in dry upland habitats, including sandhills, scrub, xeric oak hammock, and dry pine flatwoods. It also commonly uses disturbed habitats such as pastures, old fields, and road shoulders. Suitable habitat for the gopher tortoise is available within and adjacent to the project study area. In June 2021, a 15% survey was conducted within the project limits within suitable habitat for gopher tortoise burrows to determine presence/absence. During this survey, 12 gopher tortoise burrows (one abandoned, 11 potentially occupied) were observed within the existing ROW in the southern portion of the project limits. **Figure A-4** in **Appendix A** depicts the approximate location of these burrows. As a result, the potential for occurrence of the gopher tortoise within the project area has been determined to be **high**.

Prior to construction of the proposed project, 100% surveys of the appropriate habitats will be conducted for the presence of gopher tortoise burrows. If gopher tortoises or their burrows are found in or within 25 feet of the construction limits of the proposed project, coordination with the FWC will be implemented to secure permits needed to relocate the gopher tortoises prior to construction. Based on these commitments, **no adverse effect anticipated** for the gopher tortoise as a result of the proposed project.

Short-tailed Snake

Status: Threatened

The short-tailed snake (*Lampropeltis extenuata*) inhabits dry upland habitats such as longleaf pine and xeric oak sandhills but may also be found in scrub and xeric hammock habitats. There are no

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documented historic occurrences of the short-tailed snake within the project study area and no observations were made during field reviews. Marginally suitable habitat for the short-tailed snake is present within and adjacent to the project study area. As a result, the potential for occurrence of the short-tailed snake within the project study area has been determined to be **low.**

Though marginally suitable habitat occurs within the project study area, implementation of the proposed project will only directly affect the existing US 98 ROW and the proposed pond sites which do not consist of suitable habitat for the short-tailed snake. Due to the lack of documented occurrence or observation during field reviews and absence of suitable habitat, **no effect anticipated** for the short-tailed snake as a result of the proposed project.

Florida Pine Snake

Status: Threatened

The Florida pine snake (*Pituophis melanoleucus mugitus*) prefers dry, upland areas with well-drained, sandy soils. This includes natural habitats such as upland pine forests and sandhills, but they have also been known to occur in scrubby flatwoods, oak scrub, dry oak forest, old fields, and agricultural borders. The pine snake often coexists with pocket gophers and gopher tortoises. There are no documented historic occurrences of the pine snake within or adjacent to the project study area and no observations were made during field reviews; however, some areas of marginally suitable habitat are present within the project study area. In addition, gopher tortoise burrows are present within the project study area. As a result, the potential for occurrence of the Florida pine snake within the project study area has been determined to be **low.**

Prior to construction of the proposed project, surveys of the appropriate habitats will be conducted for the presence of gopher tortoise burrows and coordinate with the FWC accordingly. Based on these commitments, **no adverse effect anticipated** for the Florida pine snake as a result of the proposed project.

Florida Sandhill Crane

Status: Threatened

Two subspecies of sandhill cranes occur in Florida. The Florida sandhill crane (*Antigone canadensis pratensis*) is a non-migratory subspecies that resides in Florida year-round. The greater sandhill crane (*A. canadensis*) winters in Florida but nests in the Great Lakes region. The migratory subspecies arrives in Florida in October and November and leaves for breeding grounds in northern U.S. and Canada from late January to early March. Sandhill cranes are associated with wet and dry prairies, freshwater marshes, open woods, and pasture. Sandhill cranes have been known to frequent agricultural areas like feed lots and crop fields, and also golf courses and other open lawns, especially in winter and early spring. Suitable habitat is present throughout the project study area and sandhill cranes were observed within the project study area during the January 2021 caracara surveys. However, based on the timing of these observations, it cannot be determined which subspecies was observed. Additional, marginally

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suitable nesting habitat is present within the herbaceous wetlands present within project study area. As a result, the potential for occurrence of the Florida sandhill crane is **high**.

As part of the proposed project, impacts to wetland habitat within the project area will be mitigated in accordance to the requirements of Part IV, Chapter 373 F.S. and 33 U.S.C. Section 1344 to prevent a net loss of wetland habitat functions and values. In addition, the project area will be resurveyed for sandhill crane nests prior to construction. If Florida sandhill crane nests are found within the proposed project area, coordination with the FWC will be conducted prior to construction to minimize adverse impacts to this species to the greatest extent possible. As a result, **no adverse effect anticipated** for the Florida sandhill crane.

Florida Burrowing Owl

Status: Threatened

The Florida burrowing owl (*Athene cunicularia floridana*) requires upland habitats such as high, sparsely vegetated, sandy ground. It also makes extensive use of ruderal areas such as pastures, airports, ball fields, parks, school grounds, road rights-of-way, and vacant spaces in residential areas. There are no documented historic occurrences of the Florida burrowing owl within the project study area and no individuals or burrows were observed during field reviews; however, suitable habitat is present within the project study area since the owl has been known to utilize road rights-of-way. The potential for occurrence of the Florida burrowing owl within the project study area has been determined to be **low.**

To avoid any potential impacts to this species, appropriate upland habitats within the proposed project area will be surveyed for burrowing owls or their burrows prior to construction. If any burrows are located in the project area, coordination with the FWC will be conducted to develop and implement the appropriate protection criteria prior to construction. With this commitment, the proposed project is not anticipated to affect the Florida burrowing owl. As a result, **no adverse effect anticipated** for the Florida burrowing owl.

Little Blue Heron and Tricolored Heron

Status: Threatened

The little blue heron (*Egretta caerulea*) and tricolored heron (*Egretta tricolor*) feed in shallow freshwater, brackish, and saltwater habitats. Preferred nesting habitat for these wading birds includes woody vegetation such as cypress, willow, maple, black mangrove, and cabbage palm. The herbaceous wetlands and surface waters within and adjacent to the project study area provide foraging habitat and some wetland areas may provide nesting habitat. During the field reviews, tricolored and little blue herons were observed within the project study area. The potential for occurrence of the little blue and tricolored herons within the project study area has been determined to be **high**.

As part of the proposed project, impacts to wetland habitat within the project area will be mitigated in accordance to the requirements of Part IV, Chapter 373 F.S. and 33 U.S.C. Section 1344 to prevent a net loss of wetland habitat functions and values. As a result, **no adverse effect anticipated** for the little blue heron and tricolored heron.

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Southeastern American Kestrel

Status: Threatened

The southeastern American kestrel (*Falco sparverius paulus*) is found in open pine habitats, woodland edges, prairies, and pastures throughout much of Florida. This species nests in tall dead trees or utility poles generally with an unobstructed view of surroundings. Sandhill habitats seem to be preferred but the kestrel may also occur in flatwoods settings having open patches of grass or bare ground to detect prey.

During the 2021 caracara surveys, a kestrel was observed near the northern portion of the project study area perched on overhead wires and foraging in an offsite pasture. Marginally suitable foraging habitat is present adjacent to the ROW. As a result, the potential for occurrence of the southeastern American kestrel in the project study area has been determined to be **high.**

As part of the PD&E study, a survey for the southeastern American kestrel was conducted in June-July 2021. Surveying for kestrels was done in accordance with the survey methodology contained in FWC's *Species Conservation Measures and Permitting Guidelines for the Southeastern American Kestrel,* effective December 2020. Data sheets from the survey are provided in **Appendix H**. Habitat mapping was done to identify suitable foraging habitat per the FWC 2020 guidelines. Based on these guidelines, suitable foraging habitat identified within a 600-foot buffer of the project corridor consisted of the following vegetative cover types, classified using FLUCFCS: Open Land (FLUCFCS 190); Cropland and Pastureland (FLUCFCS 210); Other Open Lands (FLUCFCS 260); Shrub and Brushland (FLUCFCS 320); Upland Coniferous Forest (FLUCFCS 410); and Pine Flatwoods (FLUCFCS 411). **Figure A-5** in **Appendix A** depicts the location of the survey stations and suitable foraging habitat.

No known active nest cavities were identified, and no individual kestrels were observed within the project study area during the 2021 survey period. Suitable nesting and foraging habitat are not present within the existing US 98 ROW. A kestrel survey will be conducted during the 2022 survey season within the selected SMF and FPC sites, as necessary, of which results will be provided in an addendum to this report. If any individuals or nests are observed prior to construction, coordination with FWC will be implemented. As a result, it has been determined that **no adverse effect anticipated** for the southeastern American kestrel.

Least Tern

Status: Threatened

The least tern (*Sterna antillarum*) is found in coastal areas including beaches, lagoons, bays, and estuaries. They increasingly use artificial nesting sites including gravel rooftops, dredge spoil islands or other dredged material deposits, construction sites, causeways, and mining lands. There are no documented historic occurrences of the least within or adjacent to the project study area and no observations were made during field reviews. Areas of well drained sand or gravel with little vegetation that may provide natural nesting habitat are not present within the project study area. Additionally,

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artificial nesting sites are not located within the project study area. Therefore, the potential for occurrence of the least tern within the project study area has been determined to be **low.**

Due to the lack of documented occurrence or observation during field reviews and absence of suitable nesting habitat, **no effect anticipated** for the least tern**.**

State Listed Plant Species

State listed plant species, their habitat, and potential for occurrence have been provided in **Table 3-2.** The majority of the proposed project improvements will take place within existing FDOT-owned ROW that is largely mowed and maintained. Impacts to wetlands and surface waters include impacts to linear roadside ditches and freshwater herbaceous wetlands. Additionally, preferred habitat of the federally listed species potentially occurring within the project study area is limited to sandhill scrub typically occurring on the Lake Wales Ridge. In September 2021, a pedestrian survey for listed scrub plant species with a fall flowering/survey season was conducted within the areas of suitable and marginally suitable habitat occurring within the project limits. No suitable habitat for listed scrub plant species occurs within the preliminarily selected SMF/FPC sites. During the fall survey, no listed plant species were identified. For listed scrub plant species with a spring flowering/survey season, a pedestrian survey will be conducted within the areas of suitable and marginally suitable habitat occurring within the project limits in March 2022 to further determine the absence/presence of state listed scrub plant species. The results of the March 2022 spring survey will be included in an addendum to this report. **Table 3-5** lists the state listed scrub plants, survey season, and preferred habitat. Based on the results of the 2021 survey and due to minimal presence of suitable habitat within the project study area, it was determined that the proposed project will have **no effect anticipated** on state listed plant species.

Table 3-5 State Listed Scrub Plants Survey

Species	Listing	Preferred Habitat	Survey Season
State Listed Plants			
Incised Groove-bur (*Agrimonia incisa*)	T	sandy, dry-mesic, usually upland; longleaf pine-deciduous scrub oak, sandy or sandy loam; open pine woods or mixed pine-oak woods, bluffs, small clearings and old roads	Fall
Ashe's savory (*Calamintha ashei*)	T	dry pinelands and sand pine scrub in canopy openings and disturbed areas	Spring or Fall
Many-flowered Grass-pink (*Calopogon multiflorus*)	T	dry to moist flatwoods with longleaf pine, wiregrass, saw palmetto	Spring
Sand butterfly-pea (*Centrosema arenicola*)	E	mixed woodlands; pine thickets	Fall
Highlands Goldenaster (*Chrysopsis highlandsensis*)	E	sand pine scrub, scrubby flatwoods	Fall
Nodding Pinweed (*Lechea cernua*)	T	fire-maintained scrub	Spring or Fall
Pine Pinweed (*Lechea divaricata*)	E	scrubby flatwoods	Fall
Florida Spiny-pod (*Matelea pubiflora*)	E	sandhills, scrubs	Spring or Fall

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Species	Listing	Preferred Habitat	Survey Season
Lewton's Polygala (*Polygala lewtonii*)	E	oak scrub, sandhill, and transition zones between high pine and turkey oak barrens	Spring
Giant Orchid (*Pteroglossaspis ecristata*)	T	sandhill, scrub, pine flatwoods, pine rocklands, and occasionally in old fields	Fall
Large-plumed Beaksedge (*Rhynchospora megaplumosa*)	E	scrubby flatwoods	Spring or Fall
Florida Willow (*Salix floridana*)	E	bottomland forests, floodplains, hydric hammocks, swamps, edges of spring-runs, and streams	Spring
Scrub Bluestem (*Schizachyrium niveum*)	E	white sand patches in rosemary scrub, sand pine scrub and oak scrub	Fall
Scrub Stylisma (*Stylisma abdita*)	E	scrub and sandhills	Spring

Sources: FNAI, 2021; FDACS, 2010.
Notes: E = Endangered; T = Threatened

3.3.3 Other Protected Species

Bald Eagle

Status: Protected by Federal and State Law

The bald eagle (*Haliaeetus leucocephalus*) was removed from the endangered species list in August 2007; however, this species is protected under the Bald and Golden Eagle Protection Act in accordance with 16 U.S.C. Section 668, the Migratory Bird Treaty Act in accordance with 16 U.S.C. Sections 703-712., and the State Bald Eagle Management Plan (FWC, 2008). Bald eagles frequent areas close to coastal areas, bays, rivers, lakes, or other bodies of water with a concentrated food source as the ideal habitat. Tall trees, mostly live pines, typically serve as nesting sites; however, in urban areas the bald eagle may nest in cell towers. The FWC online bald eagle nest locator website indicates that the nearest document nest is located approximately 1.8 miles northeast of the northern terminus of the project limits in the Colt Creek State Preserve (nest ID PO124). A bald eagle was observed flying over the project study area during the field reviews; however, no nests have been observed within or adjacent to the project study area and foraging habitat is limited. As a result, the potential for occurrence of the bald eagle is **low.**

Pursuant to the USFWS bald eagle guidelines, any disturbance within 1,000 feet of a bald eagle nest requires additional coordination and potential permitting with the USFWS. To avoid any potential impacts to this species, the FDOT will resurvey appropriate upland habitats within 1,000 feet of the proposed project area for bald eagle nests prior to construction. If a bald eagle nest is found within 1,000 feet of the proposed project area, the FDOT will coordinate with USFWS to secure any and all approvals regarding this species. As a result, **no effect** anticipated on the Bald Eagle.

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Osprey

Status: Protected by Federal and State Law

The osprey (*Pandion haliaetus*) was removed from Florida's endangered and threatened species list in 2018; however, this species is protected under the Migratory Bird Treaty Act and 68A-16.001, F.A.C. This species can be found on or near large lakes, rivers, and coastal areas where suitable nesting sites can be found. Water bodies must be large, fairly open, and clear for osprey to locate prey. Nesting sites are large living or dead trees and man-made structures and sites often stand above surrounding vegetation or in more open fields and sparsely timbered forests. Active osprey nests (i.e. nests with eggs or flightless young) are protected from destruction by the Migratory Bird Treaty Act. During the field reviews, an active osprey nest was observed on a cell tower within the southern portion of the project study area. A nest was also observed on a cell tower within the northern portion of the project study area; however, no activity was observed in this nest during the field reviews. **Figure A-6** in **Appendix A** depicts the location of these nests in relation to the project limits. Foraging habitat is present in the vicinity of the project study area but not within the ROW. As a result, the potential for occurrence of the osprey is **high**.

Currently, there are no osprey nests located within the ROW or proposed FPC and SMF sites that will be impacted by the proposed construction of the proposed project. FDOT will re-evaluate the project area prior to the start of construction for the presence of osprey nests. As a result, **no effect** anticipated on the osprey.

Florida Black Bear

Status: Protected by State Law

The Florida black bear (*Ursus americanus floridanus*) was removed from Florida's endangered and threatened species list in 2012; however, this species is protected by 68A-4.009, F.A.C. (2015) and the Florida Black Bear Management Plan (FWC, 2019). The Florida black bear occurs in a wide variety of forested communities, including forested wetlands which are particularly important for diurnal cover.

No black bears were observed during field reviews and there are no documented historic occurrences within the project study area. The nearest documented bear nuisance call is located approximately two miles west of the center of the project study area in the Green Swamp Wildlife Management Area. Suitable habitat for the black bear is present within and adjacent to the project study area, but not within the existing ROW. Marginally suitable habitat may occur within the proposed FPC and SMF sites. As a result, the potential for occurrence of the Florida black bear within the project study area has been determined to be **low**.

Measures to be taken to minimize conflict with bears during construction activities include:

- Following BMPs during construction;
- Requiring clean construction sites with wildlife-resistant containers for workers to use for food-related and other wildlife-attractant refuse; and

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- Requiring frequent trash removal and the use of proper food storage and removal on work sites.

In addition, wildlife crossings are proposed to be constructed as part of the proposed project that will include wildlife fencing to guide wildlife to the crossing. The addition, these features will provide enhanced opportunity for the safe passage of wildlife under US 98. As a result, **no effect** anticipated for the Florida black bear.

3.4 SUMMARY

Tables 3-6 through **3-8** summarize the impact determination that has been made for protected species based upon their probability of occurrence in the project study area, impacts to habitat suitable required to support the life cycle of the various species and their needs, and the commitments made to offset any potential impacts to each species. To further minimize impacts to wildlife, FDOT is also evaluating the addition of wildlife features along US 98 including a wildlife crossing at the Main Stream Bridge culvert (located approximately 1.4 miles southeast of SR 471) that will be designed for the crossing of large mammals (e.g., panther, bear, deer, hogs) and several smaller features designed for the crossing of smaller mammals (e.g., rabbits, raccoons, fox, etc.). These features will provide enhanced opportunity for the safe passage of wildlife under US 98. Further discussion will be provided in an addendum to this report following completion of the wildlife features evaluation.

Table 3-6 Summary of Federally Listed Species Effect Determinations

Project Impact Determination	Federal Species
May affect, not likely to adversely affect	Eastern Indigo Snake (*Drymarchon couperi*) Blue-tailed Mole Skink (*Plestiodon egregious lividus*) Sand Skink (*Plestiodon reynoldsi*) Eastern Black Rail (*Laterallus jamaicensis jamaicensis*) Wood Stork (*Mycteria americana*) Everglade Snail Kite (*Rostrhamus sociabilis*)
No effect	Florida Panther (*Puma concolor coryi*) Florida Grasshopper Sparrow (*Ammodramus savannarum floridanus*) Audubon's Crested Caracara (*Caracara cheriway*) Federally listed plants

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Table 3-7 Summary of State Listed Species Effect Determinations

Project Impact Determination	State Species
No adverse effect anticipated	Gopher Tortoise (*Gopherus polyphemus*) Florida Pine Snake (*Pituophis melanoleucus mugitus*) Florida Sandhill Crane (*Antigone canadensis pratensis*) Florida Burrowing Owl (*Athene cunicularia floridana*) Little Blue Heron (*Egretta caerulea*) Tricolored Heron (*Egretta tricolor*) Southeast American Kestrel (*Falco sparverius paulus*)
No effect anticipated	Short-tailed Snake (*Lampropeltis extenuate*) Least Tern (*Sternula antillarum*) State listed plants

Table 3-8 Summary of Other Protected Species Effect Determinations

Project Impact Determination	Other Protected Species
No effect anticipated	Bald Eagle (*Haliaeetus leucocephalus*) Osprey (*Pandion haliaetus*) Florida Black Bear (*Ursus americanus floridanus*)

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SECTION 4 WETLANDS AND OTHER SURFACE WATERS EVALUATION

4.1 INTRODUCTION

The analysis described in this section is consistent with Part 2, Chapter 9, Wetlands and Other Surface Waters of the PD&E Manual. Presidential Executive Order (EO) 11990 entitled *Protection of Wetlands* establishes a National Policy to "avoid to the extent possible the long and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative." FDOT has assessed wetlands and surface waters that may be affected by the proposed project.

4.2 METHODOLOGY

Wetland and other surface water were delineated and surveyed in June through August 2021 within the proposed project limits (i.e., existing US 98 ROW). A preliminary evaluation of wetlands and other surface waters within the proposed SMF and FPC sites was conducted in June 2021. Wetland limits were delineated using the procedures within Chapter 62-340, F.A.C. (1994), *Delineation of the Landward Extent of Wetlands and Surface Waters* and the criteria found within the U.S. Army Corps of Engineers (USACE) *1987 Corps of Engineers Wetland Delineation Manual* (Y-87-1) and *2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coast Plain Region* (Version 2.0) (USACE, 1987; USACE, 2010).

In accordance with Chapter 62-340.600, F.A.C., surface water limits were delineated at top of the bank for conveyance systems with side slopes of one foot vertical to four feet horizontal or steeper (i.e., ditches). Other roadside conveyance systems not meeting this surface water definition such as swales (defined in Section 403.803, F.S. as trenched conveyances with side slopes equal to or greater than three feet horizontal to one foot vertical) were not delineated as surface waters.

Wetlands and other surface waters were classified using FLUCFCS (FDOT, 1999) and the USFWS *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin *et. al.*, 1979). The literature and databases reviewed prior to wetland and surface water delineations are listed in **Section 2.2.** During the field reviews, each wetland and other surface water within the project limits was visually inspected and attention given to identifying dominant plant species. The presence of nuisance/exotic vegetation and other disturbances, such as channelization, clearing, etc. were also noted.

4.3 INDIVIDUAL WETLANDS AND OTHER SURFACE WATERS

A total of 65 wetlands and 92 other surface waters were identified within the project limits of the proposed mainline widening. Descriptions of these wetlands are provided in **Appendix H**. Included in each description are the FLUCFCS and USFWS wetland classification codes, listings of dominant vegetation, watershed location, and field observations. **Figure A-7** in **Appendix A** depict the location of these wetlands and other surface waters. Photographs of each wetland identified within the project limits are provided in **Appendix H**.

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Table 4-1 provides a summary of the federally jurisdictional wetlands and other surface waters (Waters of the US) identified within the project limits. **Table 4-1** also provides a summary of the state-only jurisdictional (non-Waters of the US) within the project limits. Federal regulatory jurisdiction of wetlands and other surface waters identified within the project limits was determined in accordance with the Navigable Waters Protection Rule (NWPR) (85 FR 22250). The NWPR, finalized June 22, 2020, defines the definition of non-jurisdictional surface waters and jurisdiction surface waters (i.e., Waters of the US) under the CWA.

Based on the NWPR, the surface waters that are cut from non-hydric soil, not connected to federally jurisdictional wetlands, and solely provide conveyance for roadway drainage were not considered to be Waters of the US.

The other surface waters identified within the project limits are man-made ditches and function as part of the roadside conveyance system for stormwater runoff and discharge offsite via a series of pipe culverts and cross drains. Vegetation predominately consists of bahia grass (*Paspalum notatum*), torpedo grass (*Panicum repens*), pennywort (*Hydrocotyle umbellata*), and primrose willow (*Ludwigia peruviana*) and are routinely disturbed by maintenance activities like mowing or regrading.

Table 4-1 Wetlands and Other Surface Waters within the Limits of Mainline Widening

Wetland/Surface Water ID	FLUCFCS Code and Description	USFWS Classification	Watershed/ERP Basin	Acres within Existing ROW
Federally Jurisdictional Wetlands				
WL 1	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.31
WL 2	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.07
WL 3	617 – Mixed Wetland Hardwoods	PFO1C	Withlacoochee River	0.08
WL 4	617 – Mixed Wetland Hardwoods/641 – Freshwater Marsh	PFO1C/PEM1C	Withlacoochee River	0.51
WL 5	631 – Wetland Scrub	PSS1C	Withlacoochee River	<0.01
WL 6	630 – Forested Wetland Mix	PFO1/2C	Withlacoochee River	0.05
WL 7	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.81
WL 8	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.70
WL 9	630 – Forested Wetland Mix	PFO1/2C	Withlacoochee River	0.60
WL 10	630 – Forested Wetland Mix	PFO1/2C	Withlacoochee River	0.26
WL 11	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.03
WL 12	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.56
WL 13	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.76
WL 14	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.24
WL 15	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.31
WL 16	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.43
WL 17	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.15
WL 18	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.22
WL 19	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.58

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Wetland/Surface Water ID	FLUCFCS Code and Description	USFWS Classification	Watershed/ERP Basin	Acres within Existing ROW
Federally Jurisdictional Wetlands				
WL 20	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.43
WL 21	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.05
WL 22	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.27
WL 23	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.12
WL 24	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.15
WL 25	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.21
WL 26	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.30
WL 27	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.47
WL 28	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.09
WL 29	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.25
WL 30	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.01
WL 31	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.56
WL 32	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	1.27
WL 33	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.29
WL 34	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.05
WL 35	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.09
WL 36	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.03
WL 37	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.25
WL 38	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.21
WL 39	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.30
WL 40	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.13
WL 41	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.05
WL 42	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.67
WL 43	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.33
WL 44	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.45
WL 45	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.38
WL 46	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.41
WL 47	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.35
WL 48	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	0.53
WL 49	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.46
WL 50	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	0.15
WL 51	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	0.28
WL 52	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.48
WL 53	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.11
WL 54	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.49
WL 55	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.68
WL 56	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.78
WL 57	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.34

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Wetland/Surface Water ID	FLUCFCS Code and Description	USFWS Classification	Watershed/ERP Basin	Acres within Existing ROW
Federally Jurisdictional Wetlands				
WL 58	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.73
WL 59	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.52
WL 60	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.58
WL 61	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.85
WL 62	621 – Cypress	PFO2C	Hillsborough River	0.87
WL 63	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.09
WL 64	631 – Wetland Scrub	PSS1C	Withlacoochee River	0.28
WL 65	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.42
			Subtotal Federally Jurisdictional Wetlands	*23.48*
Federally Jurisdictional Other Surface Waters				
SW 4	510 – Streams and Waterways	PEMx	Withlacoochee River	0.07
SW 10a	510 – Streams and Waterways	PEMx	Withlacoochee River	0.05
SW 15a	510 – Streams and Waterways	PEMx	Withlacoochee River	0.08
SW 15	510 – Streams and Waterways	PEMx	Withlacoochee River	0.15
SW 34	510 – Streams and Waterways	PEMx	Hillsborough River	0.07
SW 55	510 – Streams and Waterways	PEMx	Hillsborough River	0.16
SW 56	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 62	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 77	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 83	510 – Streams and Waterways	PEMx	Hillsborough River	0.78
SW 84	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 86	510 – Streams and Waterways	PEMx	Withlacoochee River	0.27
SW 88	510 – Streams and Waterways	PEMx	Withlacoochee River	0.05
SW 89	510 – Streams and Waterways	PEMx	Withlacoochee River	0.08
SW 90	510 – Streams and Waterways	PEMx	Withlacoochee River	0.03
			Subtotal Federally Jurisdictional Other Surface Waters	*1.87*
State-only Jurisdictional Other Surface Waters				
SW 1	510 – Streams and Waterways	PEMx	Withlacoochee River	0.02
SW 2	510 – Streams and Waterways	PEMx	Withlacoochee River	0.01
SW 3	510 – Streams and Waterways	PEMx	Withlacoochee River	0.23
SW 5	510 – Streams and Waterways	PEMx	Withlacoochee River	0.05
SW 6	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 7	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 8	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 9	510 – Streams and Waterways	PEMx	Hillsborough River	<0.01
SW 10	510 – Streams and Waterways	PEMx	Hillsborough River	<0.01
SW 11	510 – Streams and Waterways	PEMx	Withlacoochee River	0.01
SW 12	510 – Streams and Waterways	PEMx	Withlacoochee River	0.02
SW 13	510 – Streams and Waterways	PEMx	Withlacoochee River	0.01
SW 14	510 – Streams and Waterways	PEMx	Withlacoochee River	0.02

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Wetland/Surface Water ID	FLUCFCS Code and Description	USFWS Classification	Watershed/ERP Basin	Acres within Existing ROW
State-only Jurisdictional Other Surface Waters				
SW 16	510 – Streams and Waterways	PEMx	Withlacoochee River	0.04
SW 17	510 – Streams and Waterways	PEMx	Withlacoochee River	0.03
SW 18	510 – Streams and Waterways	PEMx	Withlacoochee River	0.04
SW 19	510 – Streams and Waterways	PEMx	Withlacoochee River	0.03
SW 20	510 – Streams and Waterways	PEMx	Withlacoochee River	0.15
SW 21	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 22	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 23	510 – Streams and Waterways	PEMx	Hillsborough River	0.10
SW 24	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 25	510 – Streams and Waterways	PEMx	Hillsborough River	0.04
SW 26	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 27	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 28	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 29	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 30	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 31	510 – Streams and Waterways	PEMx	Hillsborough River	0.42
SW 32	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 33	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 35	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 36	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 37	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 38	510 – Streams and Waterways	PEMx	Hillsborough River	0.16
SW 39	510 – Streams and Waterways	PEMx	Hillsborough River	0.13
SW 40	510 – Streams and Waterways	PEMx	Hillsborough River	0.19
SW 41	510 – Streams and Waterways	PEMx	Hillsborough River	0.10
SW 42	510 – Streams and Waterways	PEMx	Hillsborough River	0.16
SW 43	510 – Streams and Waterways	PEMx	Hillsborough River	<0.01
SW 44	510 – Streams and Waterways	PEMx	Hillsborough River	0.14
SW 45	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 46	510 – Streams and Waterways	PEMx	Hillsborough River	0.05
SW 47	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 48	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 49	510 – Streams and Waterways	PEMx	Hillsborough River	<0.01
SW 50	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 51	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 52	510 – Streams and Waterways	PEMx	Hillsborough River	0.05
SW 53	510 – Streams and Waterways	PEMx	Hillsborough River	0.09
SW 54	510 – Streams and Waterways	PEMx	Hillsborough River	0.05
SW 57	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 58	510 – Streams and Waterways	PEMx	Hillsborough River	0.04

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Wetland/Surface Water ID	FLUCFCS Code and Description	USFWS Classification	Watershed/ERP Basin	Acres within Existing ROW
State-only Jurisdictional Other Surface Waters				
SW 59	510 – Streams and Waterways	PEMx	Hillsborough River	0.04
SW 60	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 61	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 63	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 64	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 65	510 – Streams and Waterways	PEMx	Hillsborough River	0.07
SW 67	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 68	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 69	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 70	510 – Streams and Waterways	PEMx	Hillsborough River	0.04
SW 71	510 – Streams and Waterways	PEMx	Hillsborough River	0.05
SW 72	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 73	510 – Streams and Waterways	PEMx	Hillsborough River	0.09
SW 74	510 – Streams and Waterways	PEMx	Hillsborough River	0.05
SW 75	510 – Streams and Waterways	PEMx	Hillsborough River	0.04
SW 76	510 – Streams and Waterways	PEMx	Hillsborough River	0.04
SW 78	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 79	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 80	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 81	510 – Streams and Waterways	PEMx	Hillsborough River	0.07
SW 82	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 85	510 – Streams and Waterways	PEMx	Withlacoochee River	0.80
SW 87	510 – Streams and Waterways	PEMx	Withlacoochee River	0.09
Subtotal State-Only Jurisdictional Other Surface Waters				*4.41*
TOTAL				**29.76**

Notes: PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded; PEMx = Palustrine, Emergent, Excavated; PSS1C = Palustrine, Scrub-shrub, Broad-leaved Deciduous, Seasonally Flooded
Sources: FDOT, 1999; Cowardin *et al.,* 1979; FDA, 2021.

An additional 18 wetlands and three other surface waters were identified within the preliminarily selected SMF and FPC sites during the evaluation of the SMF and FPC site alternatives. **Figure A-7** in **Appendix A** depicts the location of these wetlands and other surface waters. **Table 4-2** summarizes the wetland and other surface water types identified within these areas. Upon completion of evaluating the SMF and FPC sites, further assessment and delineations will be conducted of which the results will be provided in an addendum to this report.

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Table 4-2 Wetlands and Other Surface Waters within the SMF/FPC Sites

Wetland/Surface Water ID	FLUCFCS Code and Description	USFWS Classification	Watershed/ERP Basin	Acres
Federally Jurisdictional Wetlands				
WL 66	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.17
WL 67	630 – Wetland Forested Mixed	PFO1/2C	Hillsborough River	1.95
WL 68	630 – Wetland Forested Mixed	PFO1/2C	Withlacoochee River	0.28
WL 69	630 – Wetland Forested Mixed	PFO1/2C	Withlacoochee River	0.13
WL 70	621 – Cypress	PFO2C	Withlacoochee River	0.04
WL 71	630 – Wetland Forested Mixed	PFO1/2C	Withlacoochee River	0.89
WL 72	630 – Wetland Forested Mixed	PFO1/2C	Hillsborough River	0.01
WL 73	630 – Wetland Forested Mixed	PFO1/2C	Hillsborough River	1.94
WL 74	621 – Cypress	PFO2C	Hillsborough River	0.43
WL 75	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	0.17
WL 76	630 – Wetland Forested Mixed	PFO1/2C	Hillsborough River	0.02
WL 77	630 – Wetland Forested Mixed	PFO1/2C	Hillsborough River	3.35
WL 78	621 - Cypress	PFO2C	Hillsborough River	1.18
WL 79	630 – Wetland Forested Mixed	PFO1/2C	Hillsborough River	0.21
WL 80	621 – Cypress	PFO2C	Hillsborough River	0.06
WL 81	643 – Wet Prairie	PEM1C	Hillsborough River	0.11
WL 82	630 – Wetland Forested Mixed	PFO1/2C	Hillsborough River	0.13
WL 83	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.39
			Subtotal Federally Jurisdictional Wetlands	*11.46*
State-only Jurisdictional Other Surface Waters				
SW 91	530 – Reservoir	POWx	Hillsborough River	0.17
SW 92	530 – Reservoir	POWx	Withlacoochee River	5.09
SW 93	510 – Streams and Waterways (Ditch)	PEM1C	Hillsborough River	0.11
			Subtotal State-Only Jurisdictional Other Surface Waters	*5.37*
			TOTAL	**16.83**

Notes: PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded; POWx = Palustrine, Open Water, Excavated;
Sources: FDOT, 1999; Cowardin *et al.,* 1979; FDA, 2021

4.4 WETLAND AND OTHER SURFACE WATER IMPACTS

4.4.1 Avoidance and Minimization

The mainline widening of US 98 within the project limits will occur wholly within FDOT ROW. Approximately 23.48 acres of wetlands and 6.28 acres of other surface waters (i.e., ditches) occur within the ROW limits of the project area. During evaluation of SMF and FPC alternatives, preliminary sites were selected to minimize wetland impacts to the greatest extent practicable. While no practicable

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alternative avoiding all wetland impacts was identified, wetland and other surface water impacts will be avoided and minimized to the greatest extent practicable during the project design and permitting. Temporary impacts due to construction will be minimized utilizing BMPs, maintaining a stormwater pollution prevention plan (SWPPP), and implementing FDOT design standards. Unavoidable wetland impacts will be mitigated to satisfy requirements of Part IV, Chapter 373, F.S. and 33 U.S.C. Section 1344.

4.4.2 Summary of Impacts

Wetland and other surface water impacts have been assessed and quantified based on the preliminary design plans for the proposed mainline widening. For this study, the entire existing ROW within the project limits is proposed to be disturbed. Therefore, all of the wetlands identified in **Table 4-1** are proposed to be impacted. Approximately 23.48 acres of federally and state jurisdictional wetlands will be permanently impacted as a result of the construction of the proposed mainline widening. To accommodate the proposed project, the existing surface waters (i.e., ditches) will be impacted; however, these impacts are proposed to be temporary as these ditches will be reconstructed and replaced in-kind. All of the cross drains will be replaced as part of the proposed project, but the locations will remain at or similar to the current locations.

Secondary impacts to the habitat functions of wetlands within 25 feet of the direct impacts were also quantified pursuant to state guidelines and are shown in **Table 4-3**. Approximately 17.07 acres of secondary impacts to wetlands would occur as a result of the proposed project.

Table 4-3 Secondary Impacts to Wetlands Resulting from Mainline Widening

Wetland ID	FLUCFCS Code	USFWS Classification	Watershed/ERP Basin	Acres
WL 1	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.16
WL 2	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.07
WL 3	617 – Mixed Wetland Hardwoods	PFO1C	Withlacoochee River	0.05
WL 4	617 – Mixed Wetland Hardwoods/641 – Freshwater Marsh	PFO1C/PEM1C	Withlacoochee River	0.42
WL 5	631 – Wetland Scrub	PSS1C	Withlacoochee River	0.02
WL 6	630 – Forested Wetland Mix	PFO1/2C	Withlacoochee River	0.07
WL 7	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.59
WL 8	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.57
WL 9	630 – Forested Wetland Mix	PFO1/2C	Withlacoochee River	0.17
WL 10	630 – Forested Wetland Mix	PFO1/2C	Withlacoochee River	0.05
WL 11	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.36
WL 12	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.59
WL 13	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.35
WL 14	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.37
WL 15	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.25

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Wetland ID	FLUCFCS Code	USFWS Classification	Watershed/ERP Basin	Acres
WL 16	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.30
WL 17	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.12
WL 18	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.16
WL 19	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.45
WL 20	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.32
WL 21	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.05
WL 22	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.23
WL 23	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.11
WL 24	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.18
WL 25	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.20
WL 26	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.23
WL 27	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.32
WL 28	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.10
WL 29	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.27
WL 30	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.05
WL 31	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.47
WL 32	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	0.00
WL 33	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.33
WL 34	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.05
WL 35	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.07
WL 36	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.07
WL 37	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.16
WL 38	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.24
WL 39	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.23
WL 40	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.11
WL 41	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.07
WL 42	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.43
WL 43	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.22
WL 44	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.48
WL 45	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.24
WL 46	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.25
WL 47	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.15
WL 48	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	0.43
WL 49	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.30
WL 50	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	0.13
WL 51	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	0.32
WL 52	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.33
WL 53	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.12
WL 54	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.36

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Wetland ID	FLUCFCS Code	USFWS Classification	Watershed/ERP Basin	Acres
WL 55	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.33
WL 56	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.62
WL 57	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.25
WL 58	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.39
WL 59	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.37
WL 60	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.54
WL 61	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.51
WL 62	621 – Cypress	PFO2C	Hillsborough River	0.54
WL 63	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.15
WL 64	631 – Wetland Scrub	PSS1C	Withlacoochee River	0.20
WL 65	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.42
			TOTAL	**17.07**

Notes: PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded; PSS1C = Palustrine, Scrub-shrub, Broad-leaved Deciduous, Seasonally Flooded
Sources: FDOT, 1999; Cowardin *et al.,* 1979; FDA, 2021.

Wetland impacts as a result of the construction of each preliminary SMF and FPC site were also assessed. These impacts are summarized in **Table 4-4**. Once evaluation of the SMF/FPC sites is completed and selection is finalized, wetland impacts within the selected preferred sites will be reassessed and included in an addendum to this report. Therefore, an overall total of direct impacts resulting from the SM/FPC sites is not provided in **Table 4-4** as many of these areas overlap the same wetland area.

Table 4-4 Direct Impacts to Wetlands Resulting from SMF/FPC Sites

SMF/FPC ID	Wetland/Surface Water ID	FLUCFCS Code	USFWS Classification	Watershed/ERP Basin	Acres
FPC 4A	WL 67	630	PFO1/2C	Hillsborough River	0.83
FPC 4A Easement	WL 67	630	PFO1/2C	Hillsborough River	0.23
FPC 4B	SW 91	530	POWx	Hillsborough River	0.17
FPC 4B	WL 66	641	PEM1C	Hillsborough River	0.17
FPC 4B	WL 67	630	PFO1/2C	Hillsborough River	0.50
FPC 4B Easement	WL 67	630	PFO1/2C	Hillsborough River	0.38
FPC 4C	WL 67	630	PFO1/2C	Hillsborough River	1.30
FPC 4C Easement	WL 67	630	PFO1/2C	Hillsborough River	0.23
FPC 5B	WL 68	630	PFO1/2C	Withlacoochee River	0.28
FPC 5C	WL 68	630	PFO1/2C	Withlacoochee River	0.03
FPC 5E	WL 70	621	PFO2C	Withlacoochee River	0.04
FPC 6A	WL 83	630	PFO1/2C	Hillsborough River	0.39
FPC 6C	WL 81	621	PFO2C	Hillsborough River	0.11
FPC 6C	WL 82	621	PFO2C	Hillsborough River	0.13

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SMF/FPC ID	Wetland/Surface Water ID	FLUCFCS Code	USFWS Classification	Watershed/ERP Basin	Acres
FPC 7B	WL 72	630	PFO1/2C	Hillsborough River	0.01
FPC 8A	WL 80	641	PEM1C	Hillsborough River	0.06
FPC 9A	WL 78	630	PFO1/2C	Hillsborough River	1.18
FPC 11A	WL 76	621	PFO2C	Hillsborough River	0.02
FPC 12A	WL 75	630	PFO1/2C	Hillsborough River	0.17
POND 2C-2	WL 71	617	PFO1C	Withlacoochee River	0.89
POND 2D-1	SW 92	530	POWx	Withlacoochee River	5.09
POND 2D-1	WL 69	630	PFO1/2C	Withlacoochee River	0.13
POND 3D-1	WL 79	641	PEM1C	Hillsborough River	0.22
POND 3D-2	WL 73	630	PFO1/2C	Hillsborough River	1.94
POND 4C-2	SW 93	510	PEM1C	Hillsborough River	0.11
POND 4C-2	WL 74	621	PFO2C	Hillsborough River	0.43
POND 4D-1	WL 77	643	PEM1C	Hillsborough River	3.35

Notes: PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded.
Sources: FDOT, 1999; Cowardin *et al.,* 1979; FDA, 2021.

Potential secondary impacts to the habitat functions of wetlands within 25 feet of the direct impacts resulting from the preliminarily selected SMF and FPC sites were also quantified pursuant to state guidelines and are shown in **Table 4-5**. As previously stated, wetland impacts within the selected preferred sites will be reassessed and included in an addendum to this report once they have been selected. Therefore, an overall total of secondary impacts resulting from the SM/FPC sites is not provided in **Table 4-5**.

Table 4-5 Secondary Impacts to Wetlands Resulting from SMF/FPC Sites

SMF/FPC ID	Wetland/Surface Water ID	FLUCFCS Code	USFWS Classification	Watershed/ERP Basin	Acres
FPC 4A	WL 67	630	PFO1/2C	Hillsborough River	0.48
FPC 4A Easement	WL 67	630	PFO1/2C	Hillsborough River	0.38
FPC 4B	WL 66	641	PEM1C	Hillsborough River	0.15
FPC 4B	WL 67	630	PFO1/2C	Hillsborough River	0.29
FPC 4B Easement	WL 67	630	PFO1/2C	Hillsborough River	0.62
FPC 4C	WL 67	630	PFO1/2C	Hillsborough River	0.55
FPC 4C Easement	WL 67	630	PFO1/2C	Hillsborough River	0.38
FPC 5B	WL 68	630	PFO1/2C	Withlacoochee River	0.50
FPC 5C	WL 68	630	PFO1/2C	Withlacoochee River	0.24
FPC 5E	WL 70	621	PFO2C	Withlacoochee River	0.18
FPC 6A	WL 83	630	PFO1/2C	Hillsborough River	0.17
FPC 6C	WL 81	621	PFO2C	Hillsborough River	0.13
FPC 6C	WL 82	621	PFO2C	Hillsborough River	0.09
FPC 7B	WL 72	630	PFO1/2C	Hillsborough River	0.07

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SMF/FPC ID	Wetland/Surface Water ID	FLUCFCS Code	USFWS Classification	Watershed/ERP Basin	Acres
FPC 8A	WL 80	630	PFO1/2C	Hillsborough River	0.11
FPC 9A	WL 78	630	PFO1/2C	Hillsborough River	0.50
FPC 11A	WL 76	621	PFO2C	Hillsborough River	0.13
FPC 12A	WL 75	630	PFO1/2C	Hillsborough River	0.14
FPC 13A	ADJACENT WL	630	PFO1/2C	Hillsborough River	0.12
POND 1A	ADJACENT WL	630	PFO1/2C	Withlacoochee River	0.09
POND 2C-2	WL 71	617	PFO1C	Withlacoochee River	0.10
POND 2D-1	WL 69	630	PFO1/2C	Withlacoochee River	0.17
POND 3D-2	WL 73	630	PFO1/2C	Hillsborough River	0.55
POND 4C-2	ADJACENT WL	621	PFO2C	Hillsborough River	0.26
POND 4D-1	WL 77	630	PFO1/2C	Hillsborough River	0.60

Notes: PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded.
Sources: FDOT, 1999; Cowardin *et al.,* 1979; FDA, 2021.

4.4.3 Cumulative Impacts

Cumulative impact is the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time (40 CFR 1508.7).

The current baseline condition in the watershed includes past and ongoing wetland, wildlife, and water quality impacts resulting from residential, commercial, agricultural, and transportation development. The impacts of these development activities overlap in time and space with the effects of the proposed project. However, this project's cumulative wetland and surface water impacts would be discountable since the project is proposing to fill only the amount of wetlands necessary to achieve the project purpose and to offset the impacts with compensatory mitigation within the same ERP basin. Cumulative water quality impacts will be discountable given the permit erosion control conditions, state permitting requirements, and proposed stormwater management facilities and floodplain compensation sites. Cumulative wildlife and fisheries impacts would also be discountable given the existing use of the roadway corridor, the functions and services of the impacted wetlands, and the mitigation proposed for the impacts. No other measurable cumulative impacts are expected for any other resource.

The proposed project does not represent a new facility; however, additional ROW acquisition will be required to accommodate proposed SMF and FPC sites. The proposed project will not increase access to areas suitable for development but enhance pedestrian safety. In summary, the proposed project's impacts on the environment resulting from the incremental impact of the proposed project when added to the past, present, and reasonably foreseeable future actions are minor and discountable given the current requirements of federal laws including Section 404 of the CWA and the conditions of the permit.

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Sufficient and appropriate compensatory in-basin mitigation will fully offset the reasonably anticipated direct, secondary and cumulative wetland impacts resulting from the implementation of the proposed project. Cumulative impacts should be minor and effectively compensated through the cumulative benefits of the proposed project and related in-basin mitigation including water quality enhancements through stormwater management improvements and compensatory in-basin mitigation.

4.4.4 Uniform Mitigation Assessment Method

The Uniform Mitigation Assessment Methodology (UMAM) per Chapter 62-345, F.A.C. (2007), is a state and federally approved method used to assess wetlands in the state of Florida. UMAM was developed by the FDEP and the water management districts to determine the amount of mitigation required to offset adverse impacts to wetlands. The methodology was designed to assess functions provided by wetlands, the amount those functions are reduced by a proposed impact, and the amount of mitigation necessary to offset the proposed functional losses.

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

- Significant nearby features,
- Water classification,
- Assessment area size,
- Hydrology and relationship to contiguous off-site wetlands,
- Uniqueness of the assessment area,
- Functions of the assessment area, and
- Wildlife utilization.

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

- Location and landscape support,
- Water environment, and
- Vegetative community.

UMAM was used to assess wetland impacts as appropriate for the federal and state requirements. UMAM was not used to assess impacts to federal jurisdictional surface waters that provide potential suitable foraging habitat for the wood stork because no net loss of suitable foraging habitat in surface waters is anticipated as on-site replacement will occur. Mitigation to compensate for impacts to wetlands will be in accordance with 373.4137, F.S. to satisfy requirements of Part IV, Chapter 373, F.S. and 33 U.S.C. Section 1344. The other surface waters are exempt from state-required mitigation under 10.2.2.2 of the ERP Applicant's Handbook Volume I.

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4.4.5 UMAM Analysis Results

Utilizing the calculated wetland impact acreages and the UMAM scores, the proposed mainline widening will have a total of 14.93 units of functional loss resulting from direct and secondary impacts. Of the 14.93 units, 12.41 units occur within the Hillsborough River Watershed and 2.52 units occur within the Withlacoochee Watershed. **Table 4-6** provides an overall summary of the UMAM analysis for proposed mainline widening. Once the final SMF/FPC sites are selected, further UMAM analyses will be conducted, and results will be provided in an addendum to this report. The UMAM scores presented have not been approved by the permitting agencies and may be refined during both the federal and state permitting process for the proposed project. A summary of the UMAM analyses for the direct and secondary wetland impacts resulting from the proposed mainline widening are provided in **Tables 4-7** and **4-8**, respectively. A summary of the UMAM analyses for the wetland impacts resulting from the proposed SMF/FPC sites are provided in **Tables 4-9** and **4-10**. The corresponding UMAM worksheets are provided in **Appendix I**.

Table 4-6 UMAM Analysis Summary (Mainline Widening Only)

Wetland Type	Impact Type	Acres of Impact	Functional Loss (Units)
Hillsborough River Watershed			
Forested	Direct	8.37	5.23
	Secondary	10.32	0.70
	Subtotal Forested	*18.69*	*5.93*
Herbaceous	Direct	11.18	6.22
	Secondary	3.82	0.26
	Subtotal Herbaceous	*15.00*	*6.48*
Subtotal Hillsborough River Watershed		***33.69***	***12.41***
Withlacoochee River Watershed			
Forested	Direct	1.66	1.05
	Secondary	2.51	0.16
	Subtotal Forested	*4.17*	*1.21*
Herbaceous	Direct	2.27	1.28
	Secondary	0.42	0.03
	Subtotal Herbaceous	*2.69*	*1.31*
Subtotal Withlacoochee River Watershed		***6.86***	***2.52***
TOTAL		**40.55**	**14.93**

Sources: FDA, 2021.

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Table 4-7 UMAM Analysis of Direct Wetland Impacts Resulting from the Mainline Widening

Wetland ID	FLUCFCS Code (USFWS Classification)	Score (Delta)	Acres of Impact	Functional Loss (Units)
Hillsborough River Watershed				
WL 7	641 (PEM1C)	0.57	0.81	0.46
WL 8	630 (PFO1/2C)	0.63	0.70	0.44
WL 14	641 (PEM1C)	0.53	0.24	0.13
WL 15	641 (PEM1C)	0.53	0.31	0.17
WL 16	641 (PEM1C)	0.53	0.43	0.23
WL 17	641 (PEM1C)	0.53	0.15	0.08
WL 18	641 (PEM1C)	0.53	0.22	0.12
WL 19	641 (PEM1C)	0.53	0.58	0.31
WL 20	641 (PEM1C)	0.53	0.43	0.23
WL 21	641 (PEM1C)	0.53	0.05	0.03
WL 22	641 (PEM1C)	0.60	0.27	0.16
WL 23	641 (PEM1C)	0.60	0.12	0.07
WL 24	641 (PEM1C)	0.60	0.15	0.09
WL 25	641 (PEM1C)	0.63	0.21	0.13
WL 26	641 (PEM1C)	0.57	0.3	0.17
WL 27	641 (PEM1C)	0.60	0.47	0.28
WL 28	641 (PEM1C)	0.60	0.09	0.05
WL 29	641 (PEM1C)	0.60	0.25	0.15
WL 30	641 (PEM1C)	0.60	0.01	0.01
WL 31	641 (PEM1C)	0.53	0.56	0.30
WL 32	617 (PFO1C)	0.63	1.27	0.80
WL 33	641 (PEM1C)	0.53	0.29	0.15
WL 34	641 (PEM1C)	0.53	0.05	0.03
WL 35	641 (PEM1C)	0.53	0.09	0.05
WL 36	641 (PEM1C)	0.53	0.03	0.02
WL 37	641 (PEM1C)	0.57	0.25	0.14
WL 38	641 (PEM1C)	0.53	0.21	0.11
WL 39	641 (PEM1C)	0.53	0.3	0.16
WL 40	641 (PEM1C)	0.60	0.13	0.08
WL 41	641 (PEM1C)	0.57	0.05	0.03
WL 42	641 (PEM1C)	0.53	0.67	0.36
WL 43	641 (PEM1C)	0.53	0.33	0.18
WL 44	641 (PEM1C)	0.57	0.45	0.26
WL 45	641 (PEM1C)	0.57	0.38	0.22
WL 46	641 (PEM1C)	0.60	0.41	0.25
WL 47	641 (PEM1C)	0.53	0.35	0.19
WL 48	617 (PFO1C)	0.67	0.53	0.35

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Wetland ID	FLUCFCS Code (USFWS Classification)	Score (Delta)	Acres of Impact	Functional Loss (Units)
Hillsborough River Watershed				
WL 49	630 (PFO1/2C)	0.63	0.46	0.29
WL 50	617 (PFO1C)	0.63	0.15	0.10
WL 51	617 (PFO1C)	0.60	0.28	0.17
WL 52	630 (PFO1/2C)	0.60	0.48	0.29
WL 53	641 (PEM1C)	0.50	0.11	0.06
WL 54	630 (PFO1/2C)	0.60	0.49	0.29
WL 55	630 (PFO1/2C)	0.63	0.68	0.43
WL 56	630 (PFO1/2C)	0.60	0.78	0.47
WL 57	630 (PFO1/2C)	0.63	0.34	0.22
WL 58	630 (PFO1/2C)	0.63	0.73	0.46
WL 59	630 (PFO1/2C)	0.60	0.52	0.31
WL 60	641 (PEM1C)	0.53	0.58	0.31
WL 61	641 (PEM1C)	0.53	0.85	0.45
WL 62	621 (PFO2C)	0.63	0.87	0.55
WL 63	630 (PFO1/2C)	0.63	0.09	0.06
		Subtotal Forested Wetlands	*8.37*	*5.23*
		Subtotal Herbaceous Wetlands	*11.18*	*6.22*
		Subtotal Hillsborough River Watershed	*19.55*	*11.45*
Withlacoochee River Watershed				
WL 1	641 (PEM1C)	0.57	0.31	0.18
WL 2	641 (PEM1C)	0.63	0.07	0.04
WL 3	617 (PFO1C)	0.60	0.08	0.05
WL 4	617 (PFO1C)	0.67	0.39	0.26
WL 4	641 (PEM1C)	0.53	0.12	0.06
WL 5	631 (PSS1C)	0.67	<0.01	<0.01
WL 6	630 (PFO1/2C)	0.67	0.05	0.03
WL 9	630 (PFO1/2C)	0.63	0.6	0.38
WL 10	630 (PFO1/2C)	0.63	0.26	0.16
WL 11	641 (PEM1C)	0.53	0.03	0.02
WL 12	641 (PEM1C)	0.53	0.56	0.30
WL 13	641 (PEM1C)	0.60	0.76	0.46
WL 64	631 (PSS1C)	0.60	0.28	0.17
WL 65	641 (PEM1C)	0.53	0.42	0.22
		Subtotal Forested Wetlands	*1.66*	*1.05*
		Subtotal Herbaceous Wetlands	*2.27*	*1.28*
		Subtotal Withlacoochee River Watershed	*3.93*	*2.33*
		Total Direct Wetland Impacts	**23.48**	**13.78**

Sources: FDA, 2021.

Note: Functional loss is calculated in UMAM to the nearest 1/1000. Therefore, totals may not add up due to rounding.

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PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded; PSS1C = Palustrine, Scrub-shrub, Broad-leaved Deciduous, Seasonally Flooded

Table 4-8 UMAM Analysis of Secondary Wetland Impacts Resulting from the Mainline Widening

Wetland ID	FLUCFCS Code (USFWS Classification)	Score (Delta)	Acres of Impact	Functional Loss (Units)
Hillsborough River Watershed				
WL 7	641 (PEM1C)	0.07	0.59	0.04
WL 8	630 (PFO1/2C)	0.07	0.57	0.04
WL 14	630 (PFO1/2C)	0.07	0.37	0.02
WL 15	630 (PFO1/2C)	0.07	0.26	0.02
WL 16	630 (PFO1/2C)	0.07	0.30	0.02
WL 17	630 (PFO1/2C)	0.07	0.12	0.01
WL 18	630 (PFO1/2C)	0.07	0.16	0.01
WL 19	630 (PFO1/2C)	0.07	0.45	0.03
WL 20	641 (PEM1C)	0.07	0.32	0.02
WL 21	641 (PEM1C)	0.07	0.05	0.003
WL 22	630 (PFO1/2C)	0.07	0.23	0.02
WL 23	641 (PEM1C)	0.07	0.11	0.01
WL 24	641 (PEM1C)	0.07	0.18	0.01
WL 25	641 (PEM1C)	0.07	0.20	0.01
WL 26	631 (PSS1C)	0.07	0.23	0.02
WL 27	641 (PEM1C)	0.07	0.32	0.02
WL 28	641 (PEM1C)	0.07	0.10	0.01
WL 29	641 (PEM1C)	0.07	0.27	0.02
WL 30	641 (PEM1C)	0.07	0.05	0.003
WL 31	641 (PEM1C)	0.07	0.47	0.03
WL 32	617 (PFO1C)	0.00	0.00	0.00
WL 33	617 (PFO1C)	0.07	0.33	0.02
WL 34	621 (PFO2C)	0.07	0.05	0.003
WL 35	617 (PFO1C)	0.07	0.07	0.005
WL 36	617 (PFO1C)	0.07	0.07	0.005
WL 37	630 (PFO1/2C)	0.07	0.16	0.01
WL 38	630 (PFO1/2C)	0.07	0.24	0.02
WL 39	641 (PEM1C)	0.07	0.23	0.02
WL 40	641 (PEM1C)	0.07	0.11	0.01
WL 41	641 (PEM1C)	0.07	0.07	0.005
WL 42	630 (PFO1/2C)	0.07	0.43	0.03
WL 43	621 (PFO2C)	0.07	0.22	0.01
WL 44	641 (PEM1C)	0.07	0.48	0.03
WL 45	630 (PFO1/2C)	0.07	0.24	0.02

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Wetland ID	FLUCFCS Code (USFWS Classification)	Score (Delta)	Acres of Impact	Functional Loss (Units)
Hillsborough River Watershed				
WL 46	630 (PFO1/2C)	0.07	0.25	0.02
WL 47	641 (PEM1C)	0.07	0.15	0.01
WL 48	617 (PFO1C)	0.07	0.43	0.03
WL 49	630 (PFO1/2C)	0.07	0.30	0.02
WL 50	617 (PFO1C)	0.07	0.13	0.01
WL 51	617 (PFO1C)	0.07	0.32	0.02
WL 52	630 (PFO1/2C)	0.07	0.33	0.02
WL 53	641 (PEM1C)	0.07	0.12	0.01
WL 54	630 (PFO1/2C)	0.07	0.36	0.02
WL 55	630 (PFO1/2C)	0.07	0.33	0.02
WL 56	630 (PFO1/2C)	0.07	0.62	0.04
WL 57	630 (PFO1/2C)	0.07	0.25	0.02
WL 58	630 (PFO1/2C)	0.07	0.39	0.03
WL 59	630 (PFO1/2C)	0.07	0.37	0.02
WL 60	630 (PFO1/2C)	0.07	0.54	0.04
WL 61	630 (PFO1/2C)	0.07	0.51	0.03
WL 62	621 (PFO2C)	0.07	0.54	0.04
WL 63	630 (PFO1/2C)	0.07	0.15	0.01
		Subtotal Forested Wetlands	*10.32*	*0.70*
		Subtotal Herbaceous Wetlands	*3.82*	*0.26*
		Subtotal Hillsborough River Watershed	*14.14*	*0.96*
Withlacoochee River Watershed				
WL 1	630 (PFO1/2C)	0.07	0.16	0.01
WL 2	630 (PFO1/2C)	0.07	0.07	0.005
WL 3	617 (PFO1C)	0.07	0.05	0.004
WL 4	617 (PFO1C)	0.07	0.42	0.03
WL 5	631 (PSS1C)	0.07	0.02	0.001
WL 6	630 (PFO1/2C)	0.07	0.07	0.005
WL 9	630 (PFO1/2C)	0.07	0.17	0.01
WL 10	630 (PFO1/2C)	0.07	0.05	0.003
WL 11	617 (PFO1C)	0.07	0.36	0.02
WL 12	630 (PFO1/2C)	0.07	0.59	0.04
WL 13	630 (PFO1/2C)	0.07	0.35	0.02
WL 64	631 (PSS1C)	0.07	0.20	0.01
WL 65	641 (PEM1C)	0.07	0.42	0.03
		Subtotal Forested Wetlands	*2.51*	*0.16*
		Subtotal Herbaceous Wetlands	*0.42*	*0.03*
		Subtotal Withlacoochee River Watershed	*2.93*	*0.19*
		Total Secondary Wetland Impacts	**17.07**	**1.15**

Sources: FDA, 2021.

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Note: Functional loss is calculated in UMAM to the nearest 1/1000. Therefore, totals may not add up due to rounding.
Notes: PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded; PSS1C = Palustrine, Scrub-shrub, Broad-leaved Deciduous, Seasonally Flooded

Table 4-9 UMAM Analysis of Direct Wetland Impacts Resulting from the SMF/FPC Sites

SMF/FPC ID	Wetland ID	FLUCFCS Code (USFWS Classification)	Score (Delta)	Acres of Impact	Functional Loss (Units)
Hillsborough River Watershed					
FPC 4A	WL 67	630 (PFO1/2C)	0.67	0.83	0.55
FPC 4A Easement	WL 67	630 (PFO1/2C)	0.67	0.23	0.15
FPC 4B	WL 66	641 (PEM1C)	0.47	0.17	0.08
FPC 4B	WL 67	630 (PFO1/2C)	0.67	0.50	0.33
FPC 4B Easement	WL 67	630 (PFO1/2C)	0.67	0.38	0.25
FPC 4C	WL 67	630 (PFO1/2C)	0.67	1.30	0.87
FPC 4C Easement	WL 67	630 (PFO1/2C)	0.67	0.23	0.15
FPC 6A	WL 83	630 (PFO1/2C)	0.67	0.39	0.26
FPC 6C	WL 81	621 (PFO2C)	0.67	0.11	0.07
FPC 6C	WL 82	621 (PFO2C)	0.67	0.13	0.09
FPC 7B	WL 72	630 (PFO1/2C)	0.67	0.01	0.01
FPC 8A	WL 80	641 (PEM1C)	0.57	0.06	0.03
FPC 9A	WL 78	630 (PFO1/2C)	0.67	1.18	0.79
FPC 11A	WL 76	621 (PFO2C)	0.63	0.02	0.01
FPC 12A	WL 75	630 (PFO1/2C)	0.63	0.17	0.11
POND 3D-1	WL 79	641 (PEM1C)	0.57	0.22	0.12
POND 3D-2	WL 73	630 (PFO1/2C)	0.67	1.94	1.29
POND 4C-2	WL 74	621 (PFO2C)	0.63	0.43	0.27
POND 4D-1	WL 77	643 (PEM1C)	0.53	3.35	1.79
Withlacoochee River Watershed					
FPC 5B	WL 68	630 (PFO1/2C)	0.63	0.28	0.18
FPC 5C	WL 68	630 (PFO1/2C)	0.63	0.03	0.02
FPC 5E	WL 70	621 (PFO2C)	0.63	0.04	0.03
POND 2C-2	WL 71	617 (PFO1C)	0.60	0.89	0.53
POND 2D-1	WL 69	630 (PFO1/2C)	0.67	0.13	0.09

Sources: FDA, 2021.
Note: Functional loss is calculated in UMAM to the nearest 1/1000. Therefore, totals may not add up due to rounding.
Notes: PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded.

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Table 4-10 UMAM Analysis of Secondary Wetland Impacts Resulting from the SMF/FPC Sites

SMF/FPC ID	Wetland ID	FLUCFCS Code (USFWS Classification)	Score (Delta)	Acres of Impact	Functional Loss (Units)
Hillsborough River Watershed					
FPC 4A	WL 67	630 (PFO1/2C)	0.07	0.48	0.03
FPC 4A Easement	WL 67	630 (PFO1/2C)	0.07	0.38	0.03
FPC 4B	WL 66	641 (PEM1C)	0.07	0.15	0.01
FPC 4B	WL 67	630 (PFO1/2C)	0.07	0.29	0.02
FPC 4B Easement	WL 67	630 (PFO1/2C)	0.07	0.62	0.04
FPC 4C	WL 67	630 (PFO1/2C)	0.07	0.55	0.04
FPC 4C Easement	WL 67	630 (PFO1/2C)	0.07	0.38	0.03
FPC 6A	WL 83	630 (PFO1/2C)	0.07	0.17	0.01
FPC 6C	WL 81	621 (PFO2C)	0.07	0.13	0.01
FPC 6C	WL 82	621 (PFO2C)	0.07	0.09	0.01
FPC 7B	WL 72	630 (PFO1/2C)	0.07	0.07	0.005
FPC 8A	WL 80	630 (PFO1/2C)	0.07	0.11	0.01
FPC 9A	WL 78	630 (PFO1/2C)	0.07	0.50	0.03
FPC 11A	WL 76	621 (PFO2C)	0.07	0.13	0.01
FPC 12A	WL 75	630 (PFO1/2C)	0.07	0.14	0.01
FPC 13 A	Adjacent WL	630 (PFO1/2C)	0.07	0.12	0.01
POND 3D-1	WL 79	641 (PEM1C)	0.00	0.00	0.00
POND 3D-2	WL 73	630 (PFO1/2C)	0.07	0.55	0.04
POND 4C-2	WL 74	621 (PFO2C)	0.07	0.26	0.02
POND 4D-1	WL 77	630 (PFO1/2C)	0.07	0.60	0.04
Withlacoochee River Watershed					
FPC 5B	WL 68	630 (PFO1/2C)	0.07	0.50	0.03
FPC 5C	WL 68	630 (PFO1/2C)	0.07	0.24	0.02
FPC 5E	WL 70	621 (PFO2C)	0.07	0.18	0.01
Pond 1A	Adjacent WL	630 (PFO1/2C)	0.07	0.09	0.006
POND 2C-2	WL 71	617 (PFO1C)	0.07	0.10	0.01
POND 2D-1	WL 69	630 (PFO1/2C)	0.07	0.17	0.01

Sources: FDA, 2021.

Note: Functional loss is calculated in UMAM to the nearest 1/1000. Therefore, totals may not add up due to rounding.

Notes: PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded.

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4.4.6 Wetland Mitigation

As previously mentioned, mitigation to compensate for impacts to wetlands will be in accordance with 373.4137, F.S. to satisfy requirements of Part IV, Chapter 373, F.S. and 33 U.S.C. Section 1344. There are several private wetland mitigation banks available that service the Hillsborough River and Withlacoochee Watersheds, are state and federally permitted, and provide wood stork foraging habitat. Each wetland impact will be mitigated dependent on the watershed it occurs in to satisfy state and federal mitigation requirements. **Table 4-11** below lists the current permitted mitigation banks servicing the Hillsborough River and Withlacoochee River Watersheds. It is anticipated that the FDOT will purchase wetland credits from one or more of the banks listed below to offset the loss of the wetland functions resulting from the proposed project.

Table 4-11 Current Wetland Mitigations Bank Options

Mitigation Bank	Watershed	Forested (F)/ Herbaceous (H) Credits
Hilochee	Withlacoochee River	F/H
Withlacoochee River	Withlacoochee River	F/H
Fox Branch	Hillsborough River	F/H
Hillsborough River	Hillsborough River	F/H
Two Rivers	Hillsborough River	F/H
Boarshead Ranch	Withlacoochee/Hillsborough River	F/H
Crooked River	Withlacoochee River	F/H
Wiggins Prairie	Hillsborough River	F/H
North Tampa	Hillsborough River	F
Green Swamp	Withlacoochee River	F

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SECTION 5 ESSENTIAL FISH HABITAT

The Magnuson-Stevens Fishery Conservation and Management Act, as amended through October 11, 1996, requires the regional Fishery Management Councils and the Secretary of Commerce to describe and identify EFH for species under federal Fishery Management Plans. EFH is defined in the Magnuson-Stevens Act as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Coordination with the NMFS during the ETDM process indicated that the proposed project would not directly impact any NMFS trust resources (i.e., EFH). Therefore, no EFH involvement.

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SECTION 6 ANTICIPATED PERMITS

Section 404 of the CWA requires a permit before dredged or fill material may be discharged into Waters of the US. Section 404(g) of the CWA gives states the option of assuming the permitting responsibility and administration of the Section 404 permit program for certain waters. The state then issues the Section 404 permits for those assumed waters rather than USACE. Pursuant to the CWA, the USACE retains permitting authority in certain tidal waters and other specified waters that are currently used or may be used in the future to transport interstate or foreign commerce.

On December 17, 2020, the US Environmental Protection Agency (EPA) approved the state of Florida's request to assume administration of a portion of the CWA Section 404 Program. The State 404 Program became effective as of December 22, 2020, and is administered by the FDEP pursuant to Chapter 62-331, F.A.C.

The State 404 Program is a separate permitting program from the existing ERP program under Chapter 62-330, F.A.C., and agency action for State 404 Program verifications, notices, or permits are taken independently from ERP agency action. The purpose of the State assumption of the 404 program is to provide a streamlined permitting procedure within which both federal and state requirements are addressed by state permits.

Based on the FDEP's Retained Waters Screening Tool, which provides a depiction of the approximate extent of federally retained waters of the US, the wetlands identified within the project study area fall within the jurisdiction of the State 404 Program (state-assumed waters).

Therefore, for the proposed project, the FDEP and SWFWMD regulate impacts to wetlands and other surface waters within the project study area. Other agencies, including the USFWS, NMFS, EPA, and the FWC, review and comment on permit applications as well. Chapter 62-330, F.A.C. provides joint application forms meant to include information required for both the ERP and the State 404 Program authorizations.

Through the ERP process, SWFWMD is also responsible for authorizing the construction, alteration, operation, maintenance, repair, abandonment or removal of stormwater management systems. The design of stormwater management systems must demonstrate reasonable assurance that water quality, water quantity, flood control, and design features meet all SWFWMD applicable requirements pursuant to the Conditions for Issuance in Section 62-330.301, F.A.C.

In addition, the FDEP regulates stormwater discharges from construction sites. 40 CFR Part 122 prohibits point source discharges of stormwater to waters of the U.S. without a National Pollutant Discharge Elimination System (NPDES) permit. Under the State of Florida's delegated authority to administer the NPDES program, construction sites that will result in greater than one acre of disturbance must file for and obtain either coverage under an appropriate generic permit contained in Chapter 62-621, F.A.C., or an individual permit issued pursuant to Chapter 62-620, F.A.C. A major component of the NPDES permit is the development of a SWPPP. The SWPPP identifies potential sources of pollution that may

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reasonably be expected to affect the quality of stormwater discharges from the site and discusses good engineering practices (i.e., BMPs) that will be used to reduce the pollutants. **Table 6-1** includes a list of permits that will be required for this project.

Table 6-1 Anticipated Permits

Issuing Agency	Permit Type
FDEP	State 404 Program
SWFWMD	Individual ERP
FDEP	NPDES

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SECTION 7 CONCLUSION

The FDOT has determined that the proposed project qualifies for a Type 2 Categorical Exclusion. An NRE has been prepared to document that the proposed project does not involve significant environmental impacts and provide an opportunity for agency review and concurrence of the findings.

7.1 PROTECTED SPECIES AND HABITAT

Based on background data collection and desktop reviews, as well as site-specific field reviews, 29 federally listed, 39 state listed, and three protected animal species were identified as having the potential to occur within the project study area. **Tables 3-6, 3-7,** and **3-8** in **Section 3.4** summarize the impact determinations that have been made for protected species based upon their probability of occurrence, the potential for impact, and the commitments made to offset any potential impacts to each species. No federally listed species or designated critical habitats are expected to be adversely affected by the proposed project. Based on the findings and commitments of this report, a determination has been made that the proposed project is not likely to adversely affect any state or federally listed plant or animal species. Upon completion of evaluating and selecting the preferred SMF and FPC sites, further assessment of potential impacts to listed species will be conducted of which the results will be provided in an addendum to this report. To further minimize impacts to wildlife, FDOT is also evaluating the addition of wildlife features along US 98 including a wildlife crossing at the Main Stream Bridge culvert (located approximately 1.4 miles southeast of SR 471) that will be designed for the crossing of large mammals (e.g., panther, bear, deer, hogs) and several smaller features designed for the crossing of smaller mammals (e.g., rabbits, raccoons, fox, etc.). These features will provide enhanced opportunity for the safe passage of wildlife under US 98. Further discussion will be provided in an addendum to this report following completion of the wildlife features evaluation.

No Critical Habitat was identified within the project study area. As a result, there will be no impacts to Critical Habitat.

7.2 WETLANDS AND OTHER SURFACE WATERS

The proposed project was evaluated for the presence of wetlands and other surface waters within the project study area. A total of 65 wetlands and 92 other surface waters were identified existing ROW within the proposed project limits. Impacts were assessed based on the assumption that all wetlands and other surface waters within the existing ROW would be impacted as a result of the proposed project. As previously mentioned in **Section 4.4.1**, impacts to wetlands and other surface waters will be avoided and minimized to the greatest extent practicable during the project design and permitting. A preliminary evaluation of potential wetland impacts resulting from SMF and FPC sites is summarized in **Section 4.4.2.** Once evaluation of the SMF and FPC sites is completed and a selection of sites is finalized, wetland impacts resulting from the SMF and FPC sites will be reassessed and included in an addendum to this report.

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Impacts to federally jurisdictional wetlands and other surface waters resulting from the proposed mainline widening include:

- 23.48 acres of direct wetland impacts
- 17.07 acres of secondary wetland impacts
- 1.87 acres of temporary other surface water impacts

Impacts to state jurisdictional wetlands and other surface waters resulting from the proposed mainline widening include:

- 4.41 acres of temporary other surface water impacts

UMAM was used to assess proposed mainline widening impacts to federal and state jurisdictional wetlands which resulted in a functional loss of 14.93 units resulting from direct and secondary impacts. UMAM was not used to assess impacts to federal jurisdictional surface waters that provide potential suitable foraging habitat for the wood stork because no net loss of suitable foraging habitat in surface waters is anticipated as on-site replacement will occur. State jurisdictional surface waters do not require mitigation per Section 10.2.2.2 of Applicant's Handbook Volume I. Mitigation to compensate for impacts to wetlands will be in accordance with 373.4137, F.S. to satisfy requirements of Part IV, Chapter 373, F.S. and 33 U.S.C. Section 1344. Once the final SMF/FPC sites are selected, further UMAM analyses will be conducted, and results will be provided in an addendum to this report. Anticipated mitigation requirements resulting from the proposed mainline widening construction include a total of 2.52 credits (1.21 freshwater forested credits; 1.31 freshwater herbaceous credits) within the Withlacoochee Watershed and 12.41 credits (5.93 freshwater forested credits; 6.48 freshwater herbaceous credits) within the Hillsborough River Watershed. There are several private wetland mitigation banks available that service the Hillsborough River and Withlacoochee Watersheds, are state and federally permitted, and provide wood stork foraging habitat. Each wetland impact will be mitigated dependent on the watershed it occurs in to satisfy state and federal mitigation requirements.

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7.3 ESSENTIAL FISH HABITAT

Coordination with the NMFS during the ETDM process indicated that the proposed project would not directly impact any NMFS trust resources (i.e., EFH). Therefore, no EFH involvement.

7.4 IMPLEMENTATION MEASURES AND COMMITMENTS

Based on the field and literature reviews outlined in this report, federally listed and state listed species have a potential to occur within the proposed project area. To avoid or minimize adverse impacts to these species, FDOT will adhere to the following measures and commitments:

Implementation Measures

- Prior to construction, the FDOT will resurvey appropriate habitats within the project area to confirm the presence or absence, gopher tortoises, Florida burrowing owls, and Florida

sandhill crane nests. If any of these species or their nests are present, the FDOT will coordinate with the USFWS and/or the FWC to minimize the Proposed Project impacts and obtain the necessary permits;

- Prior to construction, the FDOT will resurvey the project area for the presence of active osprey nests. If an active osprey nest is later identified within the project area, FDOT will coordinate with the FWC (as applicable) to secure all necessary approvals regarding this species prior to project construction;
- Prior to construction, the FDOT will resurvey appropriate habitats within 1,000 feet of the Proposed Project area for bald eagle nests. If a bald eagle nest is found within 1,000 feet of the Proposed Project, the FDOT will coordinate with the USFWS to secure any and all approvals regarding this species; and
- To prevent black bear encounters during construction activities, contractors will follow BMPs; keep construction sites clean with wildlife-resistant containers for workers to use for food-related and other wildlife-attractant refuse; and frequently remove trash and use proper food storage on work sites.

Commitments

- The loss of wetland functions and values as a result of constructing the proposed 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 Section 1344; and
- The most current version of USFWS-approved *Standard Protection Measures for the Eastern Indigo Snake* will be adhered to during all construction phases of the proposed project (see **Appendix C**).

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SECTION 8 REFERENCES

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APPENDICES

Appendix A Figures

Appendix B Data Request Results

- Appendix B.1 USFWS IPaC Report
- Appendix B.2 FNAI Standard Data Report

Appendix C Standard Protection Measures for the Eastern Indigo Snake

Appendix D USFWS Effect Determination Keys

Appendix E Sand Skink and Blue-tailed Mole Skink Survey Technical Report

Appendix F Crested Caracara Survey Technical Report

Appendix G Wood Stork Foraging Analysis

Appendix H Wetland Descriptions and Photos

- Appendix H.1 Wetland Descriptions
- Appendix H.2 Wetland Photos

Appendix I UMAM Worksheets

- Appendix I.1 UMAM Worksheets – Mainline Direct Impacts
- Appendix I.2 UMAM Worksheets – Mainline Secondary Impacts
- Appendix I.3 UMAM Worksheets – Preliminary Pond Site Direct Impacts
- Appendix I.4 UMAM Worksheets – Preliminary Pond Site Secondary Impacts

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APPENDIX A

Figures

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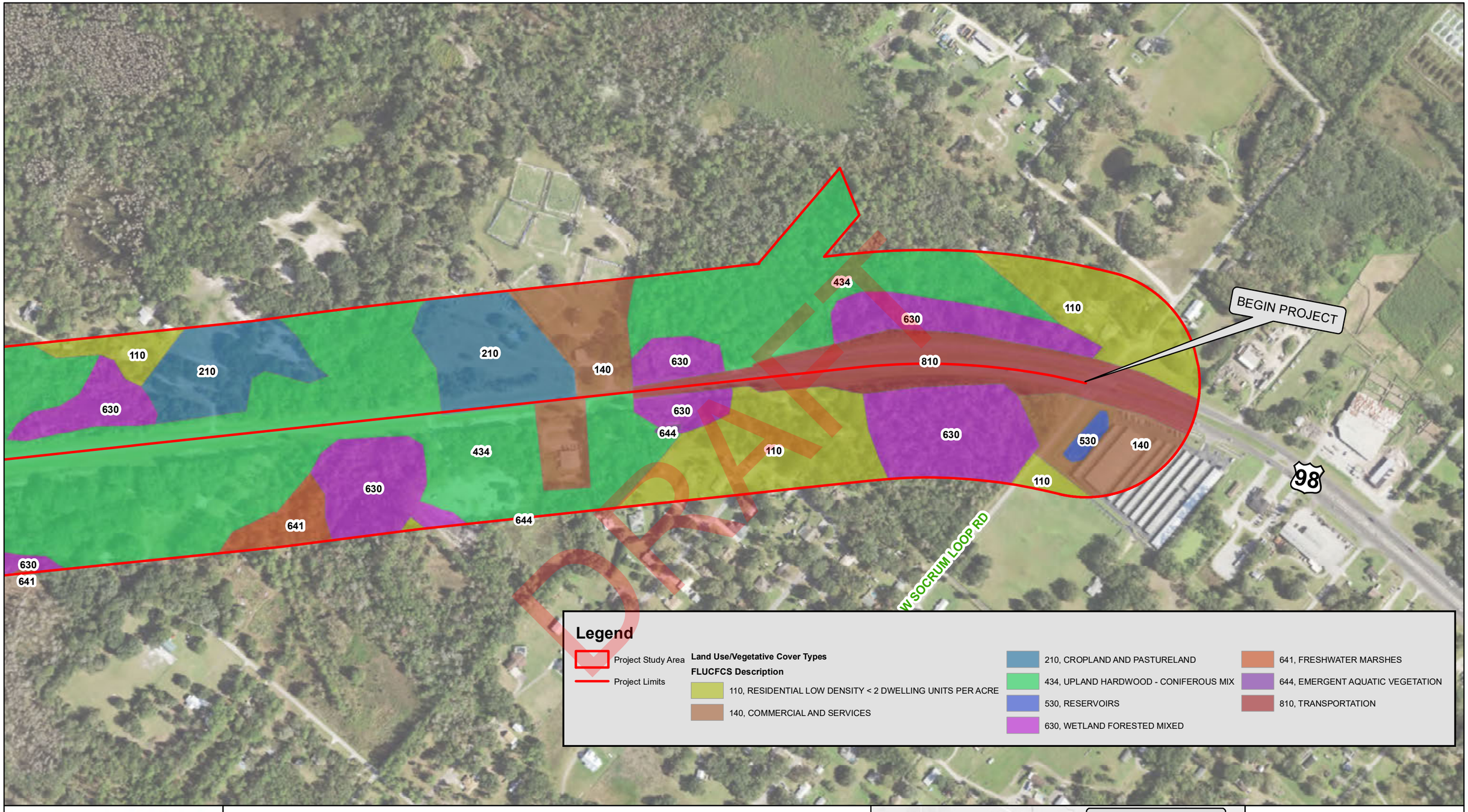
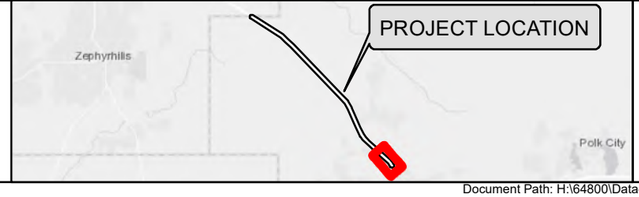


Figure A-1- Land Use/Vegetative Cover

Page 1 of 9

US 98 PD&E Study from From West Socrum Loop Road to CR 54
FPID: 436673-1
Polk County, FL



Data Source:
- FDA, ESRI, SWFWMD

1 inch = 401 feet
0 200 400
Feet

Coordinate System: NAD 1983
Florida State Plane West

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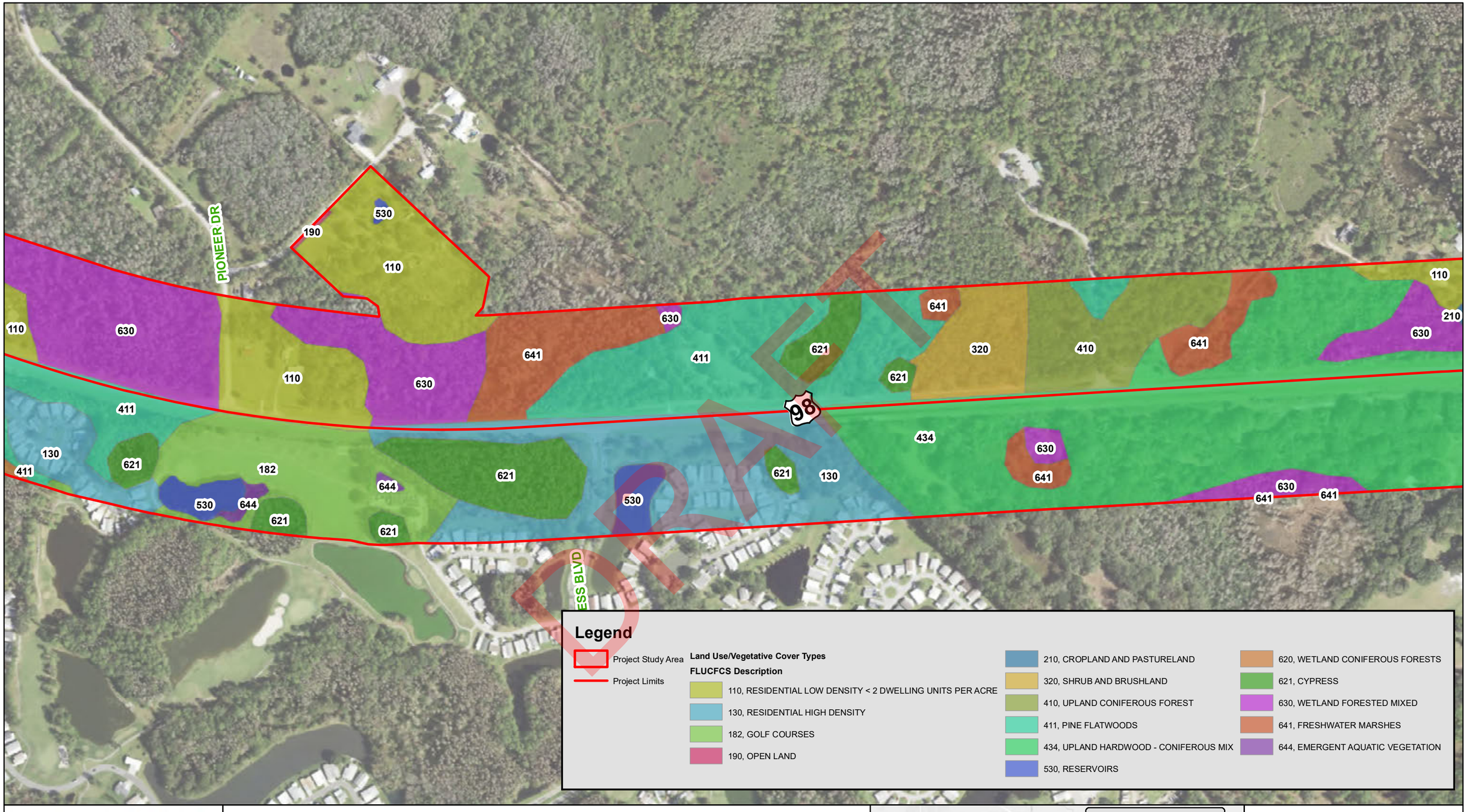
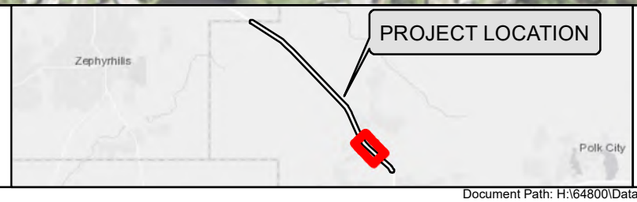


Figure A-1- Land Use/Vegetative Cover

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US 98 PD&E Study from From West Socrum Loop Road to CR 54
FPID: 436673-1
Polk County, FL

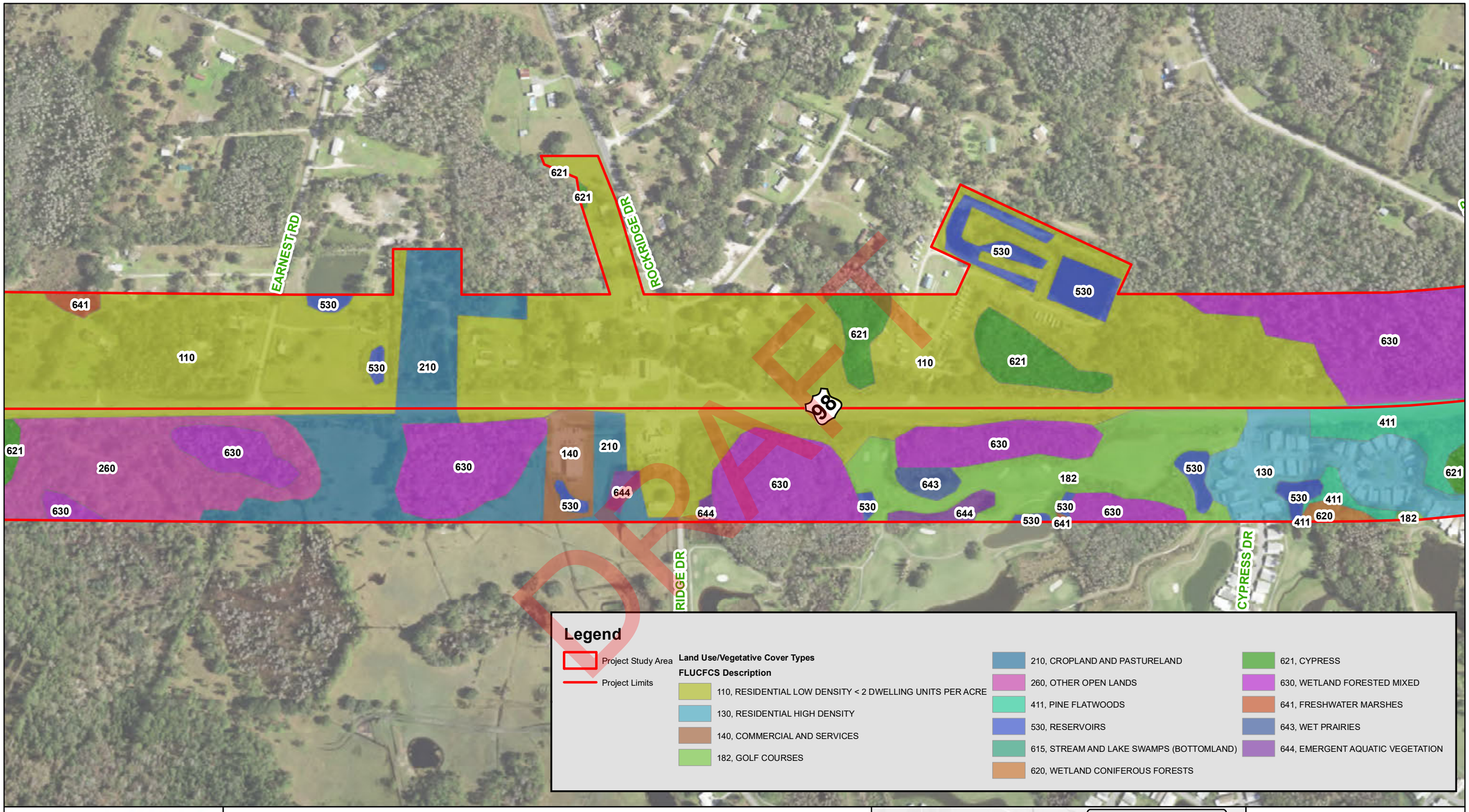


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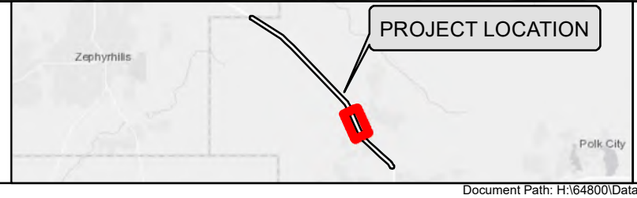


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Figure A-1- Land Use/Vegetative Cover

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US 98 PD&E Study from From West Socrum Loop Road to CR 54
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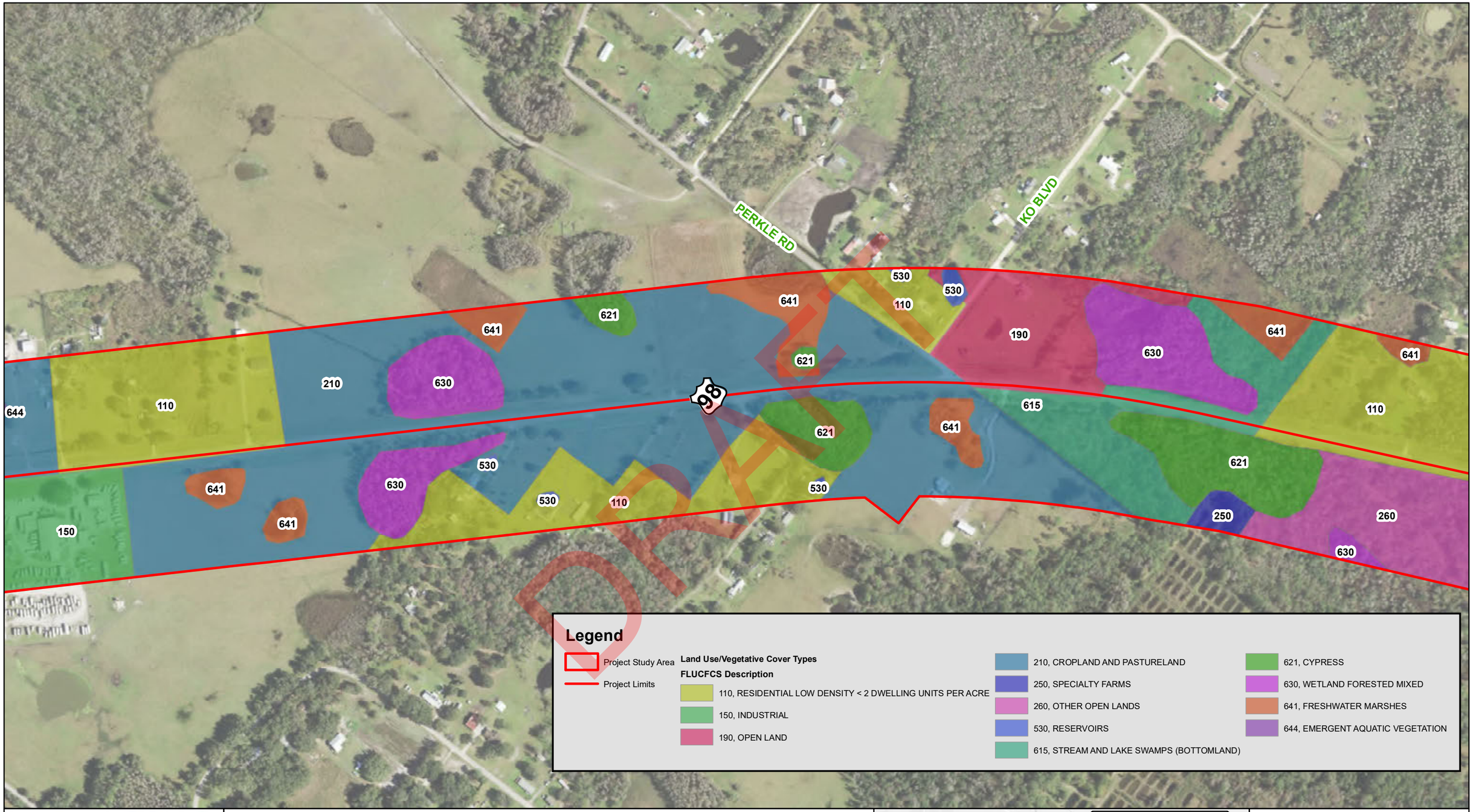
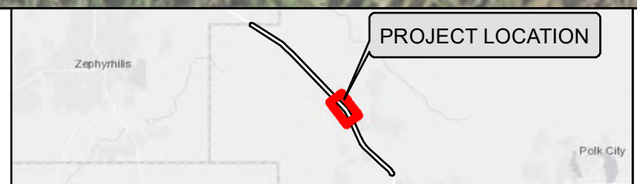


Figure A-1- Land Use/Vegetative Cover

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US 98 PD&E Study from From West Socrum Loop Road to CR 54
FPID: 436673-1
Polk County, FL



Data Source:
- FDA, ESRI, SWFWMD

1 inch = 401 feet
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Feet

Coordinate System: NAD 1983
Florida State Plane West

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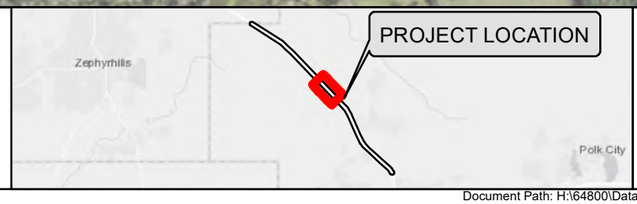


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Figure A-1- Land Use/Vegetative Cover

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US 98 PD&E Study from From West Socrum Loop Road to CR 54
FPID: 436673-1
Polk County, FL

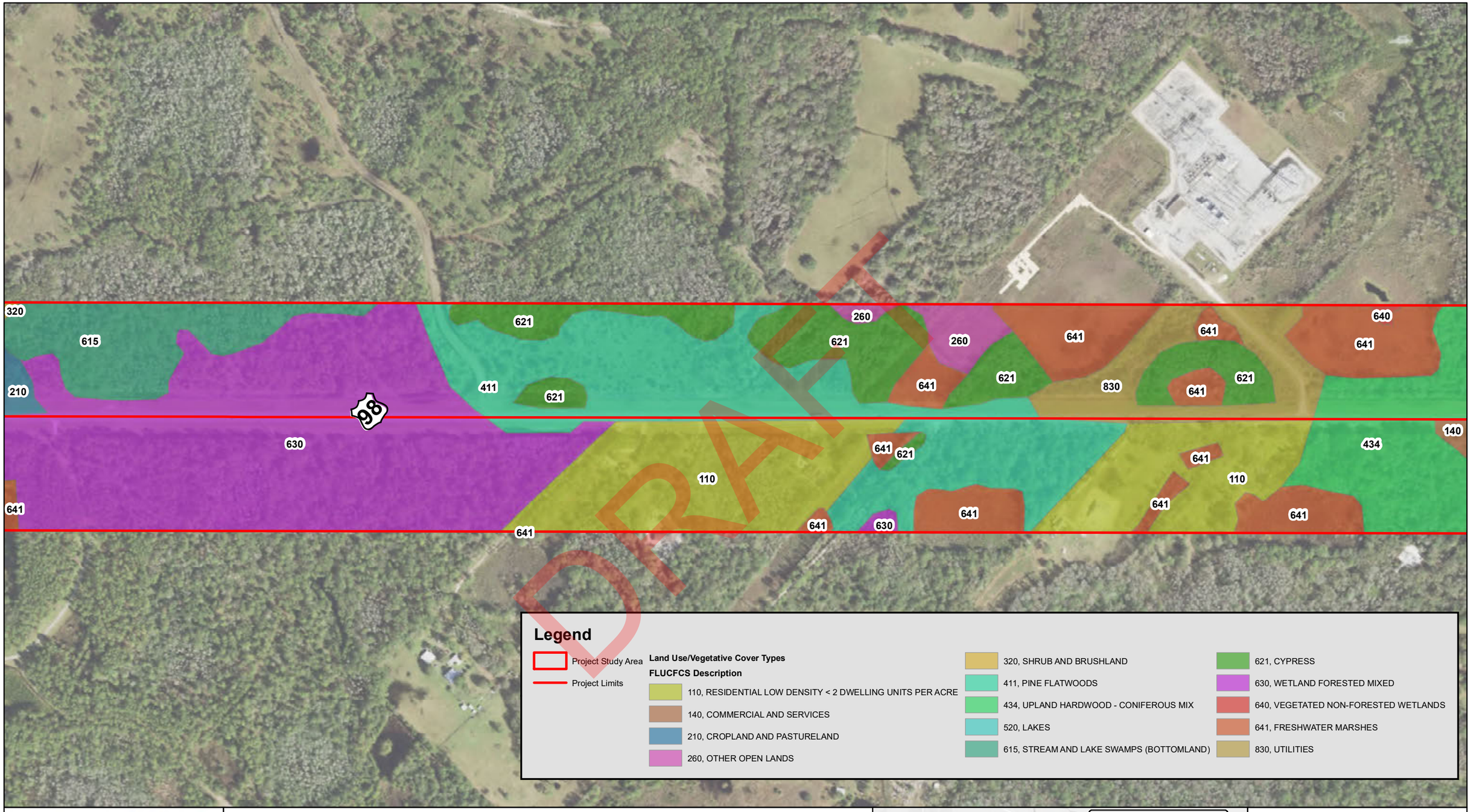


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Florida State Plane West

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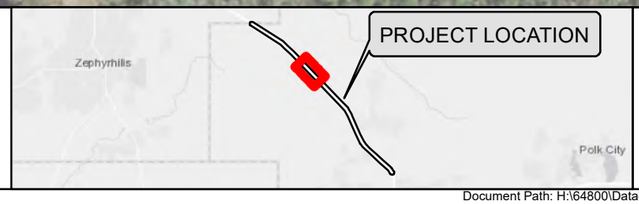


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Figure A-1- Land Use/Vegetative Cover

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US 98 PD&E Study from From West Socrum Loop Road to CR 54
FPID: 436673-1
Polk County, FL



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Florida State Plane West

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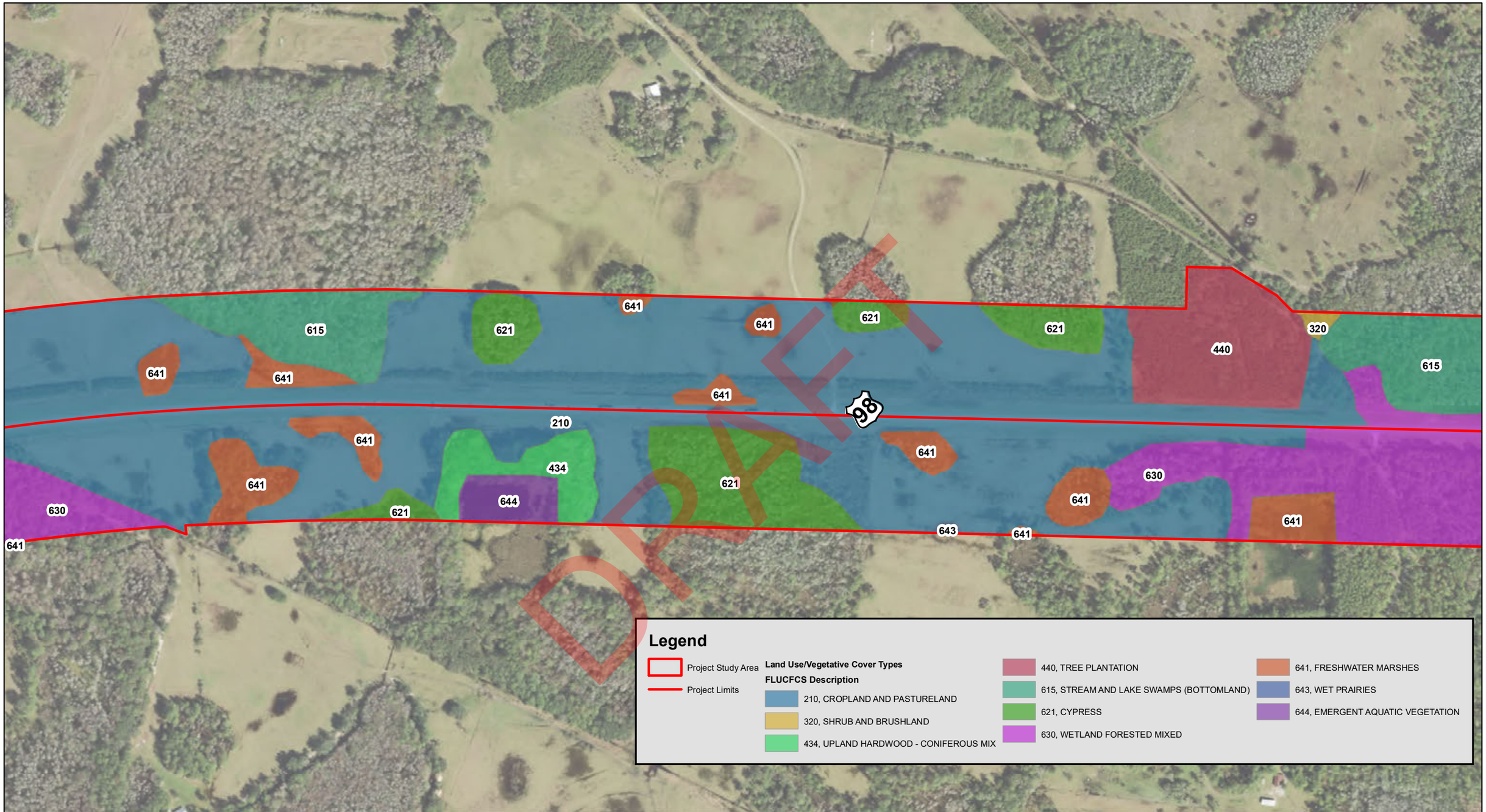
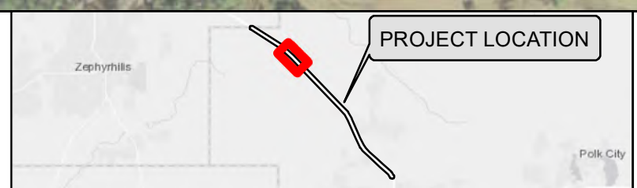


Figure A-1- Land Use/Vegetative Cover

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US 98 PD&E Study from From West Socrum Loop Road to CR 54
FPID: 436673-1
Polk County, FL



Data Source:
- FDA, ESRI, SWFWMD

1 inch = 401 feet
0 200 400
Feet

Coordinate System: NAD 1983
Florida State Plane West

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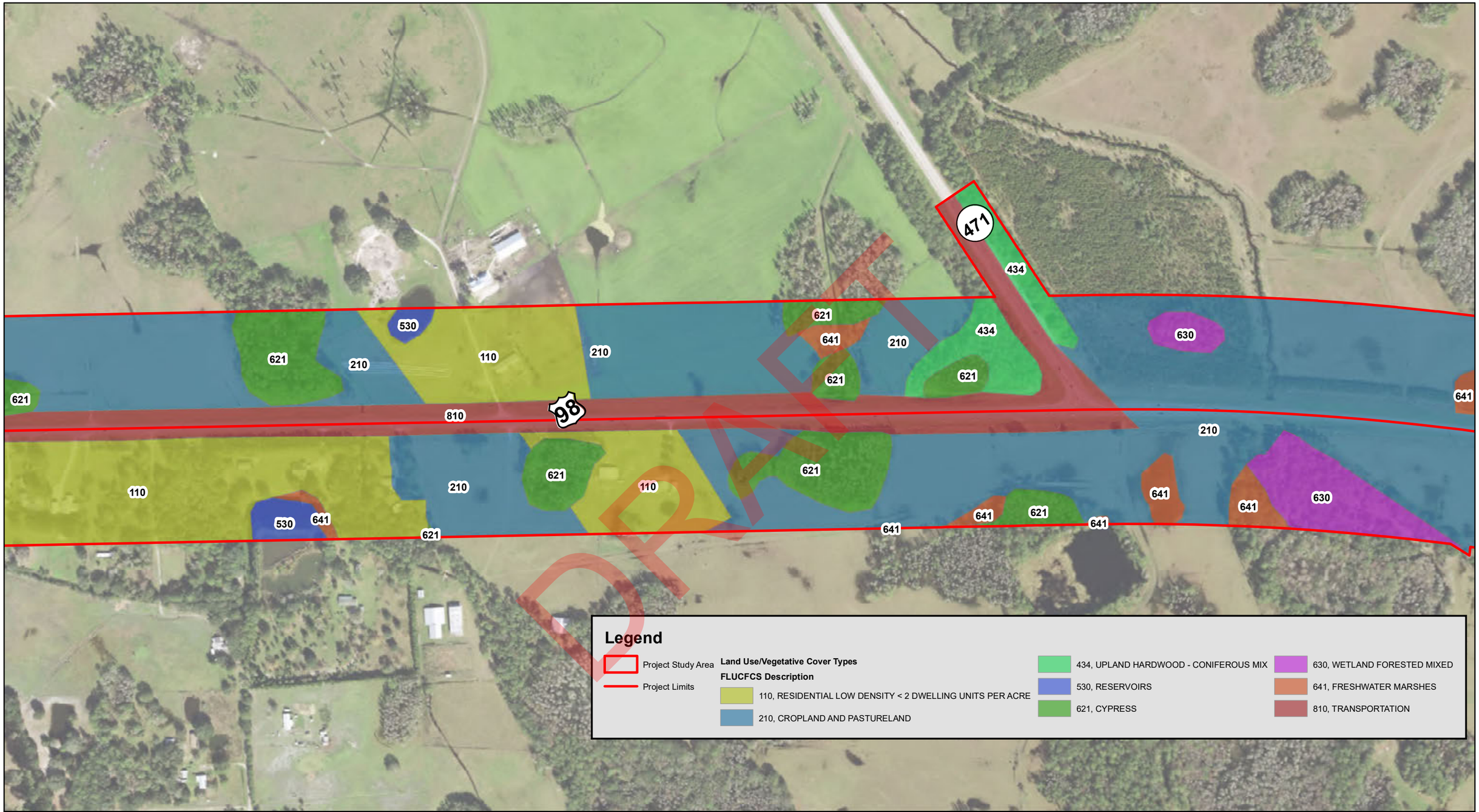
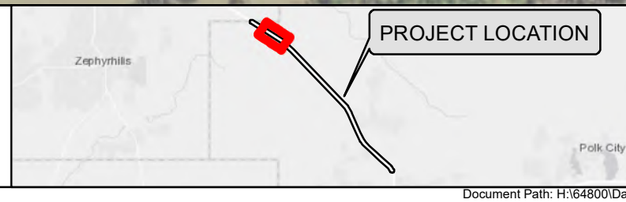


Figure A-1- Land Use/Vegetative Cover

US 98 PD&E Study from From West Socrum Loop Road to CR 54
FPID: 436673-1
Polk County, FL



Data Source:
- FDA, ESRI, SWFWMD

1 inch = 401 feet
0 200 400
Feet

Coordinate System: NAD 1983
Florida State Plane West

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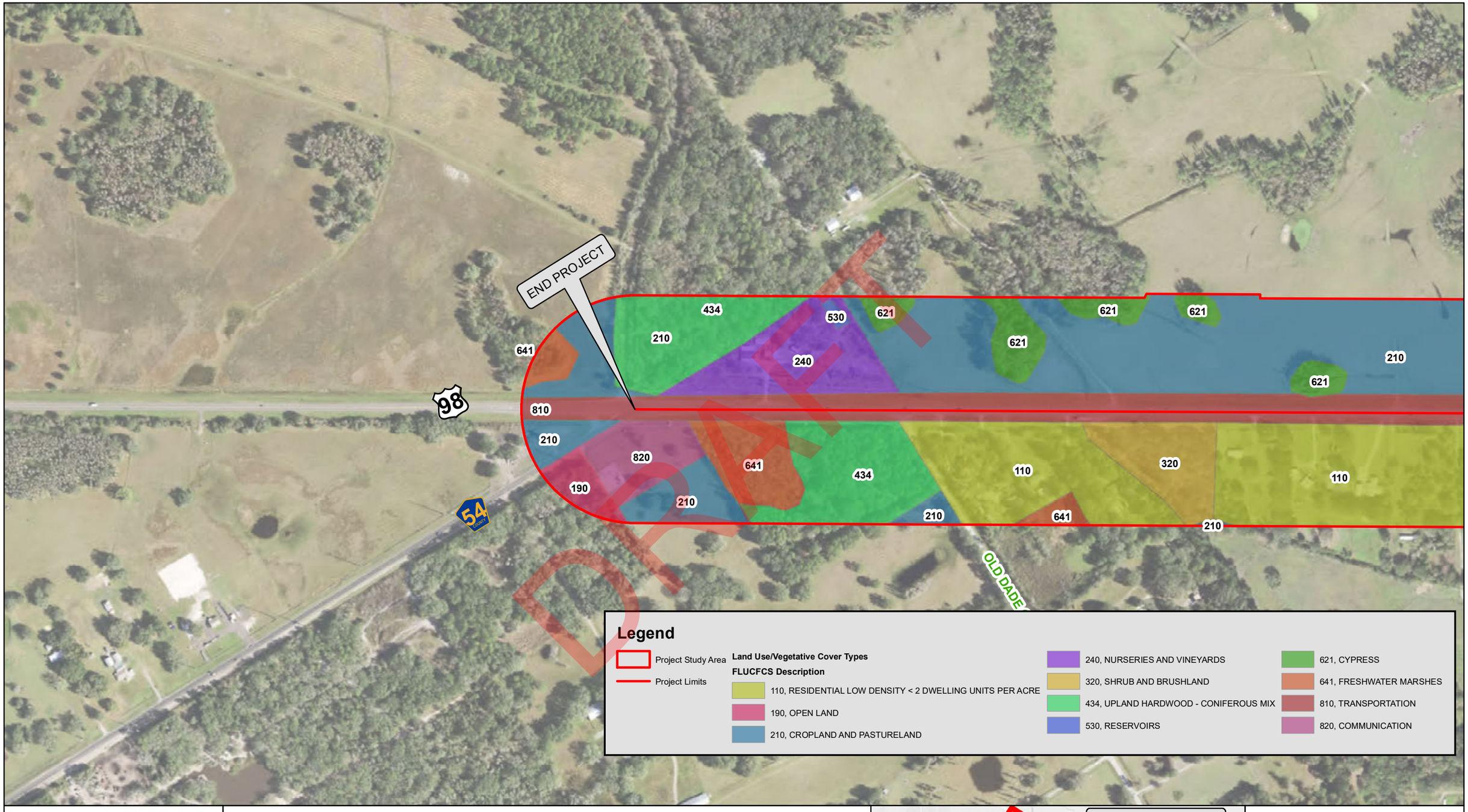
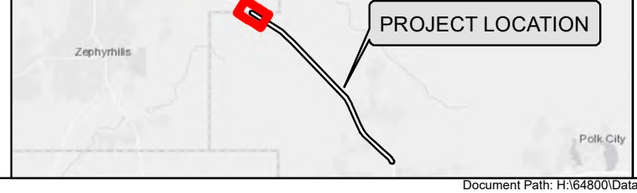


Figure A-1- Land Use/Vegetative Cover

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US 98 PD&E Study from From West Socrum Loop Road to CR 54
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Polk County, FL



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Florida State Plane West

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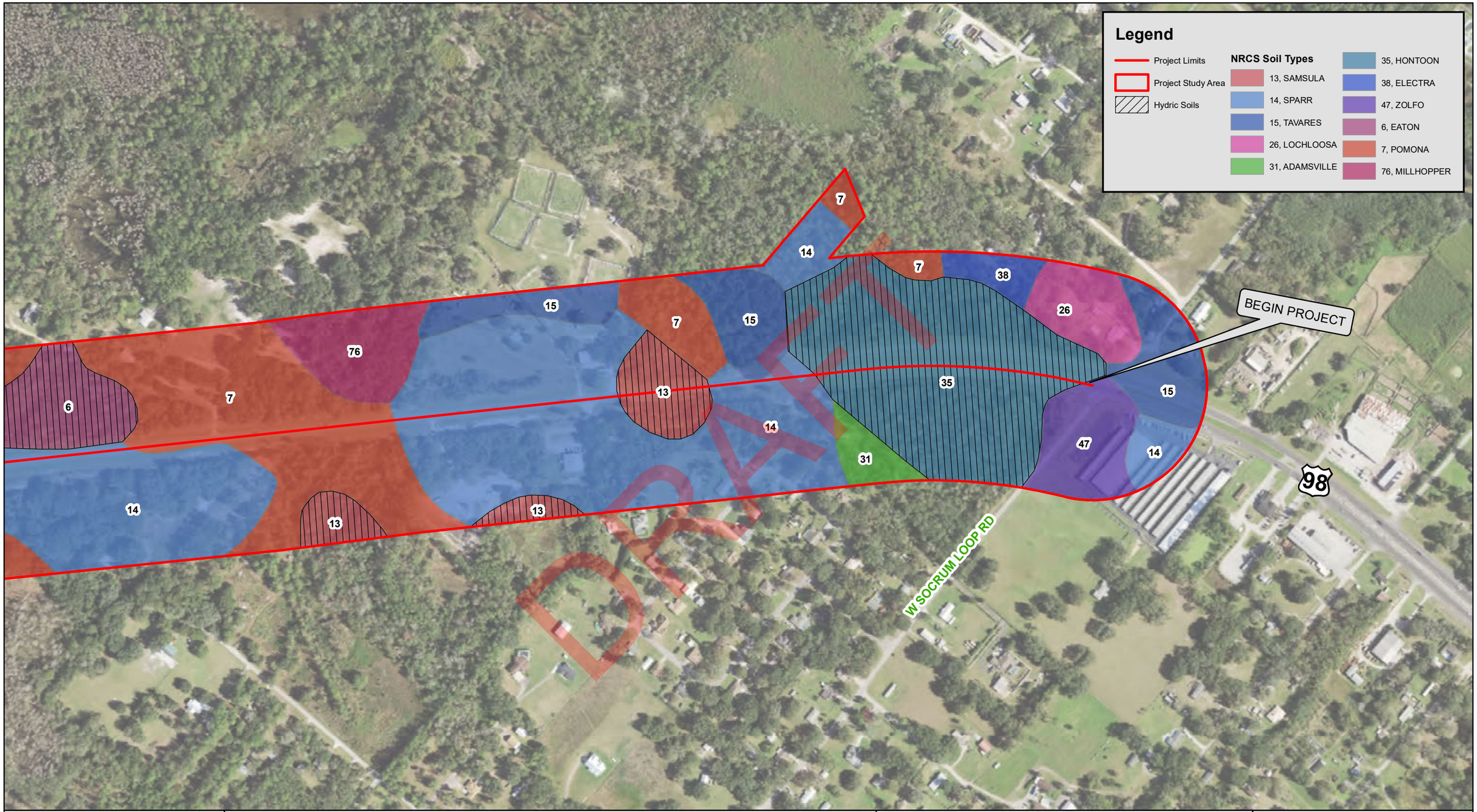
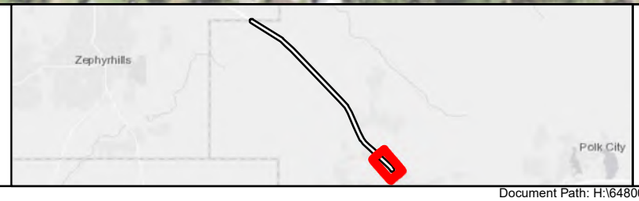


Figure A-2 - NRCS Soils

US 98 PD&E Study from West Socrum Loop to CR 54
FPID: 436673-1
Polk County, FL



Data Source:
- FDA, ESRI, NRCS

1 inch = 401 feet
0 200 400
Feet

Coordinate System: NAD 1983
Florida State Plane West

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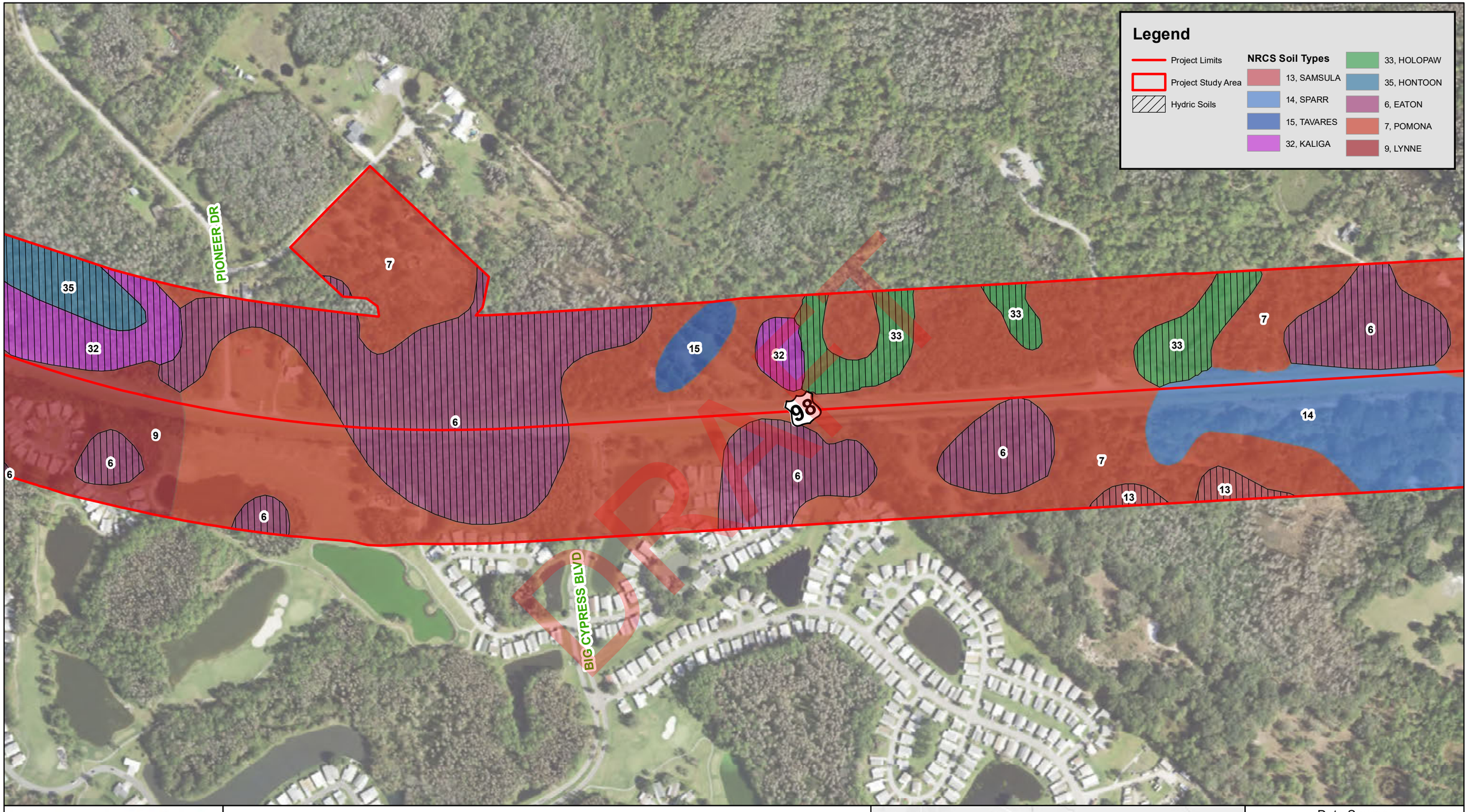
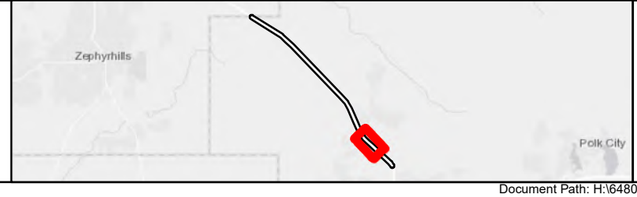


Figure A-2 - NRCS Soils

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US 98 PD&E Study from West Socrum Loop to CR 54
FPID: 436673-1
Polk County, FL



Data Source:
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1 inch = 400 feet
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Coordinate System: NAD 1983
Florida State Plane West

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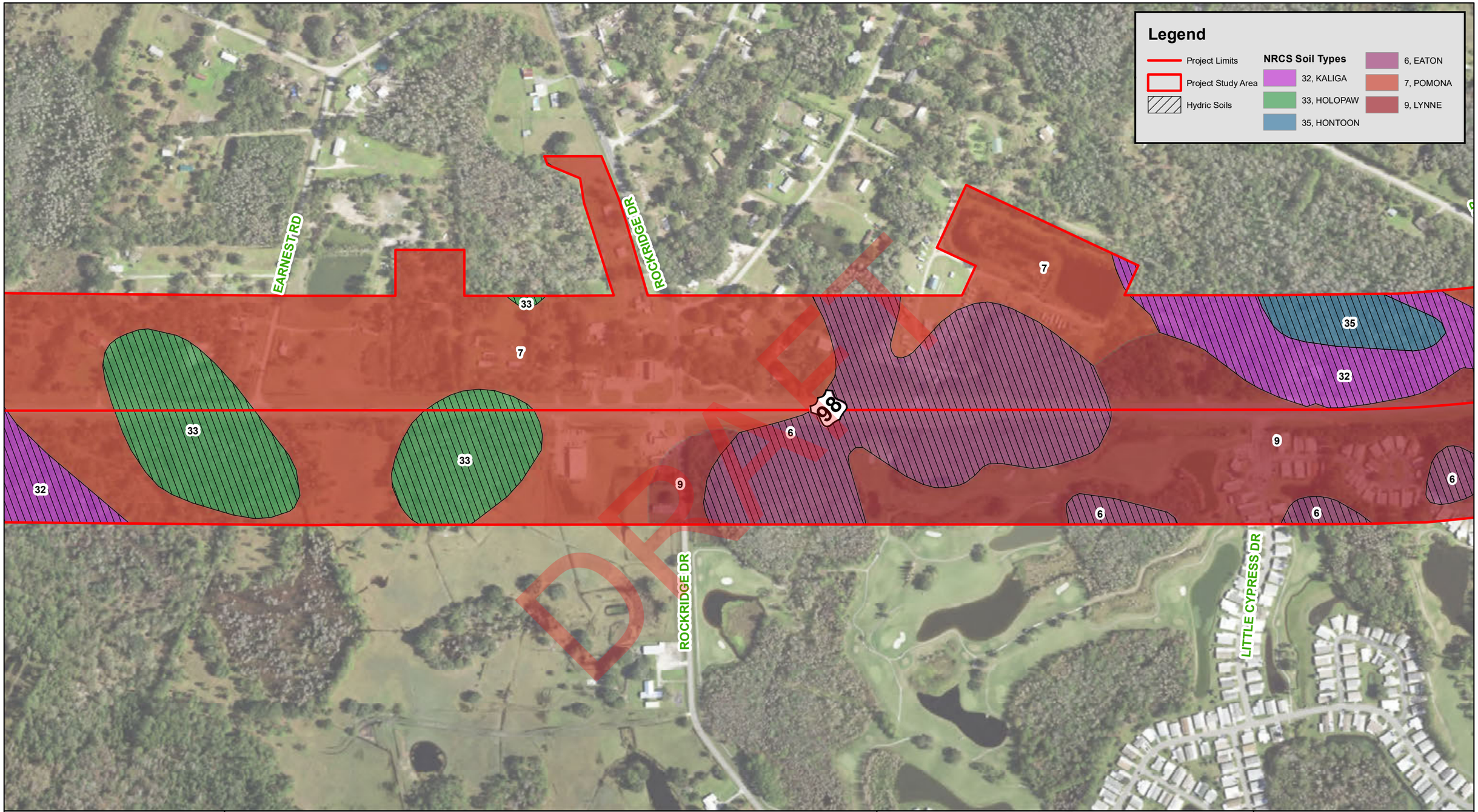
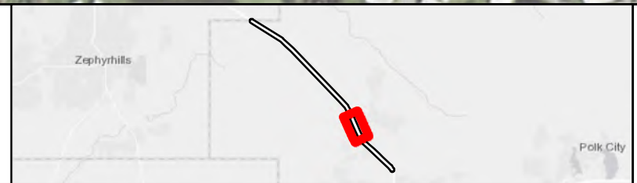


Figure A-2 - NRCS Soils

Page 3 of 9

US 98 PD&E Study from West Socrum Loop to CR 54
FPID: 436673-1
Polk County, FL



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Coordinate System: NAD 1983
Florida State Plane West

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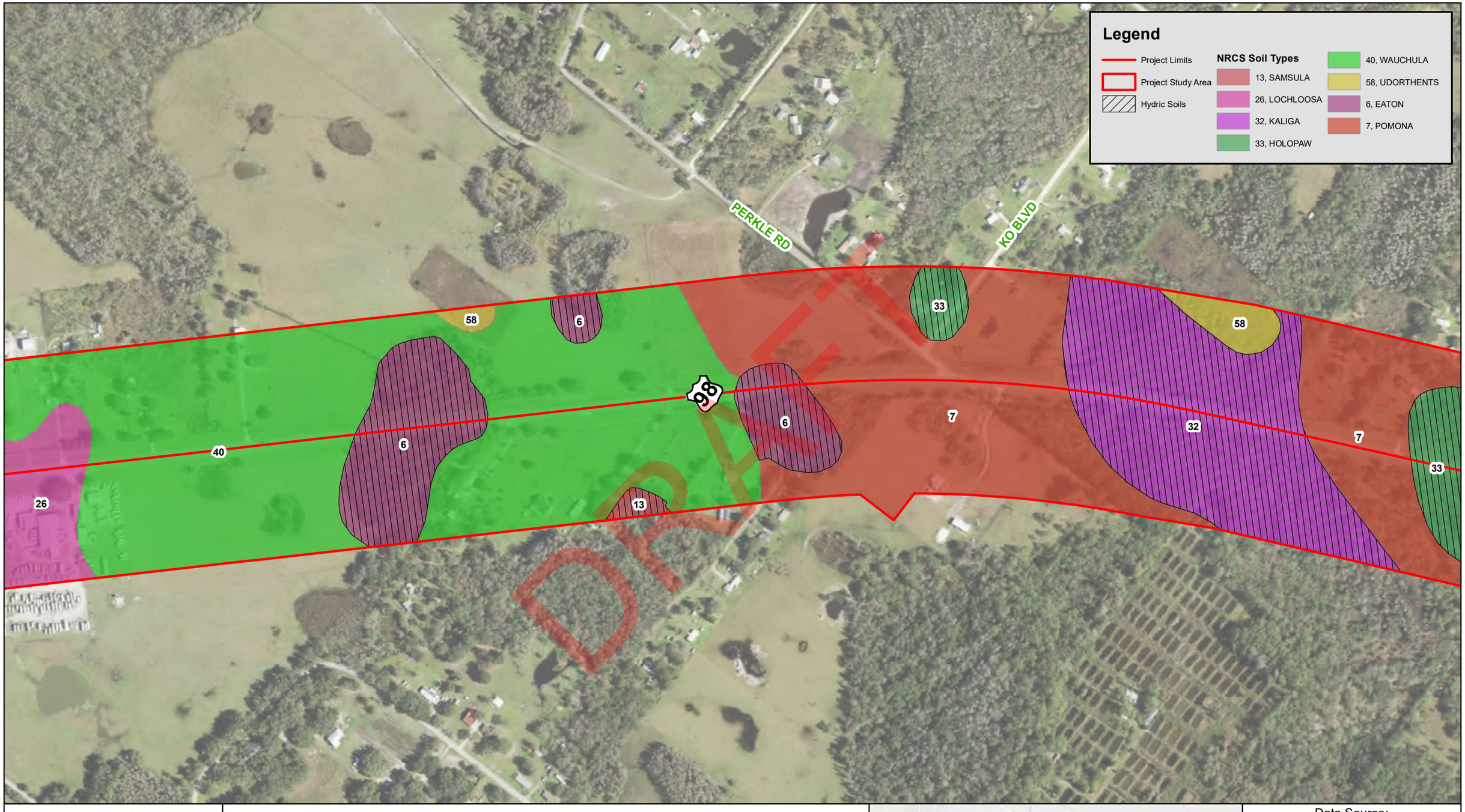
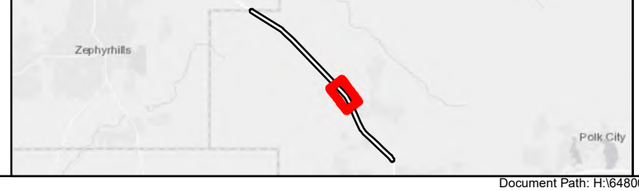


Figure A-2 - NRCS Soils
Page 4 of 9

US 98 PD&E Study from West Socrum Loop to CR 54
FPID: 436673-1
Polk County, FL



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Florida State Plane West

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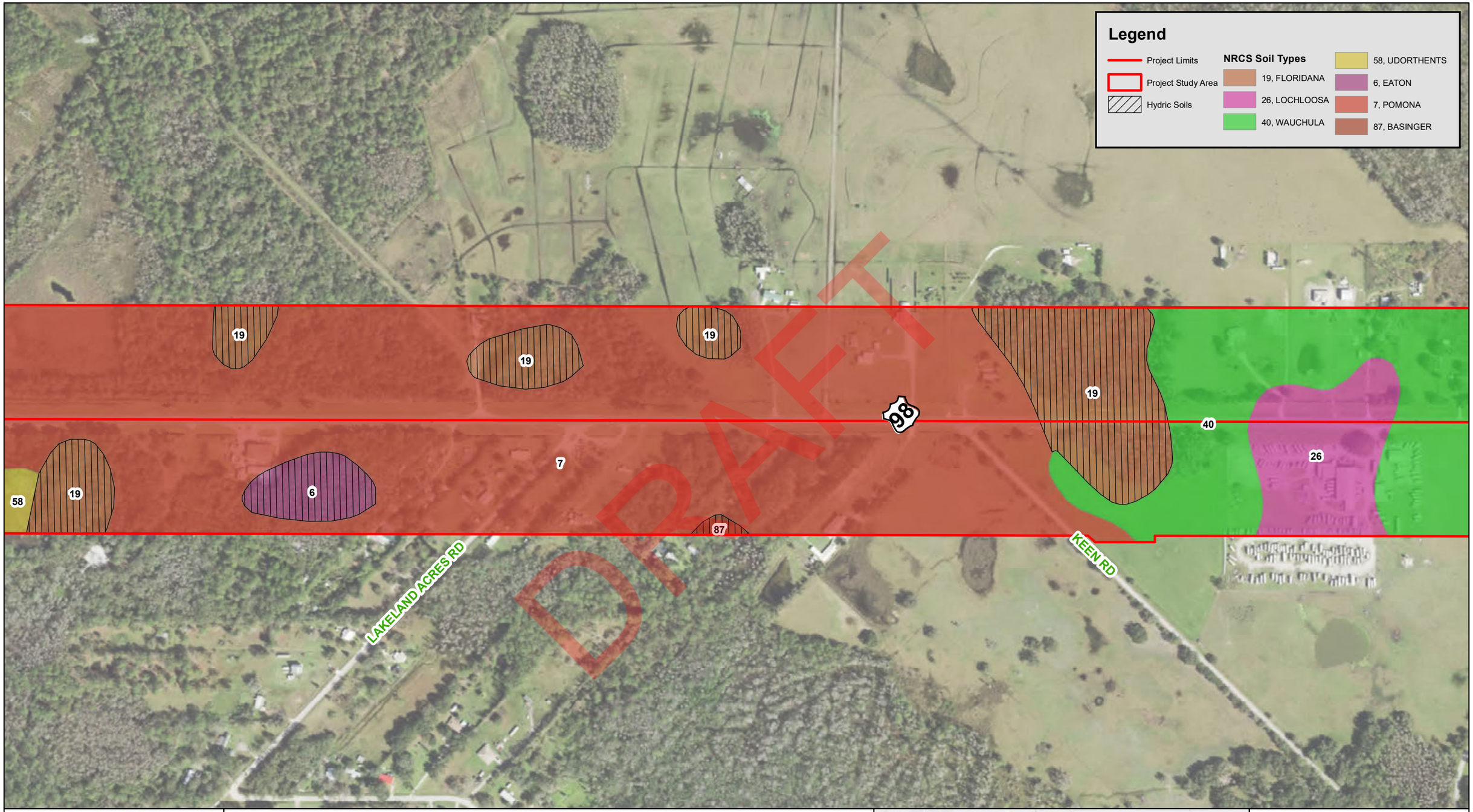
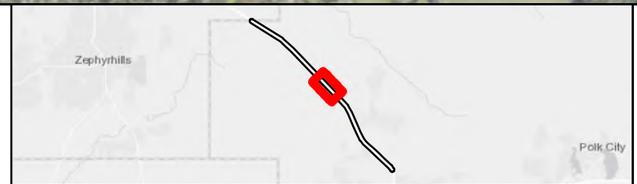


Figure A-2 - NRCS Soils
Page 5 of 9

US 98 PD&E Study from West Socrum Loop to CR 54
FPID: 436673-1
Polk County, FL



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Coordinate System: NAD 1983
Florida State Plane West

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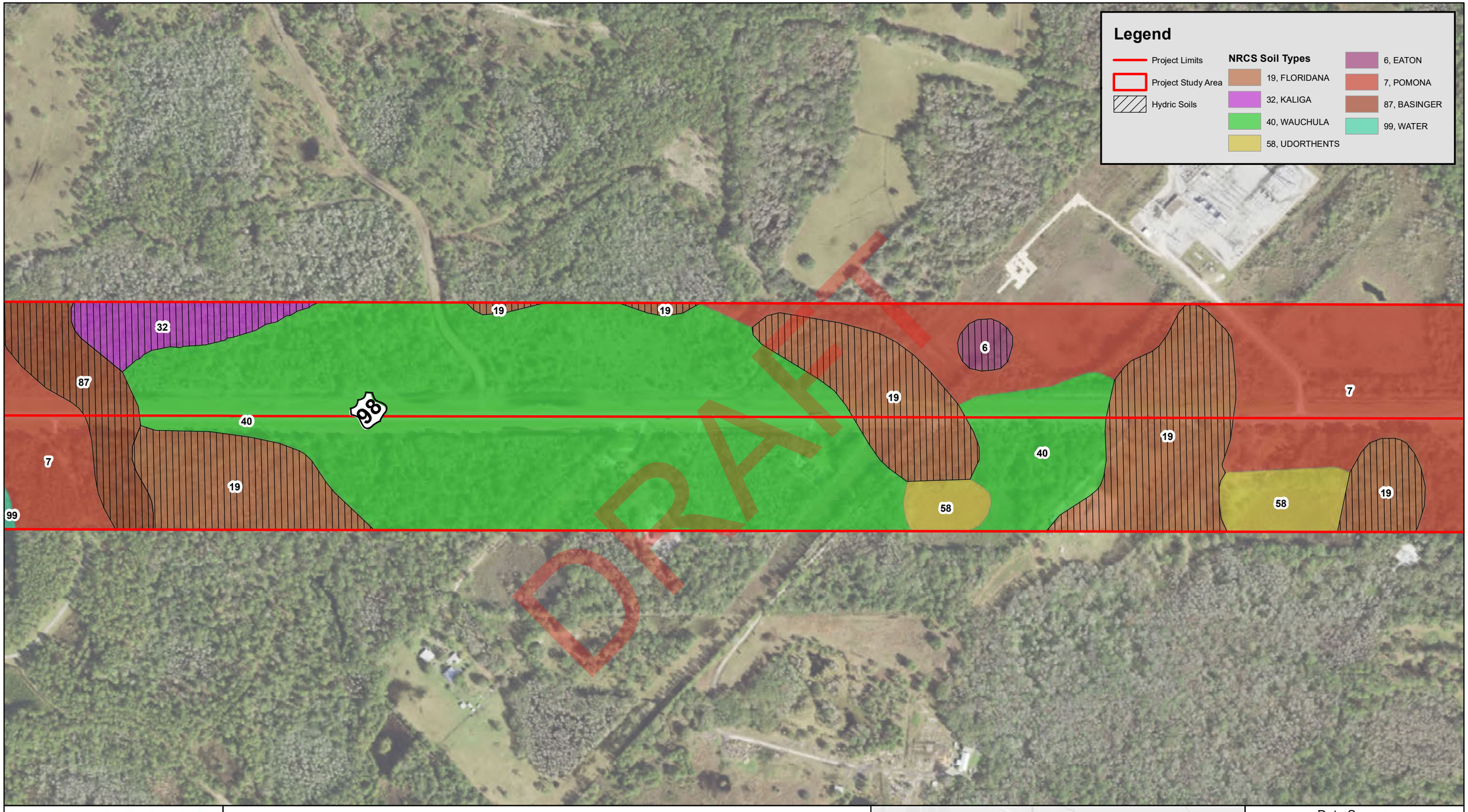
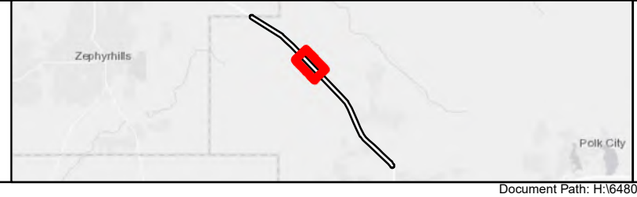


Figure A-2 - NRCS Soils
Page 6 of 9

US 98 PD&E Study from West Socrum Loop to CR 54
FPID: 436673-1
Polk County, FL



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Florida State Plane West

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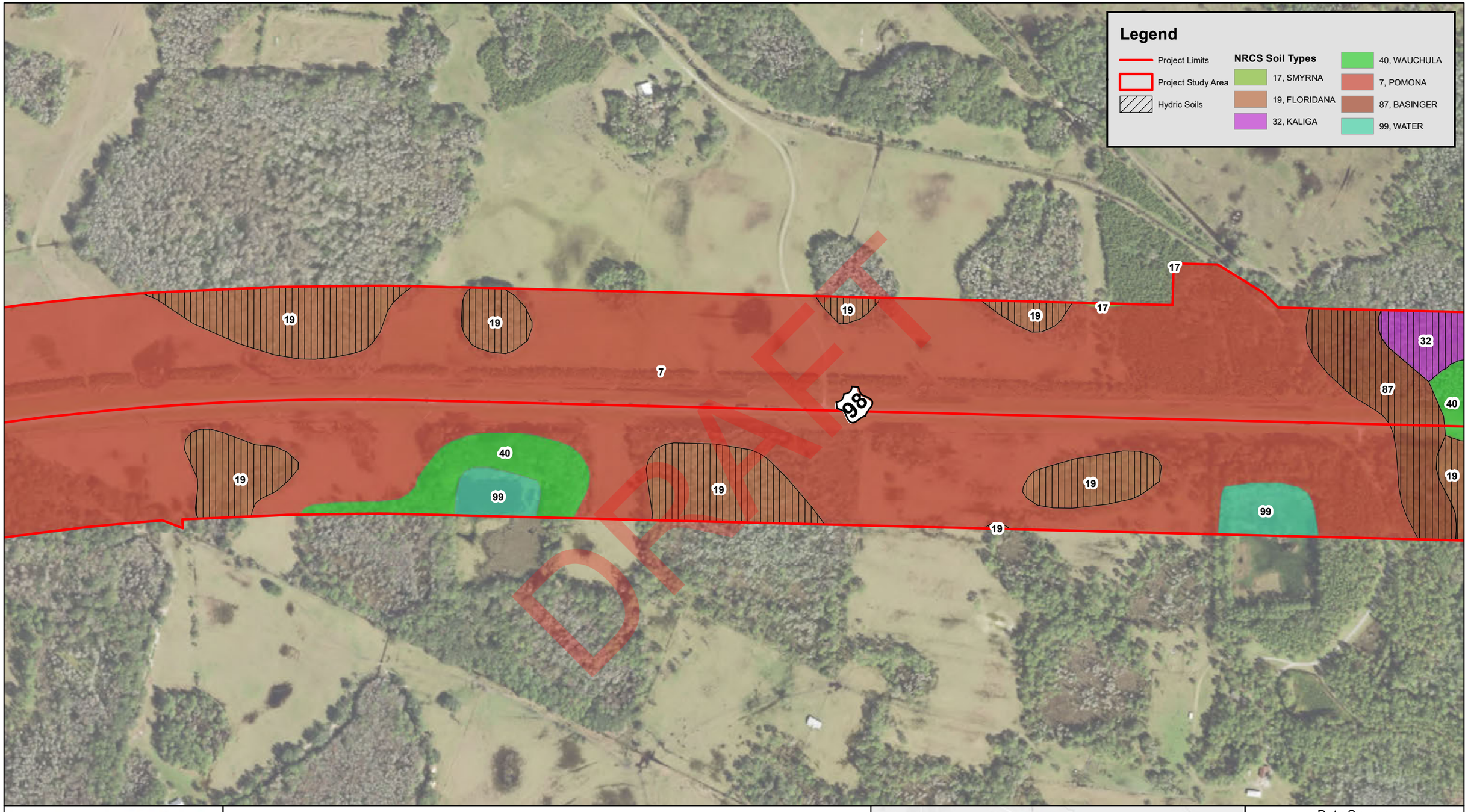
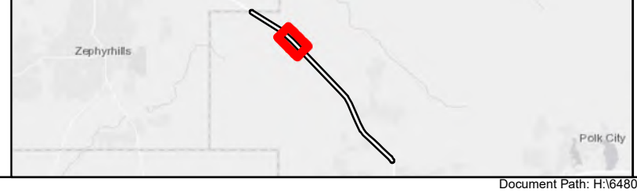


Figure A-2 - NRCS Soils

Page 7 of 9

US 98 PD&E Study from West Socrum Loop to CR 54
FPID: 436673-1
Polk County, FL



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Florida State Plane West

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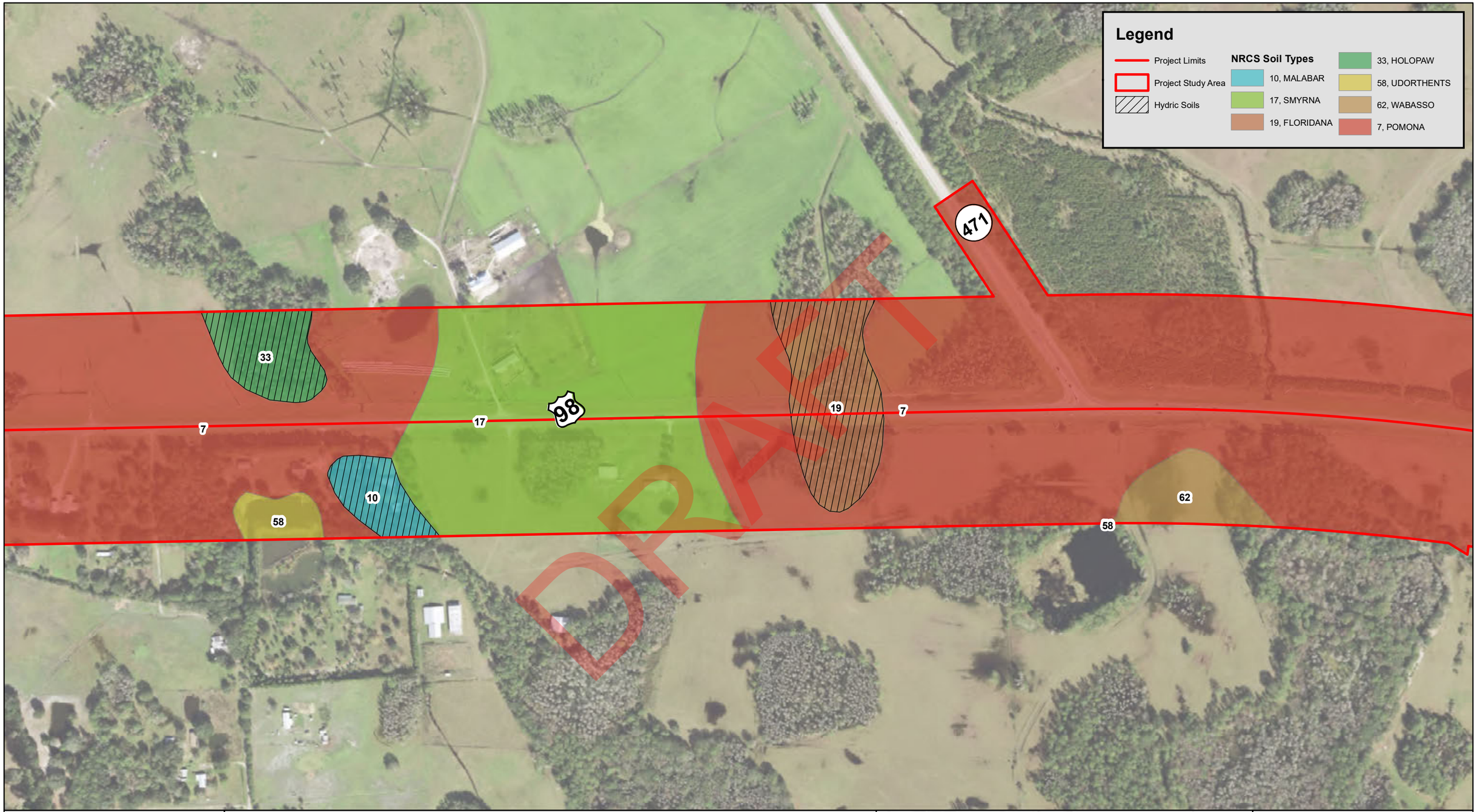
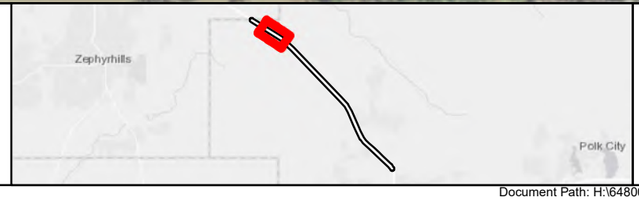


Figure A-2 - NRCS Soils
Page 8 of 9

US 98 PD&E Study from West Socrum Loop to CR 54
FPID: 436673-1
Polk County, FL



Data Source:
- FDA, ESRI, NRCS

1 inch = 401 feet
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Coordinate System: NAD 1983
Florida State Plane West

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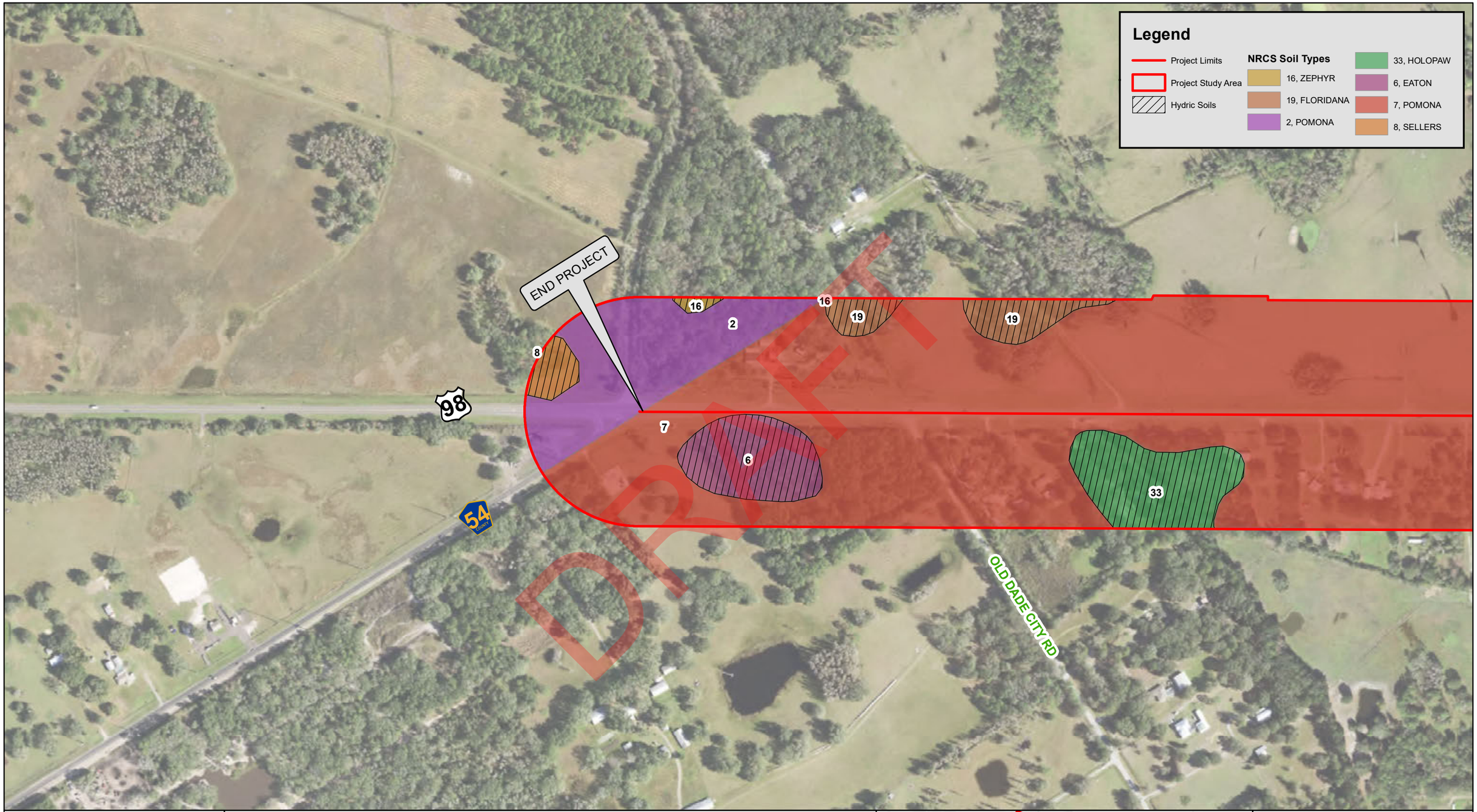
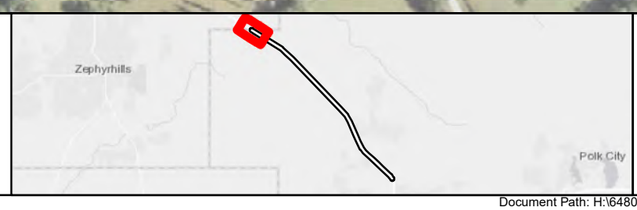


Figure A-2 - NRCS Soils
Page 9 of 9

US 98 PD&E Study from West Socrum Loop to CR 54
FPID: 436673-1
Polk County, FL

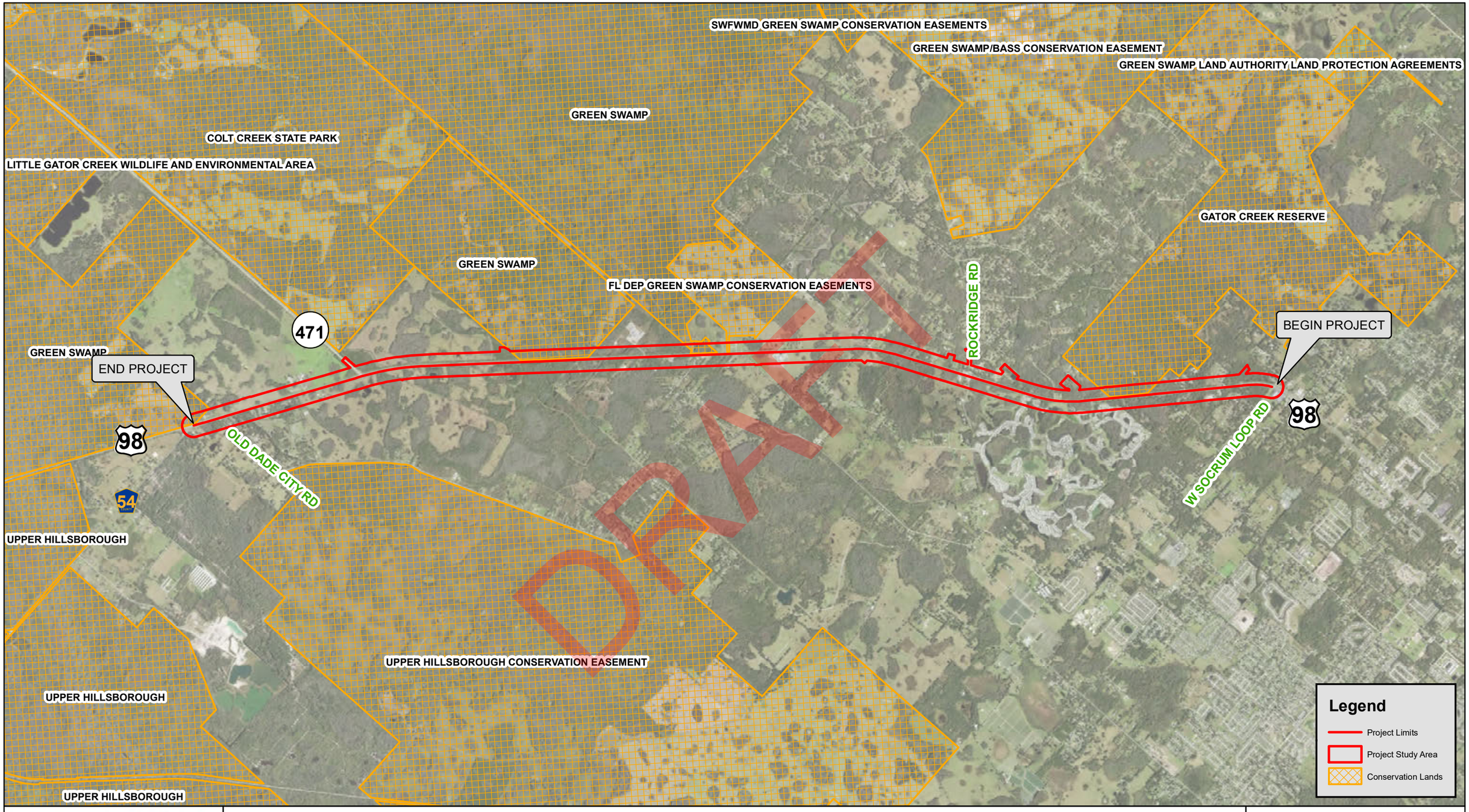


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0 200 400
Feet

Coordinate System: NAD 1983
Florida State Plane West

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FDOT

Figure A-3 - Conservation Lands

US 98 PD&E Study from West Socrum Loop to CR 54

FPID: 436673-1

Polk County, FL

Data Source:
- FDA, ESRI, FNAI

1 inch = 4,000 feet

0 2,000 4,000

Feet

Coordinate System: NAD 1983 Florida State Plane West

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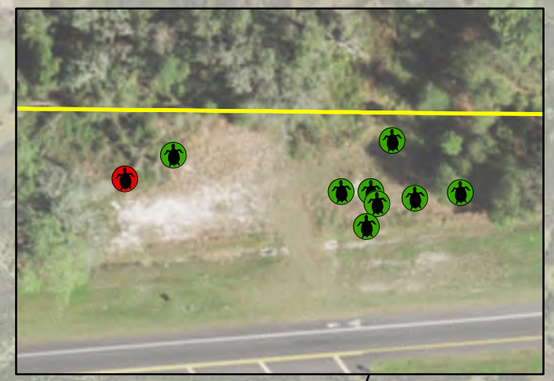
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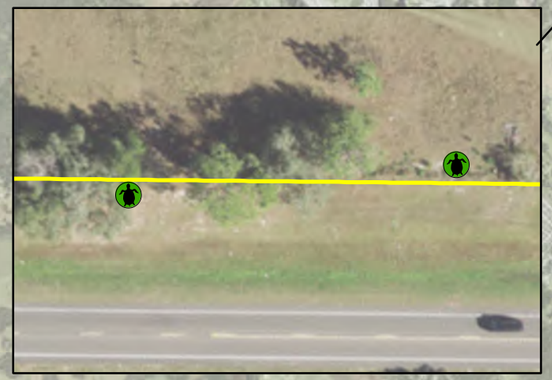
- Project Study Area
- Existing ROW

Gopher Tortoise Burrows

- Abandoned
- Potentially Occupied







471

END PROJECT

98

54

OLD DADE CITY RD

ROCKRIDGE RD

BEGIN PROJECT

W SOCRUM LOOP RD

98

DRAFT

FDOT

Figure A-4 - 15% Gopher Tortoise Survey Results (Mainline - June 2021

US 98 PD&E Study from West Socrum Loop to CR 54

FPID 436673-1

Polk County, FL

Data Source:
- FDA
- ESRI

1 inch = 4,000 feet

0 2,000 4,000

Feet

Coordinate System: NAD 1983 Florida State Plane West

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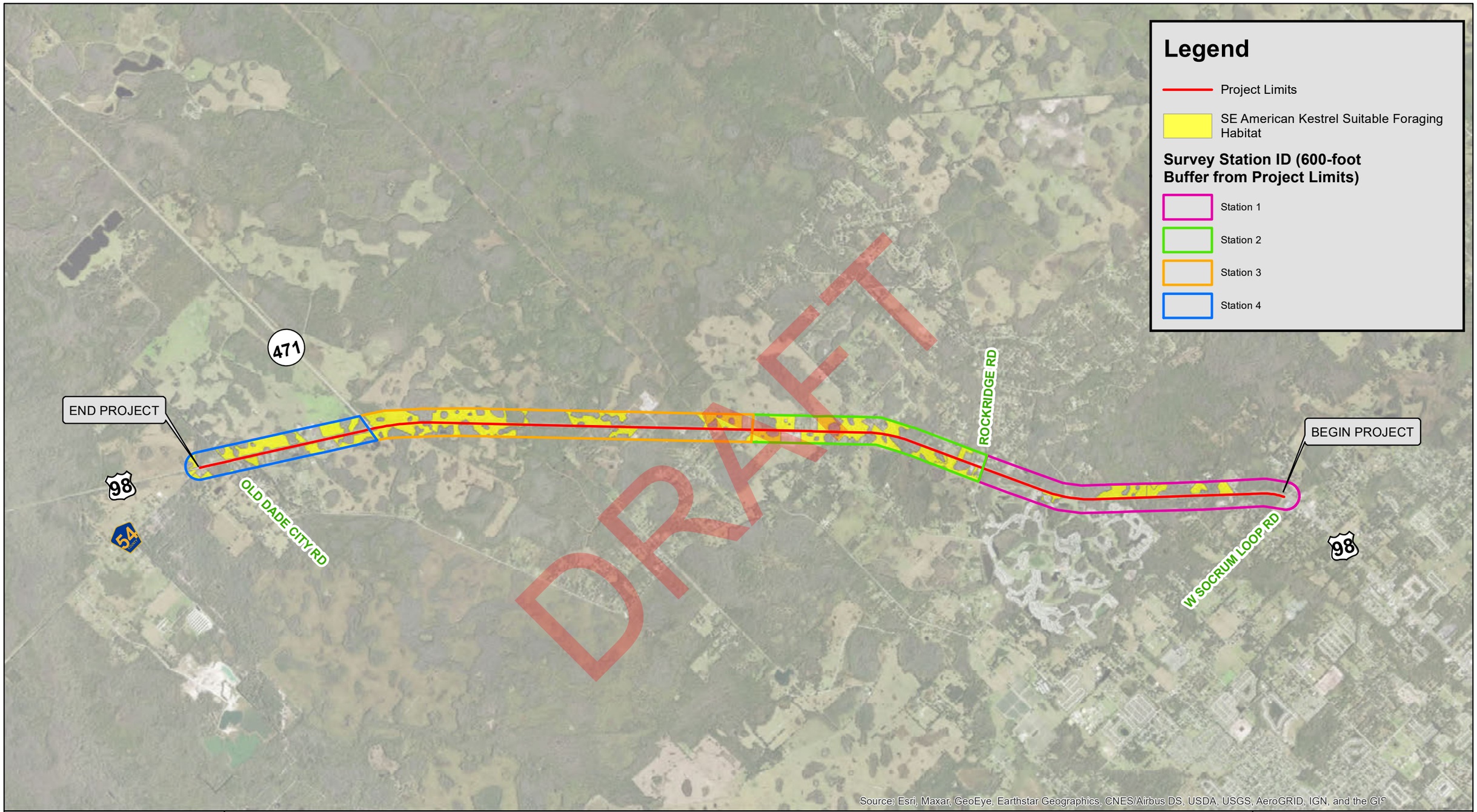


Figure A-5 - 2021 Southeastern American Kestrel Survey

US 98 PD&E Study from West Socrum Loop to CR 54

FPID 436673-1

Polk County, FL

Data Source:
- FDA
- ESRI

1 inch = 4,000 feet

0 2,000 4,000

Feet

Coordinate System: NAD 1983 Florida State Plane West

Document Path: H:\64800\Data-GIS\mxd\Draft NRE\Figure A-5 - 2021 Southeastern American Kestrel Survey_rev1.mxd

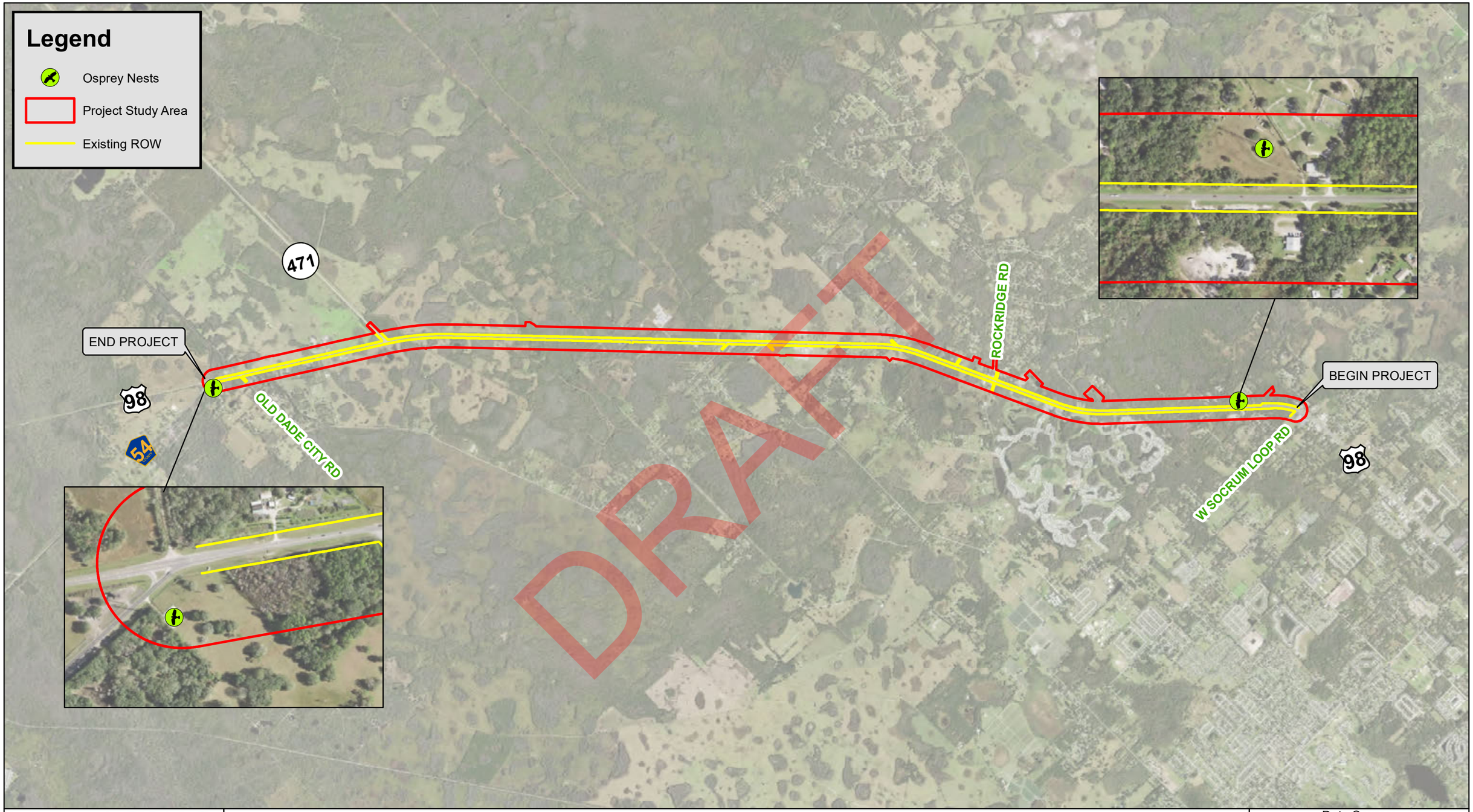


Figure A-6 - Osprey Nest Locations

US 98 PD&E Study from West Socrum Loop to CR 54

FPID 436673-1

Polk County, FL

Data Source:
- FDA
- ESRI

1 inch = 4,000 feet

0 2,000 4,000

Feet

Coordinate System: NAD 1983 Florida State Plane West

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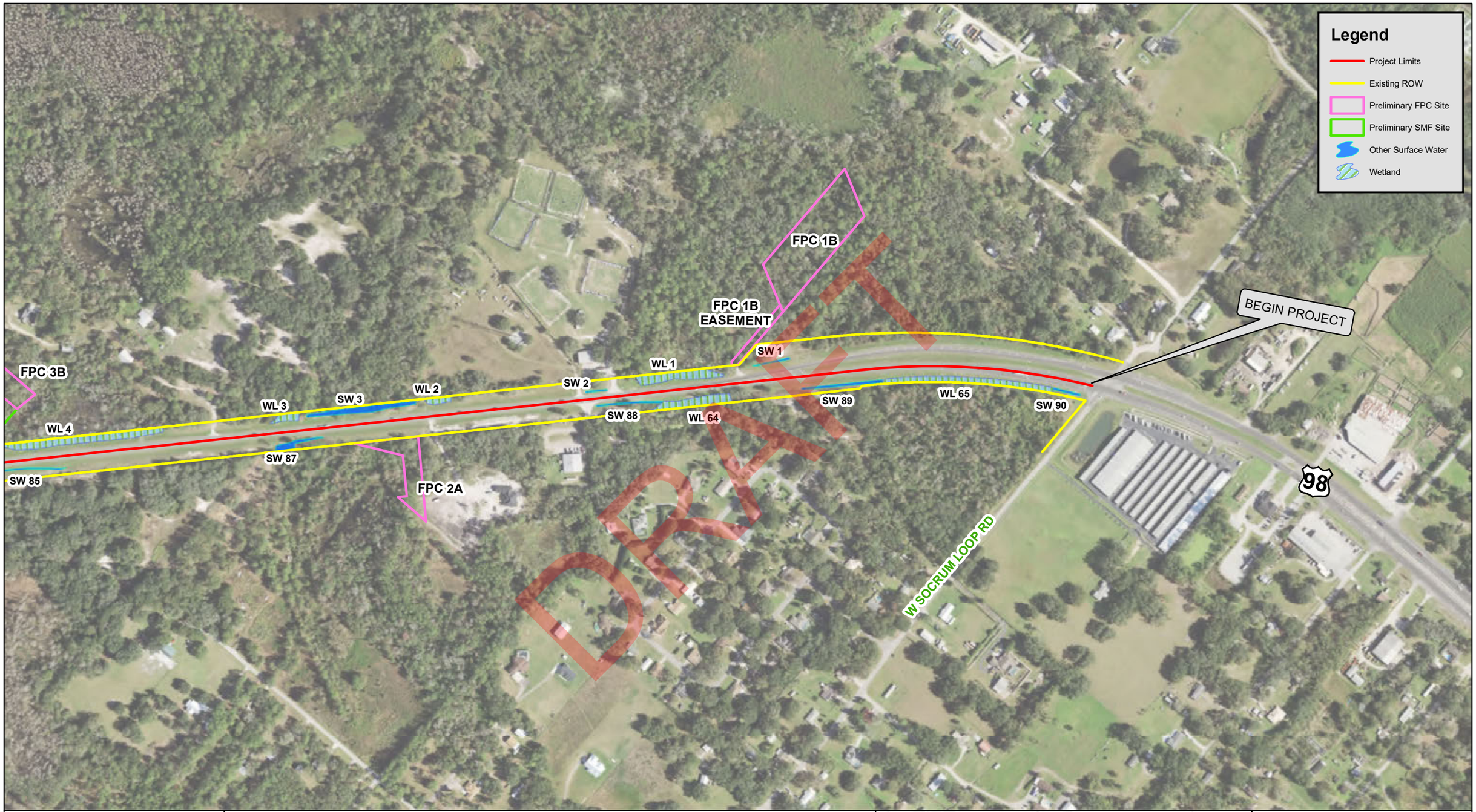
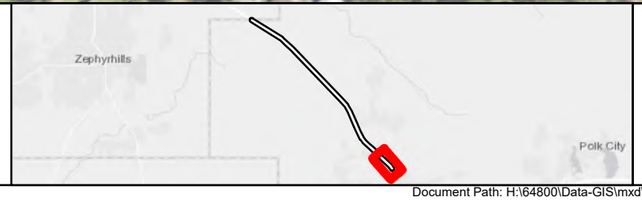


Figure A-7 - Wetlands and Other Surface Waters

US 98 PD&E Study from West Socrum Loop to CR 54
FPID: 436673-1
Polk County, FL



Data Source:
- FDA
- ESRI
1 inch = 400 feet
0 200 400
Feet
Coordinate System: NAD 1983
Florida State Plane West

Document Path: H:\64800\Data-GIS\mxd\Draft NRE\Figure A-7 - Wetlands and Surface Waters_rev2.mxd

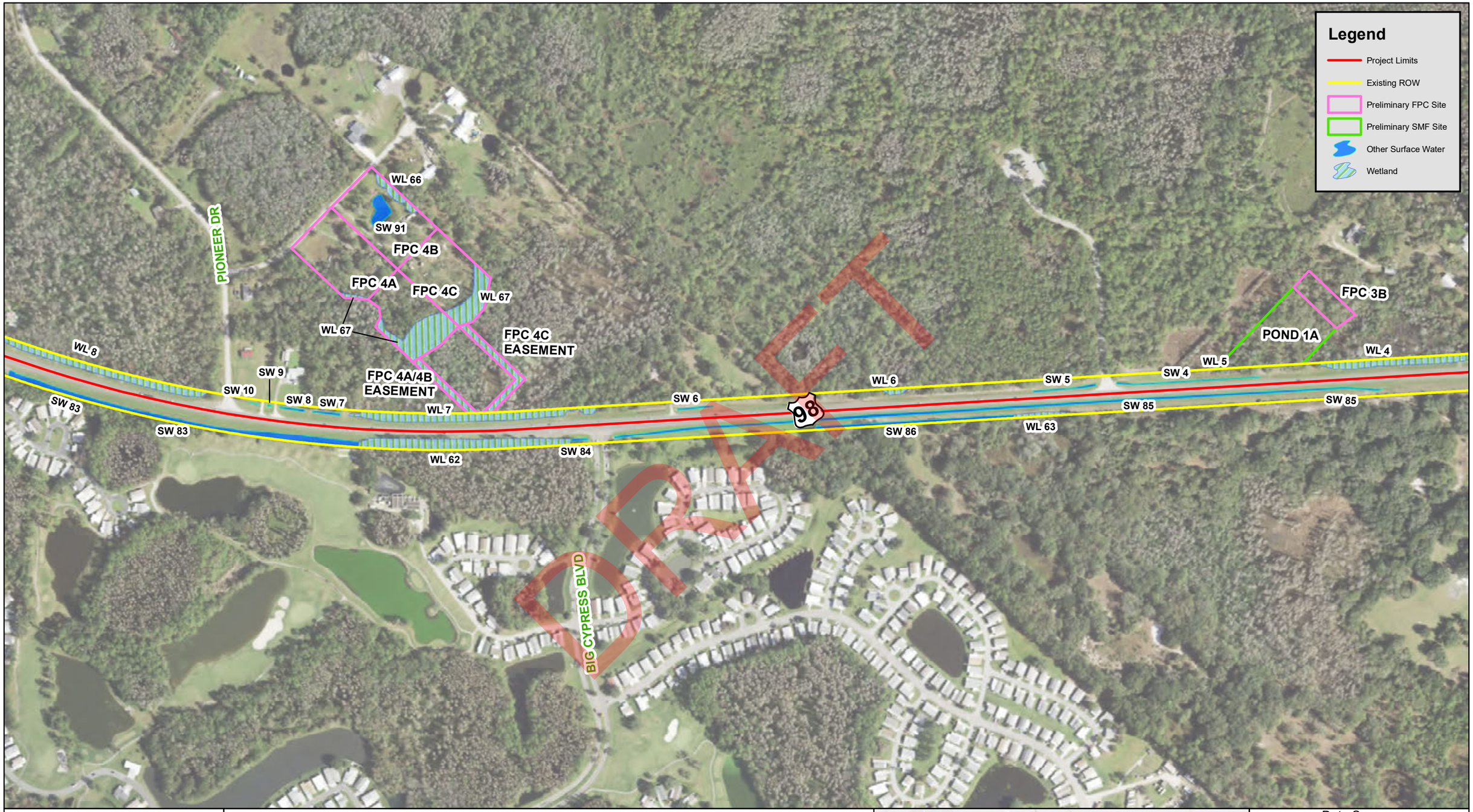
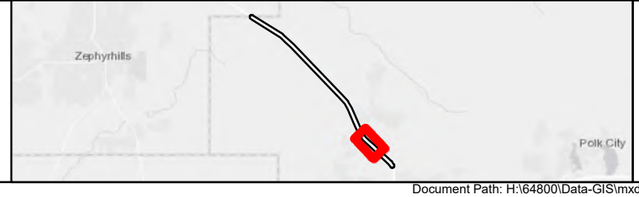


Figure A-7 - Wetlands and Other Surface Waters
Page 2 of 9

US 98 PD&E Study from West Socrum Loop to CR 54
FPID: 436673-1
Polk County, FL



Data Source:
- FDA
- ESRI
1 inch = 400 feet
0 200 400
Feet
Coordinate System: NAD 1983
Florida State Plane West

Document Path: H:\64800\Data-GIS\mxd\Draft NRE\Figure A-7 - Wetlands and Surface Waters_rev2.mxd

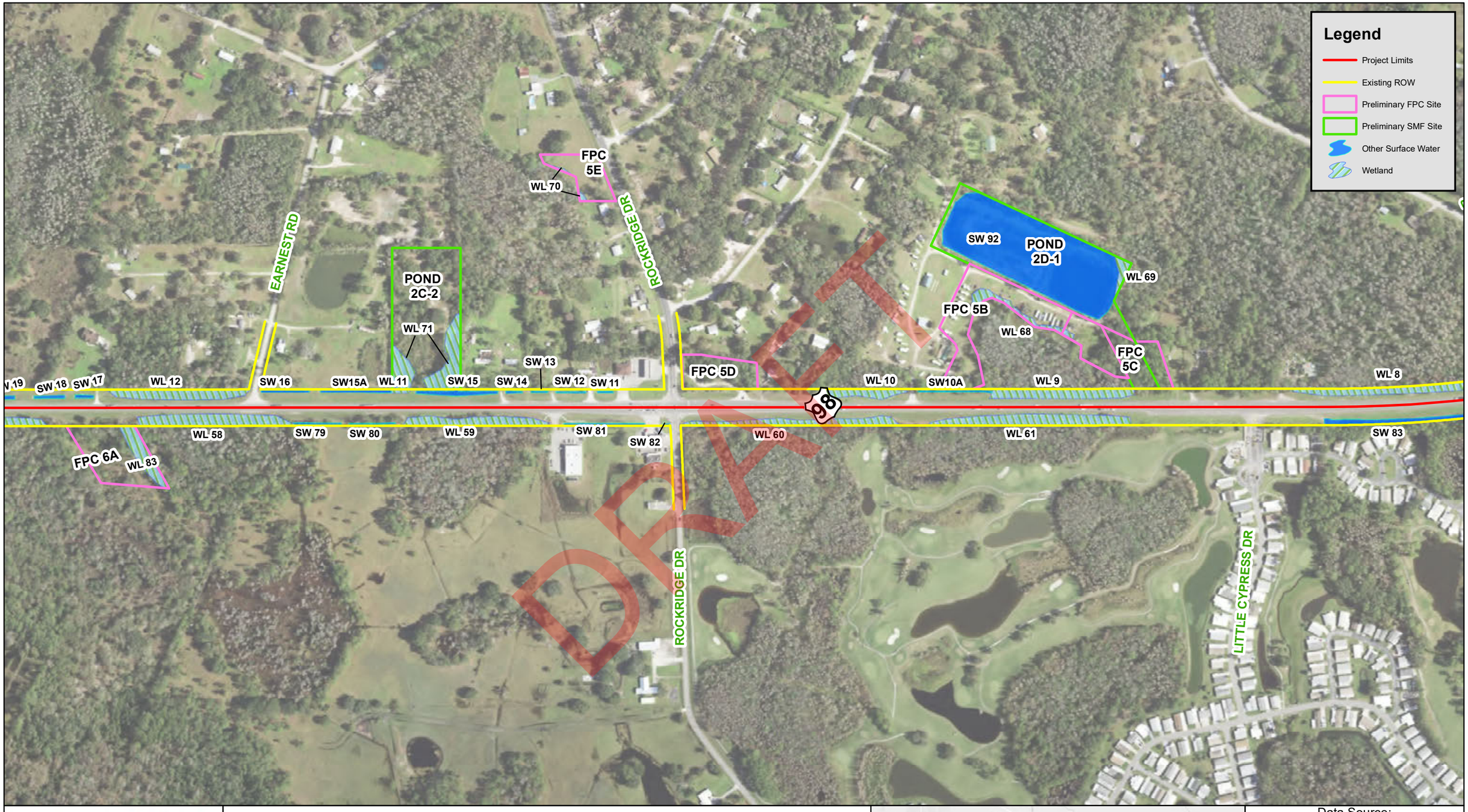
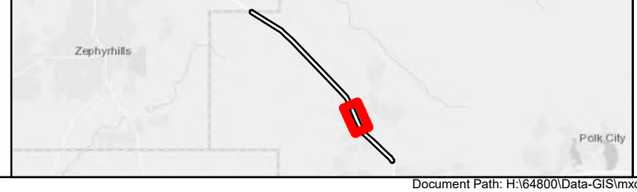


Figure A-7 - Wetlands and Other Surface Waters

Page 3 of 9

US 98 PD&E Study from West Socrum Loop to CR 54
FPID: 436673-1
Polk County, FL



Data Source:
- FDA
- ESRI
1 inch = 400 feet
0 200 400
Feet
Coordinate System: NAD 1983
Florida State Plane West

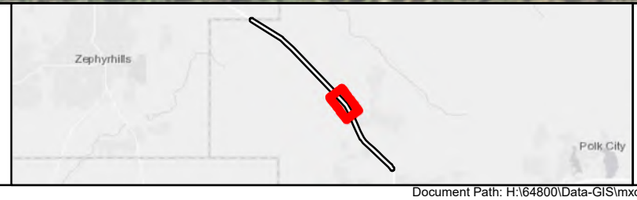
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Figure A-7 - Wetlands and Other Surface Waters

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US 98 PD&E Study from West Socrum Loop to CR 54
FPID: 436673-1
Polk County, FL



Data Source:
- FDA
- ESRI
1 inch = 400 feet
0 200 400
Feet
Coordinate System: NAD 1983
Florida State Plane West

Document Path: H:\64800\Data-GIS\mxd\Draft NRE\Figure A-7 - Wetlands and Surface Waters_rev2.mxd

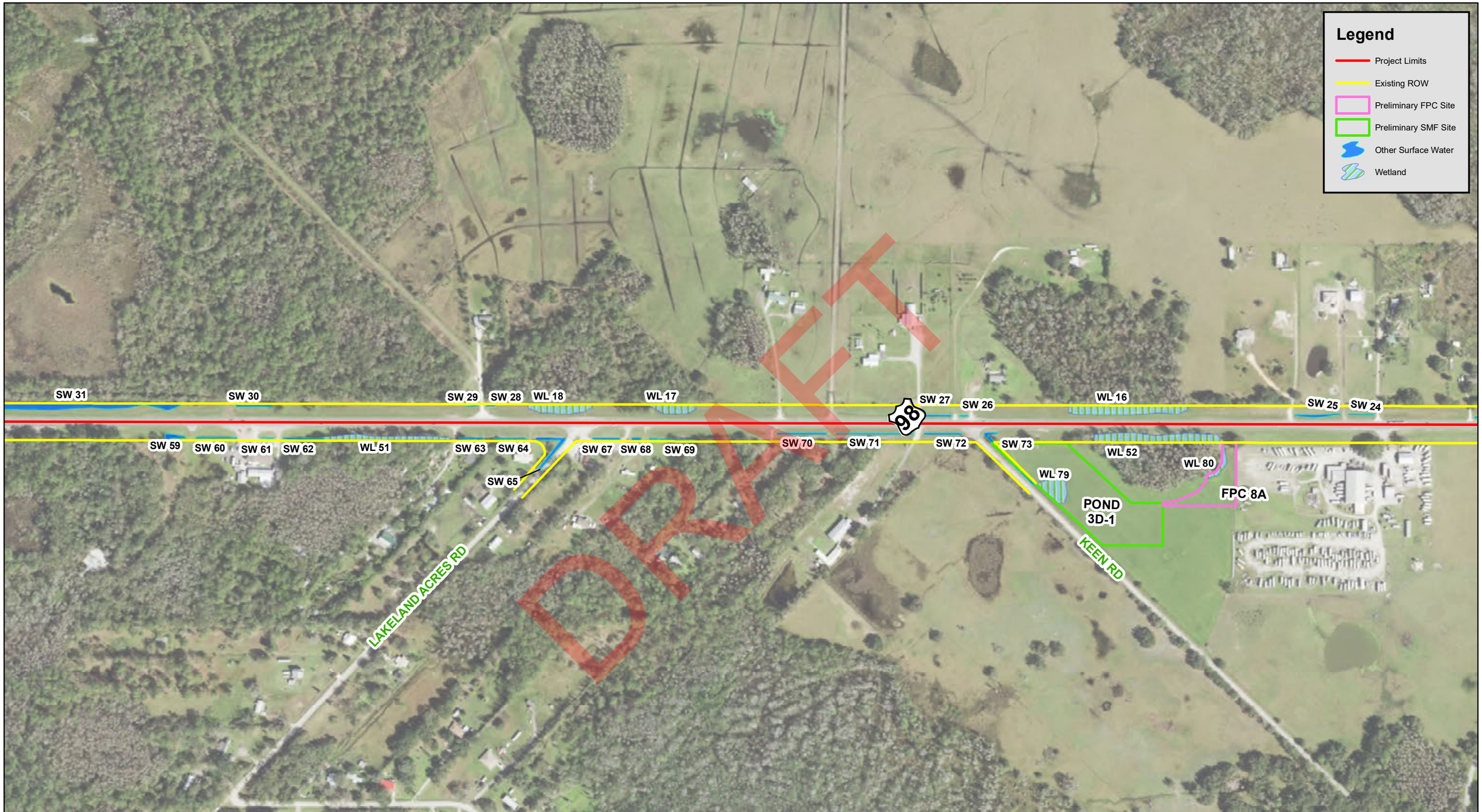


Figure A-7 - Wetlands and Other Surface Waters
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US 98 PD&E Study from West Socrum Loop to CR 54
FPID: 436673-1
Polk County, FL



Data Source:
- FDA
- ESRI
1 inch = 400 feet
0 200 400
Feet
Coordinate System: NAD 1983
Florida State Plane West

Document Path: H:\64800\Data-GIS\mxd\Draft NRE\Figure A-7 - Wetlands and Surface Waters_rev2.mxd

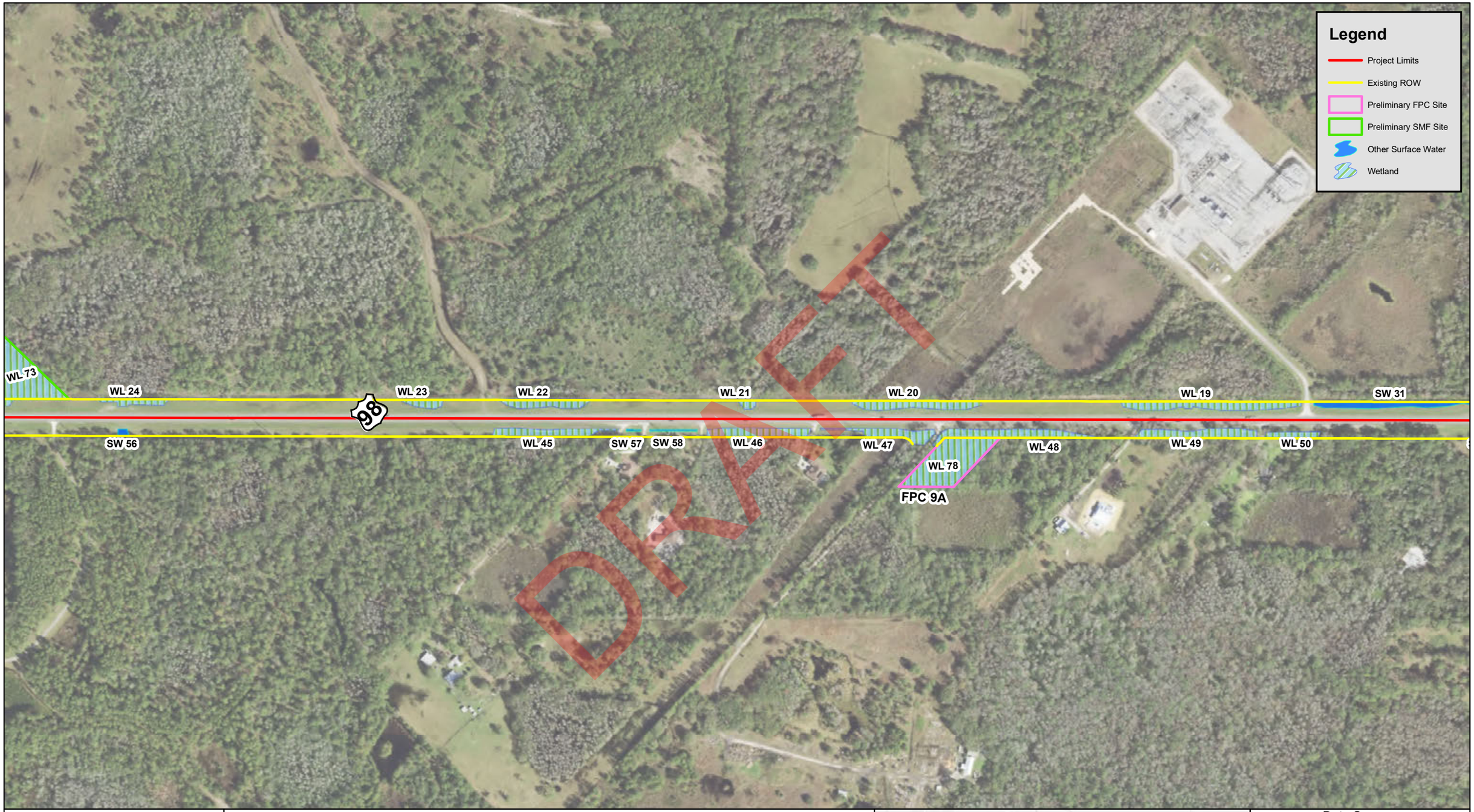


Figure A-7 - Wetlands and Other Surface Waters
Page 6 of 9

US 98 PD&E Study from West Socrum Loop to CR 54
FPID: 436673-1
Polk County, FL



Data Source:
- FDA
- ESRI
1 inch = 400 feet
0 200 400
Feet
Coordinate System: NAD 1983
Florida State Plane West

Document Path: H:\64800\Data-GIS\mxd\Draft NRE\Figure A-7 - Wetlands and Surface Waters_rev2.mxd

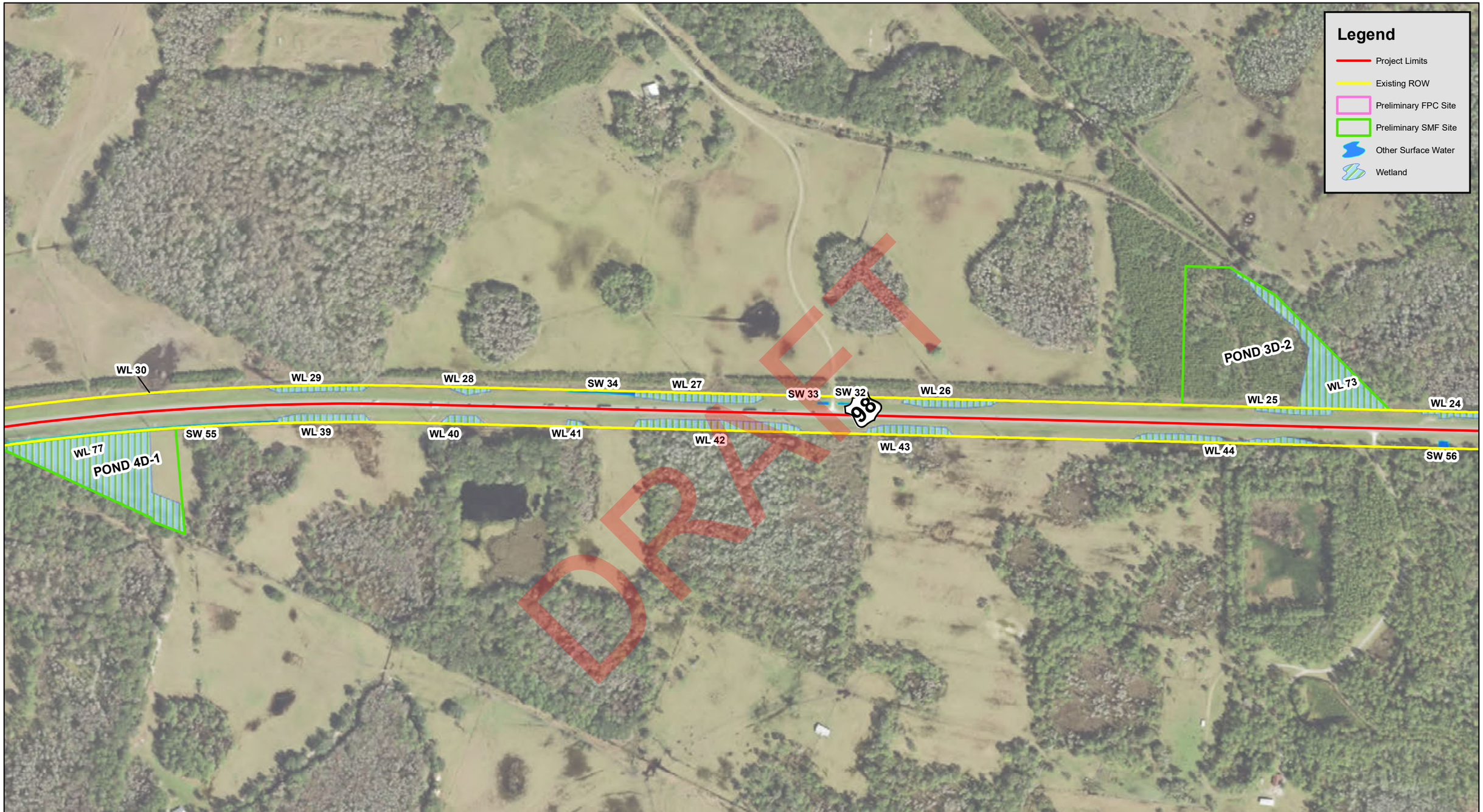


Figure A-7 - Wetlands and Other Surface Waters
Page 7 of 9

US 98 PD&E Study from West Socrum Loop to CR 54
FPID: 436673-1
Polk County, FL



Data Source:
- FDA
- ESRI
1 inch = 400 feet
0 200 400
Feet
Coordinate System: NAD 1983
Florida State Plane West

Document Path: H:\64800\Data-GIS\mxd\Draft NRE\Figure A-7 - Wetlands and Surface Waters_rev2.mxd

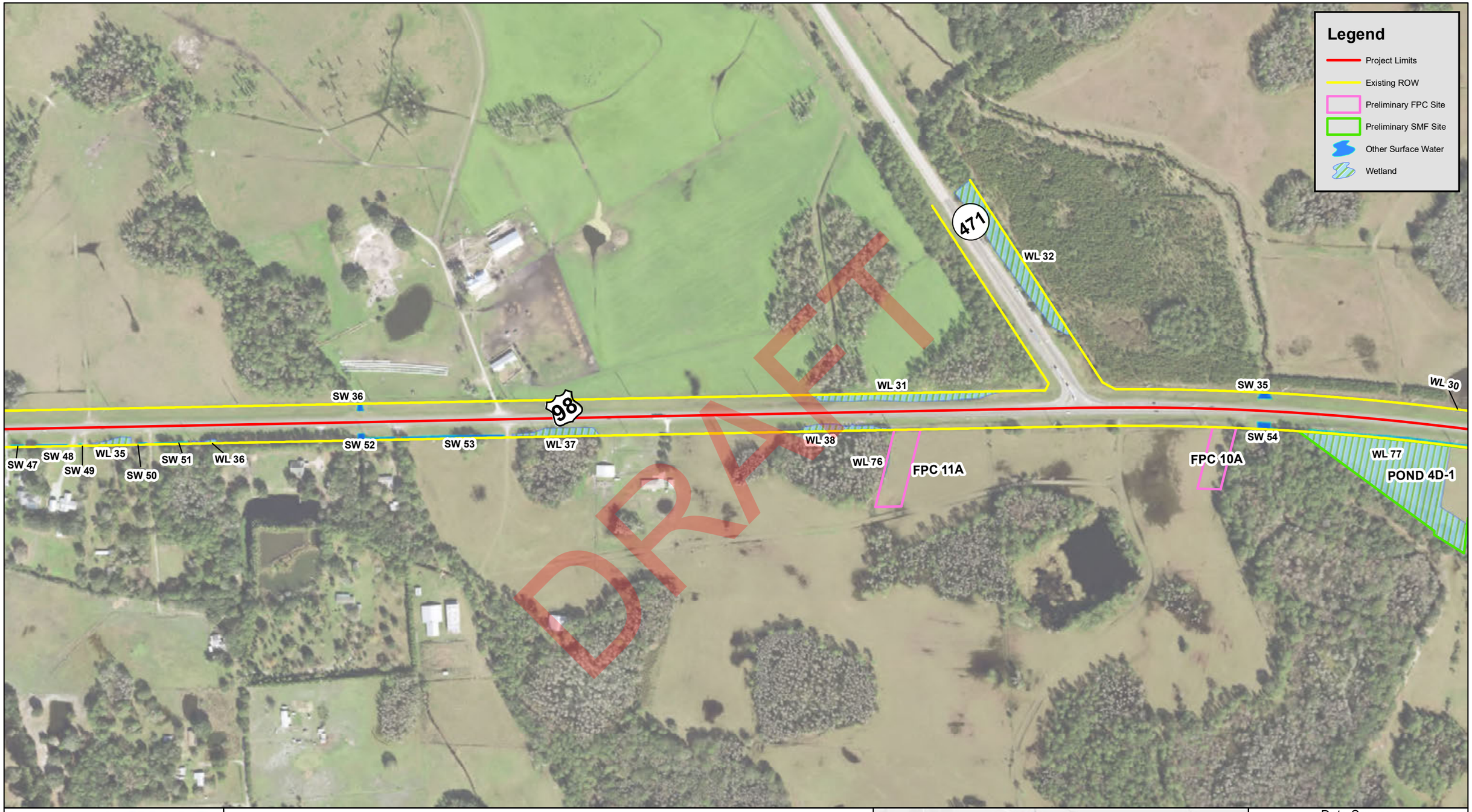
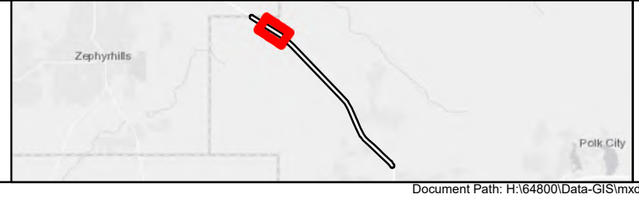


Figure A-7 - Wetlands and Other Surface Waters
Page 8 of 9

US 98 PD&E Study from West Socrum Loop to CR 54
FPID: 436673-1
Polk County, FL



Data Source:
- FDA
- ESRI
1 inch = 400 feet
0 200 400
Feet
Coordinate System: NAD 1983
Florida State Plane West

Document Path: H:\64800\Data-GIS\mxd\Draft NRE\Figure A-7 - Wetlands and Surface Waters_rev2.mxd



Figure A-7 - Wetlands and Other Surface Waters
Page 9 of 9

US 98 PD&E Study from West Socrum Loop to CR 54
FPID: 436673-1
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Data Source:
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- ESRI
1 inch = 400 feet
0 200 400
Feet
Coordinate System: NAD 1983
Florida State Plane West

Document Path: H:\64800\Data-GIS\mxd\Draft NRE\Figure A-7 - Wetlands and Surface Waters_rev2.mxd

APPENDIX B

Data Request Results

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APPENDIX B.1

USFWS IPaC Report

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Florida Ecological Services Field Office
1339 20th Street
Vero Beach, FL 32960-3559
Phone: (772) 562-3909 Fax: (772) 562-4288
http://fws.gov/verobeach

In Reply Refer To: June 01, 2021
Consultation Code: 04EF2000-2021-SLI-0767
Event Code: 04EF2000-2021-E-01942
Project Name: US 98 PD&E

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. Please 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 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 ECOS-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 ECOS-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.

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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:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

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 Tracking Number 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

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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:

South Florida Ecological Services Field Office
1339 20th Street
Vero Beach, FL 32960-3559
(772) 562-3909

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

North Florida Ecological Services Field Office
7915 Baymeadows Way, Suite 200
Jacksonville, FL 32256-7517
(904) 731-3336

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Project Summary

Consultation Code: 04EF2000-2021-SLI-0767
Event Code: 04EF2000-2021-E-01942
Project Name: US 98 PD&E
Project Type: TRANSPORTATION
Project Description: This project proposes the potential widening of US 98 (SR 35/700) from two lanes, undivided to four lanes, divided from north of West Socrum Loop Road to south of CR 54 in unincorporated Polk County.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@28.2120927,-82.01508945386641,14z



Counties: Pasco and Polk counties, Florida

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Endangered Species Act Species

There is a total of 34 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.

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Mammals

NAME	STATUS
Florida Panther *Puma (=Felis) concolor coryi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1763	Endangered
Puma (=mountain Lion) *Puma (=Felis) concolor (all subsp. except coryi)* Population: FL No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6049	Similarity of Appearance (Threatened)

Birds

NAME	STATUS
Audubon's Crested Caracara *Polyborus plancus audubonii* Population: FL pop. 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. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7713	Endangered
Florida Grasshopper Sparrow *Ammodramus savannarum floridanus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/32	Endangered
Whooping Crane *Grus americana* Population: U.S.A. (CO, ID, FL, NM, UT, and the western half of Wyoming) 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	Threatened

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Reptiles

NAME	STATUS
American Alligator *Alligator mississippiensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/776	Similarity of Appearance (Threatened)
Bluetail Mole Skink *Eumeces egregius lividus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2203	Threatened
Eastern Indigo Snake *Drymarchon corais couperi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/646	Threatened
Gopher Tortoise *Gopherus polyphemus* Population: eastern No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6994	Candidate
Loggerhead Sea Turtle *Caretta caretta* Population: Northwest Atlantic Ocean DPS There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1110	Threatened
Sand Skink *Neoseps reynoldsi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4094	Threatened

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Flowering Plants

NAME	STATUS
Avon Park Harebells *Crotalaria avonensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7093	Endangered
Britton's Beargrass *Nolina brittoniana* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4460	Endangered
Carter's Mustard *Warea carteri* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5583	Endangered
Florida Bonamia *Bonamia grandiflora* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2230	Threatened
Florida Ziziphus *Ziziphus celata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2950	Endangered
Highlands Scrub Hypericum *Hypericum cumulicola* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2940	Endangered
Lewton's Polygala *Polygala lewtonii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6688	Endangered
Papery Whitlow-wort *Paronychia chartacea* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1465	Threatened
Pigeon Wings *Clitoria fragrans* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/991	Threatened
Pygmy Fringe-tree *Chionanthus pygmaeus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1084	Endangered
Sandlace *Polygonella myriophylla* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5745	Endangered
Scrub Blazingstar *Liatris ohlingerae* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/864	Endangered
Scrub Buckwheat *Eriogonum longifolium var. gnaphalifolium* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5940	Threatened

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NAME	STATUS
Scrub Lupine *Lupinus aridorum*	Endangered
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/736	
Scrub Mint *Dicerandra frutescens*	Endangered
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/799	
Scrub Plum *Prunus geniculata*	Endangered
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2238	
Short-leaved Rosemary *Conradina brevifolia*	Endangered
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2929	
Wide-leaf Warea *Warea amplexifolia*	Endangered
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/412	
Wireweed *Polygonella basiramia*	Endangered
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1718	

Lichens

NAME	STATUS
Florida Perforate Cladonia *Cladonia perforata*	Endangered
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7516	

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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APPENDIX B.2

FNAI Standard Data Report

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FLORIDA Natural Areas INVENTORY

1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
fax 850-681-9364
www.fnai.org

June 8, 2021

Tia Norman
Faller, Davis & Associates, Inc.
4200 W Cypress Street, Suite 500
Tampa, FL 33607

Dear Ms. Norman,

Thank you for requesting information from the Florida Natural Areas Inventory (FNAI). At your request we have produced the following report for your project area.

The purpose of this Standard Data Report is to provide objective scientific information on natural resources located in the vicinity of a site of interest, in order to inform those involved in project planning and evaluation. This Report makes no determination of the suitability of a proposed project for this location, or the potential impacts of the project on natural resources in the area.

Project: PD&E Study for US 98

Date Received: 6/2/2021

Location: Polk County

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Element Occurrences

A search of our maps and database indicates that we currently have several element occurrences mapped in the vicinity of the study area (see enclosed map and element occurrence table). Please be advised that a lack of element occurrences in the FNAI database is not a sufficient indication of the absence of rare or endangered species on a site.

Federally Listed Species

Our data indicate federally listed species are present on or very near this site, specifically Eastern Indigo Snake (*Drymarchon couperi*) (see enclosed map and tables for details). This statement should not be interpreted as a legal determination of presence or absence of federally listed species on a property.

The element occurrences data layer includes occurrences of rare species and natural communities. The map legend indicates that some element occurrences occur in the general vicinity of the label point. This may be due to lack of precision of the source data, or an element that occurs over an extended area (such as a wide ranging species or large natural community). For animals and plants, element occurrences generally refer to more than a casual sighting; they usually indicate a viable population of the species. Note that some element occurrences represent historically documented observations which may no longer be extant. Extirpated element occurrences will be marked with an 'X' following the occurrence label on the enclosed map.

Likely and Potential Rare Species

In addition to documented occurrences, other rare species and natural communities may be identified on or near the site based on habitat models and species range models (see enclosed Biodiversity Matrix Report). These species should be taken into consideration in field surveys, land management, and impact avoidance and mitigation.

Florida Resources and Environmental Analysis Center

Institute of Science and Public Affairs

The Florida State University

FNAI habitat models indicate areas, which based on land cover type, offer suitable habitat for one or more rare species that is known to occur in the vicinity. Habitat models have been developed for approximately 300 of the rarest species tracked by the Inventory, including all federally listed species.

FNAI species range models indicate areas that are within the known or predicted range of a species, based on climate variables, soils, vegetation, and/or slope. Species range models have been developed for approximately 340 species, including all federally listed species.

The FNAI Biodiversity Matrix Geodatabase compiles Documented, Likely, and Potential species and natural communities for each square mile Matrix Unit statewide.

CLIP

The enclosed map shows natural resource conservation priorities based on the Critical Lands and Waters Identification Project. CLIP is based on many of the same natural resource data developed for the Florida Forever Conservation Needs Assessment, but provides an overall picture of conservation priorities across different resource categories, including biodiversity, landscapes, surface waters, and aggregated CLIP priorities (that combine the individual resource categories). CLIP is also based primarily on remote sensed data and is not intended to be the definitive authority on natural resources on a site.

For more information on CLIP, visit http://www.fnai.org/clip.cfm .

The Inventory always recommends that professionals familiar with Florida's flora and fauna conduct a site-specific survey to determine the current presence or absence of rare, threatened, or endangered species.

Please visit www.fnai.org/trackinglist.cfm for county or statewide element occurrence distributions and links to more element information.

The database maintained by the Florida Natural Areas Inventory is the single most comprehensive source of information available on the locations of rare species and other significant ecological resources. However, the data are not always based on comprehensive or site-specific field surveys. Therefore this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. Inventory data are designed for the purposes of conservation planning and scientific research, and are not intended for use as the primary criteria for regulatory decisions.

Information provided by this database may not be published without prior written notification to the Florida Natural Areas Inventory, and the Inventory must be credited as an information source in these publications. **The maps contain sensitive environmental information, please do not distribute or publish without prior consent from FNAI.** FNAI data may not be resold for profit.

Thank you for your use of FNAI services. An invoice will be mailed separately. If I can be of further assistance, please contact me at (850) 224-8207 or at kbrinegar@fnai.fsu.edu.

Sincerely,

Kerri Brinegar

Kerri Brinegar
GIS / Data Services

Encl

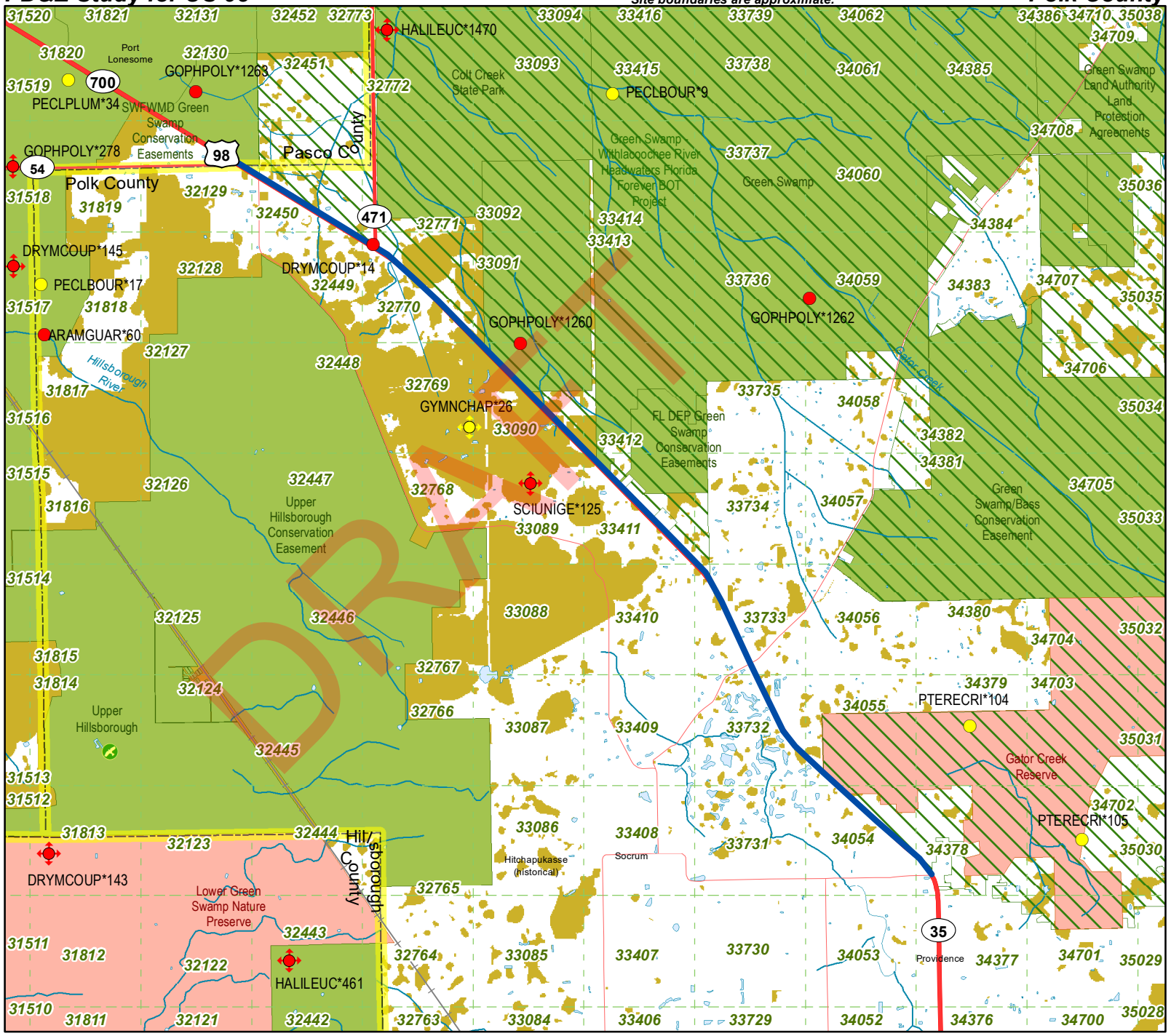
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PD&E Study for US 98

Site boundaries are approximate.

Polk County



Element Occurrences

- Animals
- Plants
- Communities
- Other
- Data Sensitive

Point Indicates General Vicinity of Element

U.S. Fish & Wildlife Service Scrub Jay Survey 1992-96

Conservation Lands

- Federal
- State
- Local
- Private
- State Aquatic Preserves

N

Land Acquisition Projects

- Florida Forever Board of Trustees Projects

- FNAI Rare Species Habitat
- FNAI Biodiversity Matrix Square Mile Units

- County Boundary
- Roads
- Water

NOTE

This map contains environmentally sensitive information. Please do not distribute or publish without prior consent from FNAI. Map should not be interpreted without accompanying documents.

Map produced by KAB
6/8/2021

PD&E Study for US 98

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FLORIDA Natural Areas INVENTORY

CLIP v4.0 Resource Priorities

Biodiversity Resource Category

- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

Landscape Resource Category

- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

Surface Water Resource Category

- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

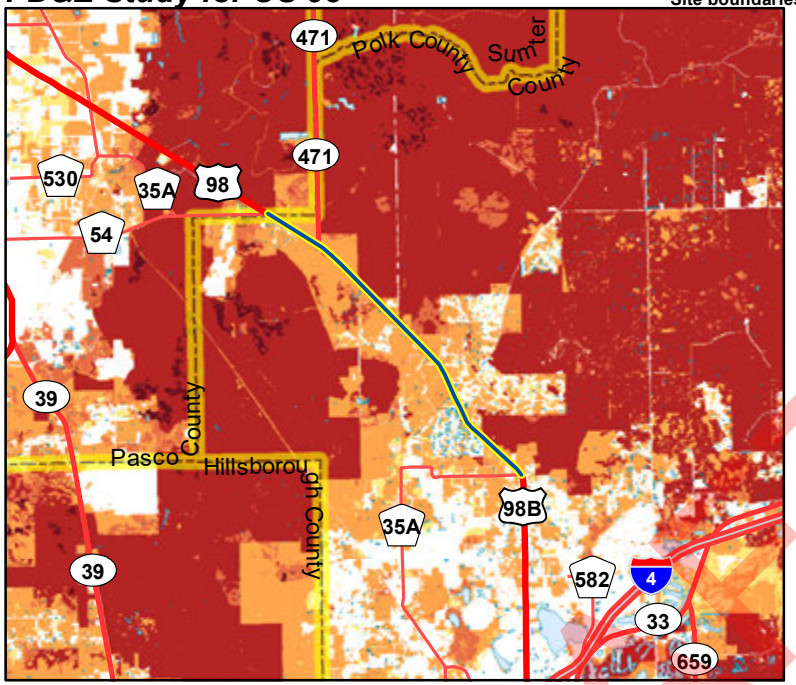
Aggregated CLIP Priorities

- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

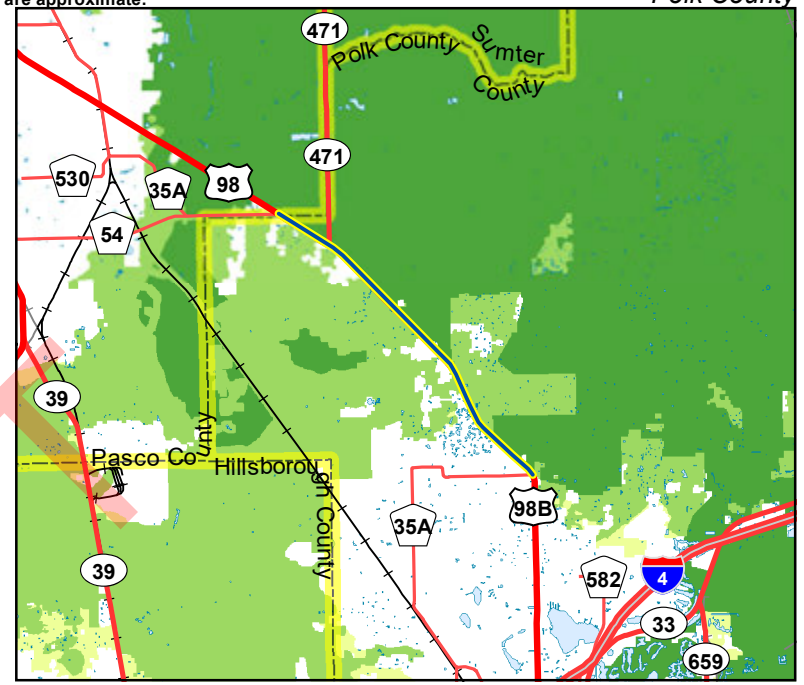
Site Boundary

Map should not be interpreted without accompanying documents.

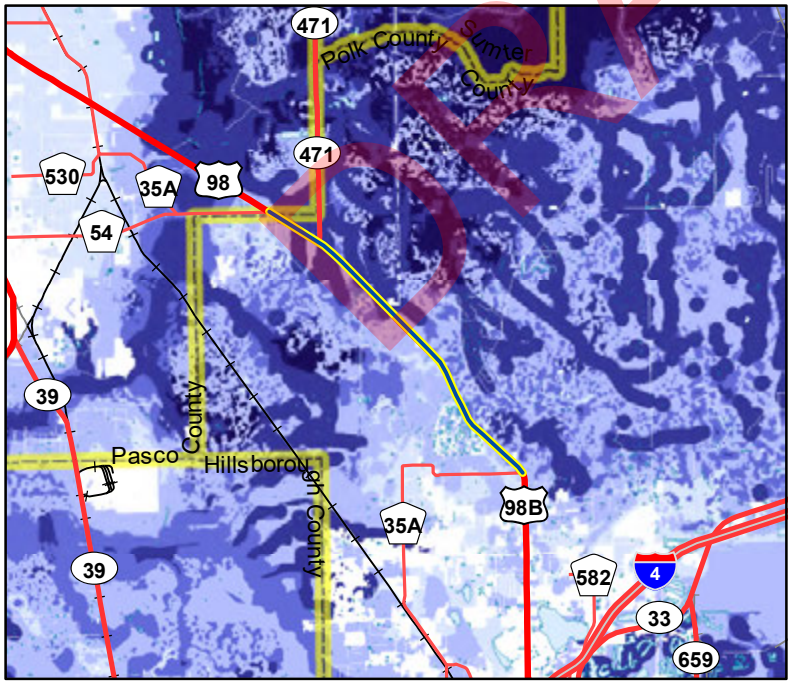
Critical Lands and Waters Identification Project (CLIP) is a cooperative effort between the FSU Florida Natural Areas Inventory, UF Center for Landscape Conservation Planning, and FL Fish & Wildlife Conservation Commission, with additional funding from FL Dept of Environmental Protection and US Fish & Wildlife Service.



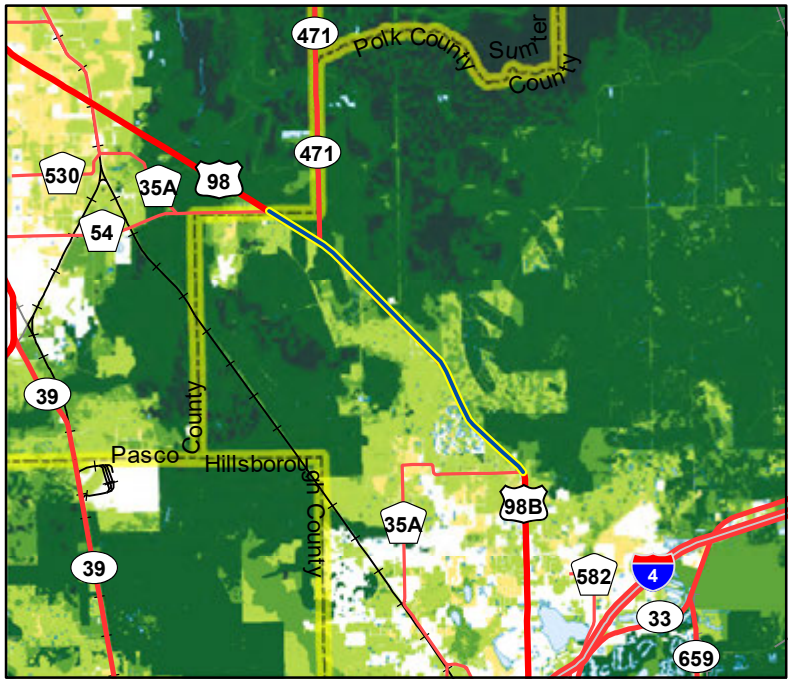
CLIP Biodiversity Resource Priorities



CLIP Landscape Resource Priorities



CLIP Surface Water Resource Priorities



CLIP Aggregated Resource Priorities

0 2.5 5 10 15 Miles

Map produced by KAB
6/8/2021

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FNAI ELEMENT OCCURRENCE REPORT on or near

PD&E Study for US 98

Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
DRYMCOUP*14	*Drymarchon couperi*	Eastern Indigo Snake	G3	S2?	T	FT	1983-12	No general description given	1983-12: SPECIMEN OBSERVED DEAD ON ROAD BY J. COX (PNDCOX02FLUS).
GOPHPOLY*1260	*Gopherus polyphemus*	Gopher Tortoise	G3	S3	C	ST	2008-07-25	2008-07: heavily disturbed mesic to wet flatwoods, with ORV use and fire exclusion (PNDHER03FLUS).	2008-07-25 and -23: 2 tortoises foraging ca. 2.5 km apart; more southern one in grassy road that passes through mesic flatwoods, more northern one feeding on Dichanthilium in fire-suppressed wet flatwoods; observations were incidental to natural community survey (PNDHER03FLUS).
GOPHPOLY*1263	*Gopherus polyphemus*	Gopher Tortoise	G3	S3	C	ST	2008-07-16	2008-07-16: actively grazed improved pasture (PNDDIA02FLUS).	2008-07-16: single burrow observed in actively grazed improved pasture (PNDDIA02FLUS).
GYMNCHAP*26	*Gymnopogon chapmanianus*	Chapman's skeletongrass	G3	S3	N	N	1987-11-02	1987-11-02: Flatwoods (Hall).	1987-11-02: Infrequent; scattered in flatwoods; specimen taken [leaves, inflor., and few roots] (Hall).
PTERECRI*104	*Pteroglossaspis ecristata*	giant orchid	G2G3	S2	N	T	2009-08-06	2009-08-06: Improved Paspalum notatum pasture with scattered Quercus virginiana, Quercus geminata, and Pinus elliotii moderately disturbed by agriculture and clearing. Site is very close to the Green Swamp. The Upland habitat has mostly been converted to Paspalum notatum pasture and cows and donkeys are on parts of the property. Wiregrass is still present in some areas and there are lots of isolated wetlands/dome swamps (F09FNA09FLUS).	2009-08-06: 27 plants in leaf with elongated flower stalks but no buds or flowers (F09FNA09FLUS).

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FNAI ELEMENT OCCURRENCE REPORT on or near

PD&E Study for West Socrum Loop

Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
PTERECRI*105	*Pteroglossaspis ecristata*	giant orchid	G2G3	S2	N	T	2009-08-06	2009-08-06: Improved Paspalum notatum pasture with scattered Pinus elliotii, Quercus geminata, Quercus virginiana, and Euthamia caroliniana with disturbances of agriculture and clearing. Site is very close to the Green Swamp. The Upland habitiat has mostly been converted to Paspalum notatum pasture and cows and donkeys are on parts of the property. Wiregrass is still present in some areas and there are lots of isolated wetlands/dome swamps (F09FNA09FLUS).	2009-08-06: 23-94 plants in flower/bud or with elongated flower stalk (F09FNA09FLUS).
SCIUNIGE*125	*Sciurus niger niger*	Southeastern Fox Squirrel	G5T5	S3	N	N	1988-07-28	Cypress Swamp; Mesic Flatwoods.	1988-07-28: B.A. Millsap, GFC, observed 1 adult male.

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Florida Natural Areas Inventory

Biodiversity Matrix Report

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Matrix Unit ID: 32129					
Likely					
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	T	FT
Mesic flatwoods		G4	S4	N	N
Mycteria americana	Wood Stork	G4	S2	T	FT
Potential					
Agrimonia incisa	incised groove-bur	G3	S2	N	T
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Asplenium x heteroresiliens	Morzenti's spleenwort	G2	S1	N	N
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Carex chapmannii	Chapman's sedge	G3	S3	N	T
Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S1	N	N
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Forestiera godfreyi	Godfrey's swampprivet	G2	S2	N	E
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	N
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Monotropsis reynoldsiae	pygmy pipes	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	N
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Podomys floridanus	Florida Mouse	G3	S3	N	N
Pycnanthemum floridanum	Florida mountain-mint	G3	S3	N	T
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N
Warea carteri	Carter's warea	G1	S1	E	E
Matrix Unit ID: 32449					
Likely					
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	T	FT
Mesic flatwoods		G4	S4	N	N
Mycteria americana	Wood Stork	G4	S2	T	FT
Potential					
Agrimonia incisa	incised groove-bur	G3	S2	N	T
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Asplenium x heteroresiliens	Morzenti's spleenwort	G2	S1	N	N
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	N
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Litsea aestivalis	pondspice	G3?	S2	N	E

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Definitions: *Documented - Rare species and natural communities documented on or near this site.*
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Florida Natural Areas Inventory

Biodiversity Matrix Report

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Monotropsis reynoldsiae	pygmy pipes	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	N
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Podomys floridanus	Florida Mouse	G3	S3	N	N
Pycnanthemum floridanum	Florida mountain-mint	G3	S3	N	T
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N

Matrix Unit ID: 32450

Likely

Mesic flatwoods		G4	S4	N	N
Mycteria americana	Wood Stork	G4	S2	T	FT

Potential

Agrimonia incisa	incised groove-bur	G3	S2	N	T
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Asplenium x heteroresiliens	Morzenti's spleenwort	G2	S1	N	N
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	T	FT
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	N
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Litsea aestivalis	pondspice	G3?	S2	N	E
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Monotropsis reynoldsiae	pygmy pipes	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	N
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Podomys floridanus	Florida Mouse	G3	S3	N	N
Pycnanthemum floridanum	Florida mountain-mint	G3	S3	N	T
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N

Matrix Unit ID: 32770

Documented-Historic

Drymarchon couperi	Eastern Indigo Snake	G3	S2?	T	FT

Likely

Mesic flatwoods		G4	S4	N	N
Mycteria americana	Wood Stork	G4	S2	T	FT

Potential

DRAFT

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Biodiversity Matrix Report

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Agrimonia incisa	incised groove-bur	G3	S2	N	T
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Asplenium x heteroresiliens	Morzenti's spleenwort	G2	S1	N	N
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	N
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Monotropsis reynoldsiae	pygmy pipes	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	N
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Podomys floridanus	Florida Mouse	G3	S3	N	N
Pycnanthemum floridanum	Florida mountain-mint	G3	S3	N	T
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N

Matrix Unit ID: 33090

Documented

Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST

Likely

Drymarchon couperi	Eastern Indigo Snake	G3	S2?	T	FT
Mesic flatwoods		G4	S4	N	N
Mycteria americana	Wood Stork	G4	S2	T	FT

Potential

Agrimonia incisa	incised groove-bur	G3	S2	N	T
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Asplenium x heteroresiliens	Morzenti's spleenwort	G2	S1	N	N
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S1	N	N
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	N
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Monotropsis reynoldsiae	pygmy pipes	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	N
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Podomys floridanus	Florida Mouse	G3	S3	N	N
Pycnanthemum floridanum	Florida mountain-mint	G3	S3	N	T
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N

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Florida Natural Areas Inventory

Biodiversity Matrix Report

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Matrix Unit ID: 33091					
Likely					
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	T	FT
Mesic flatwoods		G4	S4	N	N
Mycteria americana	Wood Stork	G4	S2	T	FT
Potential					
Agrimonia incisa	incised groove-bur	G3	S2	N	T
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Asplenium x heteroresiliens	Morzenti's spleenwort	G2	S1	N	N
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	N
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Monotropsis reynoldsiae	pygmy pipes	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	N
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Podomys floridanus	Florida Mouse	G3	S3	N	N
Pycnanthemum floridanum	Florida mountain-mint	G3	S3	N	T
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N
Matrix Unit ID: 33411					
Likely					
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	T	FT
Mycteria americana	Wood Stork	G4	S2	T	FT
Potential					
Agrimonia incisa	incised groove-bur	G3	S2	N	T
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Asplenium x heteroresiliens	Morzenti's spleenwort	G2	S1	N	N
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Bonamia grandiflora	Florida bonamia	G3	S3	T	E
Calamintha ashei	Ashe's savory	G3	S3	N	T
Carex chapmannii	Chapman's sedge	G3	S3	N	T
Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Coleataenia abscissa	cutthroatgrass	G3	S3	N	E
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S1	N	N
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Eriogonum longifolium var. gnaphalifolium	scrub buckwheat	G4T3	S3	T	E
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	N
Heterodon simus	Southern Hognose Snake	G2	S2S3	N	N

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Florida Natural Areas Inventory

Biodiversity Matrix Report

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Lechea cernua	nodding pinweed	G3	S3	N	T
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Monotropsis reynoldsiae	pygmy pipes	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	N
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N
Nolina brittoniana	Britton's beargrass	G3	S3	E	E
Paronychia chartacea var. chartacea	paper-like nailwort	G3T3	S3	T	E
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Podomys floridanus	Florida Mouse	G3	S3	N	N
Polygala lewtonii	Lewton's polygala	G2	S2	E	E
Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	T
Pycnanthemum floridanum	Florida mountain-mint	G3	S3	N	T
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Salix floridana	Florida willow	G2	S2	N	E
Sceloporus woodi	Florida Scrub Lizard	G2G3	S2S3	N	N
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N
Warea carteri	Carter's warea	G1	S1	E	E

Matrix Unit ID: 33412

Likely

Drymarchon couperi	Eastern Indigo Snake	G3	S2?	T	FT
Mesic flatwoods		G4	S4	N	N
Mycteria americana	Wood Stork	G4	S2	T	FT

Potential

Agrimonia incisa	incised groove-bur	G3	S2	N	T
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Asplenium x heteroresiliens	Morzenti's spleenwort	G2	S1	N	N
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Calamintha ashei	Ashe's savory	G3	S3	N	T
Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	N
Heterodon simus	Southern Hognose Snake	G2	S2S3	N	N
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Monotropsis reynoldsiae	pygmy pipes	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	N
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Podomys floridanus	Florida Mouse	G3	S3	N	N
Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	T
Pycnanthemum floridanum	Florida mountain-mint	G3	S3	N	T
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Sceloporus woodi	Florida Scrub Lizard	G2G3	S2S3	N	N

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Florida Natural Areas Inventory

Biodiversity Matrix Report

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N
Matrix Unit ID: 33732					
Likely					
Mesic flatwoods		G4	S4	N	N
Mycteria americana	Wood Stork	G4	S2	T	FT
Potential					
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Bonamia grandiflora	Florida bonamia	G3	S3	T	E
Calamintha ashei	Ashe's savory	G3	S3	N	T
Calopogon multiflorus	many-flowered grass-pink	G2G3	S2S3	N	T
Carex chapmannii	Chapman's sedge	G3	S3	N	T
Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Chionanthus pygmaeus	pygmy fringe tree	G2	S2S3	E	E
Coleataenia abscissa	cutthroatgrass	G3	S3	N	E
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	T	FT
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Eriogonum longifolium var. gnaphalifolium	scrub buckwheat	G4T3	S3	T	E
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	N
Hartwrightia floridana	hartwrightia	G2	S2	N	T
Heterodon simus	Southern Hognose Snake	G2	S2S3	N	N
Lechea cernua	nodding pinweed	G3	S3	N	T
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Monotropsis reynoldsiae	pygmy pipes	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	N
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N
Nolina atopocarpa	Florida beargrass	G3	S3	N	T
Nolina brittoniana	Britton's beargrass	G3	S3	E	E
Paronychia chartacea var. chartacea	paper-like nailwort	G3T3	S3	T	E
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Plestiodon egregius lividus	Blue-tailed Mole Skink	G5T2	S2	T	FT
Podomys floridanus	Florida Mouse	G3	S3	N	N
Polygala lewtonii	Lewton's polygala	G2	S2	E	E
Polygonella basiramia	Florida jointweed	G3	S3	E	E
Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	T
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Salix floridana	Florida willow	G2	S2	N	E
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N
Warea carteri	Carter's warea	G1	S1	E	E
Matrix Unit ID: 33733					
Likely					
Mesic flatwoods		G4	S4	N	N

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Mycteria americana	Wood Stork	G4	S2	T	FT
Potential					
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Bonamia grandiflora	Florida bonamia	G3	S3	T	E
Calamintha ashei	Ashe's savory	G3	S3	N	T
Carex chapmannii	Chapman's sedge	G3	S3	N	T
Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Coleataenia abscissa	cutthroatgrass	G3	S3	N	E
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	T	FT
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Eriogonum longifolium var. gnaphalifolium	scrub buckwheat	G4T3	S3	T	E
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	N
Hartwrightia floridana	hartwrightia	G2	S2	N	T
Heterodon simus	Southern Hognose Snake	G2	S2S3	N	N
Lechea cernua	nodding pinweed	G3	S3	N	T
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Monotropsis reynoldsiae	pygmy pipes	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	N
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N
Nolina brittoniana	Britton's beargrass	G3	S3	E	E
Paronychia chartacea var. chartacea	paper-like nailwort	G3T3	S3	T	E
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Plestiodon egregius lividus	Blue-tailed Mole Skink	G5T2	S2	T	FT
Podomys floridanus	Florida Mouse	G3	S3	N	N
Polygala lewtonii	Lewton's polygala	G2	S2	E	E
Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	T
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Salix floridana	Florida willow	G2	S2	N	E
Sceloporus woodi	Florida Scrub Lizard	G2G3	S2S3	N	N
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N
Warea carteri	Carter's warea	G1	S1	E	E
Matrix Unit ID: 33734					
Likely					
Mesic flatwoods		G4	S4	N	N
Mycteria americana	Wood Stork	G4	S2	T	FT
Potential					
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Asplenium x heteroresiliens	Morzenti's spleenwort	G2	S1	N	N
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Bonamia grandiflora	Florida bonamia	G3	S3	T	E
Calamintha ashei	Ashe's savory	G3	S3	N	T
Carex chapmannii	Chapman's sedge	G3	S3	N	T

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Florida Natural Areas Inventory

Biodiversity Matrix Report

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Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Coleataenia abscissa	cutthroatgrass	G3	S3	N	E
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	T	FT
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Eriogonum longifolium var. gnaphalifolium	scrub buckwheat	G4T3	S3	T	E
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	N
Hartwrightia floridana	hartwrightia	G2	S2	N	T
Heterodon simus	Southern Hognose Snake	G2	S2S3	N	N
Lechea cernua	nodding pinweed	G3	S3	N	T
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Monotropsis reynoldsiae	pygmy pipes	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	N
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N
Nolina brittoniana	Britton's beargrass	G3	S3	E	E
Paronychia chartacea var. chartacea	paper-like nailwort	G3T3	S3	T	E
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Plestiodon egregius lividus	Blue-tailed Mole Skink	G5T2	S2	T	FT
Podomys floridanus	Florida Mouse	G3	S3	N	N
Polygala lewtonii	Lewton's polygala	G2	S2	E	E
Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	T
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Salix floridana	Florida willow	G2	S2	N	E
Sceloporus woodi	Florida Scrub Lizard	G2G3	S2S3	N	N
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N
Warea carteri	Carter's warea	G1	S1	E	E

Matrix Unit ID: 34054

Likely

Mesic flatwoods		G4	S4	N	N
Mycteria americana	Wood Stork	G4	S2	T	FT

Potential

Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Bonamia grandiflora	Florida bonamia	G3	S3	T	E
Calamintha ashei	Ashe's savory	G3	S3	N	T
Calopogon multiflorus	many-flowered grass-pink	G2G3	S2S3	N	T
Carex chapmannii	Chapman's sedge	G3	S3	N	T
Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Chionanthus pygmaeus	pygmy fringe tree	G2	S2S3	E	E
Coleataenia abscissa	cutthroatgrass	G3	S3	N	E
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	T	FT
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Eriogonum longifolium var. gnaphalifolium	scrub buckwheat	G4T3	S3	T	E
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	N

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Florida Natural Areas Inventory

Biodiversity Matrix Report

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Hartwrightia floridana	hartwrightia	G2	S2	N	T
Heterodon simus	Southern Hognose Snake	G2	S2S3	N	N
Lechea cernua	nodding pinweed	G3	S3	N	T
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	N
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N
Nolina atopocarpa	Florida beargrass	G3	S3	N	T
Nolina brittoniana	Britton's beargrass	G3	S3	E	E
Paronychia chartacea var. chartacea	paper-like nailwort	G3T3	S3	T	E
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Plestiodon egregius lividus	Blue-tailed Mole Skink	G5T2	S2	T	FT
Podomys floridanus	Florida Mouse	G3	S3	N	N
Polygala lewtonii	Lewton's polygala	G2	S2	E	E
Polygonella basiramia	Florida jointweed	G3	S3	E	E
Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	T
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Salix floridana	Florida willow	G2	S2	N	E
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N
Warea carteri	Carter's warea	G1	S1	E	E

Matrix Unit ID: 34055

Likely

Mesic flatwoods		G4	S4	N	N
Mycteria americana	Wood Stork	G4	S2	T	FT

Potential

Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Bonamia grandiflora	Florida bonamia	G3	S3	T	E
Calamintha ashei	Ashe's savory	G3	S3	N	T
Calopogon multiflorus	many-flowered grass-pink	G2G3	S2S3	N	T
Carex chapmannii	Chapman's sedge	G3	S3	N	T
Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Chionanthus pygmaeus	pygmy fringe tree	G2	S2S3	E	E
Coleataenia abscissa	cutthroatgrass	G3	S3	N	E
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	T	FT
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Eriogonum longifolium var. gnaphalifolium	scrub buckwheat	G4T3	S3	T	E
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	N
Hartwrightia floridana	hartwrightia	G2	S2	N	T
Heterodon simus	Southern Hognose Snake	G2	S2S3	N	N
Lechea cernua	nodding pinweed	G3	S3	N	T
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	N
Nemastylis floridana	celestial lily	G2	S2	N	E

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Florida Natural Areas Inventory

Biodiversity Matrix Report

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Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N
Nolina atopocarpa	Florida beargrass	G3	S3	N	T
Nolina brittoniana	Britton's beargrass	G3	S3	E	E
Paronychia chartacea var. chartacea	paper-like nailwort	G3T3	S3	T	E
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Plestiodon egregius lividus	Blue-tailed Mole Skink	G5T2	S2	T	FT
Podomys floridanus	Florida Mouse	G3	S3	N	N
Polygala lewtonii	Lewton's polygala	G2	S2	E	E
Polygonella basiramia	Florida jointweed	G3	S3	E	E
Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	T
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Salix floridana	Florida willow	G2	S2	N	E
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N
Warea carteri	Carter's warea	G1	S1	E	E

Matrix Unit ID: 34378

Documented

Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	T

Likely

Mycteria americana	Wood Stork	G4	S2	T	FT

Potential

Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Bonamia grandiflora	Florida bonamia	G3	S3	T	E
Calamintha ashei	Ashe's savory	G3	S3	N	T
Calopogon multiflorus	many-flowered grass-pink	G2G3	S2S3	N	T
Carex chapmannii	Chapman's sedge	G3	S3	N	T
Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Chionanthus pygmaeus	pygmy fringe tree	G2	S2S3	E	E
Coleataenia abscissa	cutthroatgrass	G3	S3	N	E
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S1	N	N
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	T	FT
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Eriogonum longifolium var. gnaphalifolium	scrub buckwheat	G4T3	S3	T	E
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	N
Hartwrightia floridana	hartwrightia	G2	S2	N	T
Heterodon simus	Southern Hognose Snake	G2	S2S3	N	N
Lechea cernua	nodding pinweed	G3	S3	N	T
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	N
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N
Nolina atopocarpa	Florida beargrass	G3	S3	N	T
Nolina brittoniana	Britton's beargrass	G3	S3	E	E
Paronychia chartacea var. chartacea	paper-like nailwort	G3T3	S3	T	E

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Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Plestiodon egregius lividus	Blue-tailed Mole Skink	G5T2	S2	T	FT
Podomys floridanus	Florida Mouse	G3	S3	N	N
Polygala lewtonii	Lewton's polygala	G2	S2	E	E
Polygonella basiramia	Florida jointweed	G3	S3	E	E
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Salix floridana	Florida willow	G2	S2	N	E
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N
Warea carteri	Carter's warea	G1	S1	E	E

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Elements and Element Occurrences

An **element** is any exemplary or rare component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature.

An **element occurrence (EO)** is an area of land and/or water in which a species or natural community is, or was, present. An EO should have practical conservation value for the Element as evidenced by potential continued (or historical) presence and/or regular recurrence at a given location.

Element Ranking and Legal Status

Using a ranking system developed by NatureServe and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks for each element. The global rank is based on an element's worldwide status; the state rank is based on the status of the element in Florida. Element ranks are based on many factors, the most important ones being estimated number of Element Occurrences (EOs), estimated abundance (number of individuals for species; area for natural communities), geographic range, estimated number of adequately protected EOs, relative threat of destruction, and ecological fragility.

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FNAI GLOBAL ELEMENT RANK

G1 = Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
G2 = Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
G3 = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
G4 = Apparently secure globally (may be rare in parts of range).
G5 = Demonstrably secure globally.
GH = Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker).
GX = Believed to be extinct throughout range.
GXC = Extirpated from the wild but still known from captivity or cultivation.
G#? = Tentative rank (e.g., G2?).
G#G# = Range of rank; insufficient data to assign specific global rank (e.g., G2G3).
G#T# = Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1).
G#Q = Rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q).
G#T#Q = Same as above, but validity as subspecies or variety is questioned.
GU = Unrankable; due to a lack of information no rank or range can be assigned (e.g., GUT2).
GNA = Ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
GNR = Element not yet ranked (temporary).
GNRTNR = Neither the element nor the taxonomic subgroup has yet been ranked.

FNAI STATE ELEMENT RANK

S1 = Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
S2 = Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
S3 = Either very rare and local in Florida (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
S4 = Apparently secure in Florida (may be rare in parts of range).
S5 = Demonstrably secure in Florida.
SH = Of historical occurrence in Florida, possibly extirpated, but may be rediscovered (e.g., ivory-billed woodpecker).
SX = Believed to be extirpated throughout Florida.
SU = Unrankable; due to a lack of information no rank or range can be assigned.
SNA = State ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
SNR = Element not yet ranked (temporary).

FEDERAL LEGAL STATUS

Legal status information provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant federal agency.

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

C = Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.
E = Endangered: species in danger of extinction throughout all or a significant portion of its range.
E, T = Species currently listed endangered in a portion of its range but only listed as threatened in other areas
E, PDL = Species currently listed endangered but has been proposed for delisting.
E, PT = Species currently listed endangered but has been proposed for listing as threatened.
E, XN = Species currently listed endangered but tracked population is a non-essential experimental population.
T = Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.
PE = Species proposed for listing as endangered
PS = Partial status: some but not all of the species' infraspecific taxa have federal
PT = Species proposed for listing as threatened
SAT = Treated as threatened due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.
SC = Not currently listed, but considered a "species of concern" to USFWS.

STATE LEGAL STATUS

Provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant state agency.

Animals: Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

C = Candidate for listing at the Federal level by the U. S. Fish and Wildlife Service
FE = Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service
FT = Listed as Threatened Species at the Federal level by the U. S. Fish and Wildlife Service
FXN = Federal listed as an experimental population in Florida
FT(S/A) = Federal Threatened due to similarity of appearance
ST = State population listed as Threatened by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.
SSC = Listed as Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. (SSC* for Pandion haliaetus (Osprey) indicates that this status applies in Monroe county only.)
N = Not currently listed, nor currently being considered for listing.

Plants: Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 5B-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505 or see: http://www.doacs.state.fl.us/pi/.

E = Endangered: species of plants native to Florida that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue; includes all species determined to be endangered or threatened pursuant to the U.S. Endangered Species Act.
T = Threatened: species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in number as to cause them to be Endangered.
N = Not currently listed, nor currently being considered for listing.

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Element Occurrence Ranking

FNAI ranks of quality of the element occurrence in terms of its viability (EORANK). Viability is estimated using a combination of factors that contribute to continued survival of the element at the location. Among these are the size of the EO, general condition of the EO at the site, and the conditions of the landscape surrounding the EO (e.g. an immediate threat to an EO by local development pressure could lower an EO rank).

A = Excellent estimated viability
A? = Possibly excellent estimated viability
AB = Excellent or good estimated viability
AC = Excellent, good, or fair estimated viability
B = Good estimated viability
B? = Possibly good estimated viability
BC = Good or fair estimated viability
BD = Good, fair, or poor estimated viability
C = Fair estimated viability
C? = Possibly fair estimated viability
CD = Fair or poor estimated viability
D = Poor estimated viability
D? = Possibly poor estimated viability
E = Verified extant (viability not assessed)
F = Failed to find
H = Historical
NR = Not ranked, a placeholder when an EO is not (yet) ranked.
U = Unrankable
X = Extirpated

*For additional detail on the above ranks see: http://www.natureserve.org/explorer/eorankguide.htm

FNAI also uses the following EO ranks:

H? = Possibly historical
F? = Possibly failed to find
X? = Possibly extirpated

The following offers further explanation of the H and X ranks as they are used by FNAI:

The rank of H is used when there is a lack of recent field information verifying the continued existence of an EO, such as (a) when an EO is based only on historical collections data; or (b) when an EO was ranked A, B, C, D, or E at one time and is later, without field survey work, considered to be possibly extirpated due to general habitat loss or degradation of the environment in the area. This definition of the H rank is dependent on an interpretation of what constitutes "recent" field information. Generally, if there is no known survey of an EO within the last 20 to 40 years, it should be assigned an H rank. While these time frames represent suggested maximum limits, the actual time period for historical EOs may vary according to the biology of the element and the specific landscape context of each occurrence (including anthropogenic alteration of the environment). Thus, an H rank may be assigned to an EO before the maximum time frames have lapsed. Occurrences that have not been surveyed for periods exceeding these time frames should not be ranked A, B, C, or D. The higher maximum limit for plants and communities (i.e., ranging from 20 to 40 years) is based upon the assumption that occurrences of these elements generally have the potential to persist at a given location for longer periods of time. This greater potential is a reflection of plant biology and community dynamics. However, landscape factors must also be considered. Thus, areas with more anthropogenic impacts on the environment (e.g., development) will be at the lower end of the range, and less-impacted areas will be at the higher end.

The rank of X is assigned to EOs for which there is documented destruction of habitat or environment, or persuasive evidence of eradication based on adequate survey (i.e., thorough or repeated survey efforts by one or more experienced observers at times and under conditions appropriate for the Element at that location).

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APPENDIX C

Standard Protection Measures for the Eastern Indigo Snake

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STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE
U.S. Fish and Wildlife Service
August 12, 2013

The eastern indigo snake protection/education plan (Plan) below has been developed by the U.S. Fish and Wildlife Service (USFWS) in Florida for use by applicants and their construction personnel. At least **30 days prior** to any clearing/land alteration activities, the applicant shall notify the appropriate USFWS Field Office via e-mail that the Plan will be implemented as described below (North Florida Field Office: jaxregs@fws.gov; South Florida Field Office: verobeach@fws.gov; Panama City Field Office: panamacity@fws.gov). As long as the signatory of the e-mail certifies compliance with the below Plan (including use of the attached poster and brochure), no further written confirmation or "approval" from the USFWS is needed and the applicant may move forward with the project.

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

The Plan materials should consist of: 1) a combination of posters and pamphlets (see **Poster Information** section below); and 2) verbal educational instructions to construction personnel by supervisory or management personnel before any clearing/land alteration activities are initiated (see **Pre-Construction Activities** and **During Construction Activities** sections below).

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POSTER INFORMATION

Posters with the following information shall be placed at strategic locations on the construction site and along any proposed access roads (a final poster for Plan compliance, to be printed on 11" x 17" or larger paper and laminated, is attached):

DESCRIPTION: The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

SIMILAR SNAKES: The black racer is the only other solid black snake resembling the eastern indigo snake. However, black racers have a white or cream chin, thinner bodies, and WILL BITE if handled.

LIFE HISTORY: The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands

and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and above-ground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.

PROTECTION UNDER FEDERAL AND STATE LAW: The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. "Taking" of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. "Take" is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of $25,000 for civil violations and up to $50,000 and/or imprisonment for criminal offenses, if convicted.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

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

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

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

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

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

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

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PRE-CONSTRUCTION ACTIVITIES

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

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

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

DURING CONSTRUCTION ACTIVITIES

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

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

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

POST CONSTRUCTION ACTIVITIES

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

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Photo: Dirk Stevenson

ATTENTION:

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

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

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

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

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

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

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

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

DESCRIPTION: The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

SIMILAR SNAKES: The black racer is the only other solid black snake resembling the eastern indigo snake. However, black racers have a white or cream chin, thinner bodies, and WILL BITE if handled.

LIFE HISTORY: The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and above-ground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.

PROTECTION: The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. "Taking" of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. "Take" is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of $25,000 for civil violations and up to $50,000 and/or imprisonment for criminal offenses, if convicted.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

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- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant's designated agent, **and** the appropriate U.S. Fish and Wildlife Service (USFWS) office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

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- Take photographs of the snake, if possible, for identification and documentation purposes.
- Thoroughly soak the dead snake in water and then freeze the specimen. The appropriate wildlife agency will retrieve the dead snake.

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

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

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DESCRIPTION: The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

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

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

LEGAL STATUS: The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. "Taking" of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. "Take" is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of $25,000 for civil violations and up to $50,000 and/or imprisonment for criminal offenses, if convicted.

DRAFT

August 12, 2013

ATTENTION:

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



Photo: Dirk Stevenson

Please read the following information provided by the U.S. Fish and Wildlife Service to become familiar with standard protection measures for the eastern indigo snake.

APPENDIX D

USFWS Effect Determination Keys

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United States Department of the Interior

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

August 1, 2017

Donnie Kinard
U.S. Army Corps of Engineers
Post Office Box 4970
Jacksonville, Florida 32232-0019

Subject: Consultation Key for the Eastern Indigo Snake – Revised

Dear Mr. Kinard:

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This letter revises and replaces the January 25, 2010, and August 13, 2013, letters to the U.S. Army Corps of Engineers (Corps) regarding the use of the eastern indigo snake programmatic effect determination key (Key) for projects occurring within the South Florida Ecological Service's Office (SFESO) jurisdiction. This revision supersedes all prior versions of the Key in the SFESO area. The purpose of this revision is to clarify portions of the previous keys based on questions we have been asked, specifically related to habitat and refugia used by eastern indigo snakes (*Drymarchon corais couperi*), in the southern portion of their range and within the jurisdiction of the SFESO. This Key is provided pursuant to the Service's authorities under the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C.1531 *et seq.*). This Key revision has been assigned Service Consultation Code: 41420-2009-I-0467-R001.

The purpose of this Key is to assist the Corps (or other Federal action agency) in making appropriate effects determinations for the eastern indigo snake under section 7 of the Act, and streamline informal consultation with the SFESO for the eastern indigo snake when the proposed action can be walked through the Key. The Key is a tool available to the Corps (or other Federal action agency) for the purposes of expediting section 7 consultations. There is no requirement to use the Key. There will be cases when the use of the Key is not appropriate. These include, but are not limited to: where project specific information is outside of the scope of the Key or instances where there is new biological information about the species. In these cases, we recommend the Corps (or other Federal action agency) initiates traditional consultation pursuant to section 7 of the Act, and identify that consultation is being requested outside of the Key.

This Key uses project size and home ranges of eastern indigo snakes as the basis for making determinations of "may affect, but is not likely to adversely affect" (NLAA) and "may affect. and is likely to adversely affect" (may affect). Suitable habitat for the eastern indigo snake consists of a mosaic of habitats types, most of which occur throughout South Florida. Information on home ranges for individuals is not available in specific habitats in South Florida. Therefore, the SFESO uses the information from a 26-year study conducted by Layne and Steiner (1996) at Archbold Biological Station, Lake Placid, Florida, as the best available

information. Layne and Steiner (1996) determined the average home range size for a female eastern indigo snake was 46 acres and 184 acres for a male.

Projects that would remove/destroy less than 25 acres of eastern indigo snake habitat are expected to result in the loss of a portion of an eastern indigo snakes home range that would not impair the ability of the individual to feed, breed, and shelter. Therefore, the Service finds that take would not be reasonably certain to occur due to habitat loss. However, these projects have the potential to injure or kill an eastern indigo snake if the individual is crushed by equipment during site preparation or other project aspects. The Service's *Standard Protection Measures for the Eastern Indigo Snake* (Service 2013 or most current version) and the excavation of underground refugia (where a snake could be buried, trapped and/or injured), when implemented, are designed to avoid these forms of take. Consequently, projects less than 25 acres that include the Service's *Standard Protection Measures for the Eastern Indigo Snake* (Service 2013 or most current version) and a commitment to excavate underground refugia as part of the proposed action would be expected to avoid take and thus, may affect, but are not likely to adversely affect the species.

If a proposed project would impact less than 25 acres of vegetated eastern indigo snake habitat (not urban/ human-altered) completely surrounded by urban development, and an eastern indigo snake has been observed on site, the Key should not be used. The Service recommends formal consultation for this situation because of the expected increased value of the vegetated habitat within the individual's home range.

Projects that would remove 25 acres or more of eastern indigo snake habitat could remove more than half of a female eastern indigo snakes home range. This loss of habitat within a home range would be expected to significantly impair the ability of that individual to feed, breed, and shelter. Therefore, the Service finds take through habitat loss would be reasonably certain to occur and formal consultation is appropriate. Furthermore, these projects have the potential to injure or kill an eastern indigo snake if the individual is crushed by equipment during site preparation or other project aspects. The Service's *Standard Protection Measures* for the *Eastern Indigo Snake* (Service 2013 or most current version) and the excavation of underground refugia (where a snake could be buried, trapped and/or injured), when implemented, are designed to avoid these forms of take.

Eastern indigo snakes use a variety of habitat and are difficult to detect. Therefore, site specific information on the land use, observations of eastern indigo snakes within the vicinity, as well as other factors, as appropriate, will all be considered by the Service when making a final recommendation on the appropriate effects determination and whether it is appropriate to conclude consultation with the Corps (or other Federal action agency) formally or informally for projects that will impact 25 acres or more of habitat. Accordingly, when the use of the Key results in a determination of "may affect," the Corps (or other Federal action agency) is advised that consultation may be concluded informally or formally, depending on the project specific effects to eastern indigo snakes. Technical assistance from the Service can assist you in making a determination prior to submitting a request for consultation. In circumstances where the Corps (or other Federal action agency) desires to proceed with a consultation request prior to receiving

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additional technical assistance from the Service, we recommend the agency documents the biological rationale for their determination and proceed with a request accordingly.

If the use of the Key results in a determination of "no effect," no further consultation is necessary with the SFESO. If the use of the Key results in a determination of "NLAA," the SFESO concurs with this determination based on the rationale provide above, and no further consultation is necessary for the effects of the proposed action on the eastern indigo snake. For "no effect" or "NLAA" determinations, the Service recommends that the Corps (or other Federal action agency) documents the pathway used to reach your no effect or NLAA determination in the project record and proceed with other species analysis as warranted.

Eastern Indigo Snake Programmatic Effect Determination Key
Revised July 2017
South Florida Ecological Service Office

DRAFT

Scope of the Key

This Key should be used only in the review of permit applications for effects determinations for the eastern indigo snake (*Drymarchon corais couperi*) within the South Florida Ecological Service's Office (SFESO) area (Broward, Charlotte, Collier, De Soto, Glades, Hardee, Hendry, Highlands, Lee, Indian River, Martin, Miami-Dade, Monroe, Okeechobee, Osceola, Palm Beach, Polk, Sarasota, and St. Lucie Counties). There is no designated critical habitat for the eastern indigo snake.

This Key is subject to revision as the Corps (or other Federal action agency) and Service deem necessary and in particular whenever there is new information on eastern indigo snake biology and effects of proposed projects.

The Key is a tool available to the Corps (or other Federal action agency) for the purposes of expediting section 7 consultations. There is no requirement to use the Key. There will be cases when the use of the Key is not appropriate. These include, but are not limited to: where project specific information is outside of the scope of the Key or instances where there is new biological information about the species. In these cases, we recommend the Corps (or other Federal action agency) initiates traditional consultation pursuant to section 7 of the Act, and identify that consultation is being requested outside of the Key.

Habitat

Habitat use varies seasonally between upland and wetland areas, especially in the more northern parts of the species' range. In southern parts of their range eastern indigo snakes are habitat generalists which use most available habitat types. Movements between habitat types in northern areas of their range may relate to the need for thermal refugia (protection from cold and/or heat).

In northern areas of their range eastern indigo snakes prefer an interspersion of tortoise-inhabited sandhills and wetlands (Landers and Speake 1980). In these northern regions eastern indigo

snakes most often use forested areas rich with gopher tortoise burrows, hollowed root channels, hollow logs, or the burrows of rodents, armadillos, or land crabs as thermal refugia during cooler seasons (Lawler 1977; Moler 1985a; Layne and Steiner 1996). The eastern indigo snake in the northern region is typically classified as a longleaf pine savanna specialist because here, in the northern four-fifths of its range, the eastern indigo snake is typically only found in vicinity of xeric longleaf pine–turkey oak sandhills inhabited by the gopher tortoise (Means 2006).

In the milder climates of central and southern Florida, comprising the remaining one fifth of its range, thermal refugia such as those provided by gopher tortoise burrows may not be as critical to survival of indigo snakes. Consequently, eastern indigo snakes in these regions use a more diverse assemblage of habitats such as pine flatwoods, scrubby flatwoods, floodplain edges, sand ridges, dry glades, tropical hammocks, edges of freshwater marshes, muckland fields, coastal dunes, and xeric sandhill communities; with highest population concentrations of eastern indigo snakes occurring in the sandhill and pineland regions of northern and central Florida (Service 1999). Eastern indigo snakes have also been found on agricultural lands with close proximity to wetlands (Zeigler 2006).

In south Florida, agricultural sites (*e.g.*, sugar cane fields and citrus groves) are occupied by eastern indigo snakes. The use of sugarcane fields by eastern indigo snakes was first documented by Layne and Steiner in 1996. In these areas there is typically an abundance of wetland and upland ecotones (due to the presence of many ditches and canals), which support a diverse prey base for foraging. In fact, some speculate agricultural areas may actually have a higher density of eastern indigo snakes than natural communities due to the increased availability of prey. Gopher tortoise burrows are absent at these locations but there is an abundance of both natural and artificial refugia. Enge and Endries (2009) reporting on the status of the eastern indigo snake included sugarcane fields and citrus groves in a Global Information Systems (GIS)-base map of potential eastern indigo snake habitat. Numerous sightings of eastern indigo snakes within sugarcane fields have been reported within south Florida (Florida Fish and Wildlife Conservation Commission Indigo Snake Database [Enge 2017]). A recent study associated with the Comprehensive Everglades Restoration Plan (CERP) (A-1 FEB Project formerly A-1 Reservoir; Service code: 41420-2006-F-0477) documented eastern indigo snakes within sugarcane fields. The snakes used artificial habitats such as piles of limerock, construction debris, and pump stations. Recent studies also associated with the CERP at the C-44 Project (Service code: 41420-2009-FA-0314), and C-43 Project (Service code: 41420-2007-F-0589) documented eastern indigo snakes within citrus groves. The snakes used artificial habitats such as boards, sheets of tin, construction debris, pipes, drain pipes in abandoned buildings and septic tanks.

In extreme south Florida (*i.e.*, the Everglades and Florida Keys), eastern indigo snakes also utilize tropical hardwood hammocks, pine rocklands, freshwater marshes, abandoned agricultural land, coastal prairie, mangrove swamps, and human-altered habitats. Though eastern indigo snakes have been found in all available habitats of south Florida it is thought they prefer hammocks and pine forests since most observations occur there and use of these areas is disproportionate compared to the relatively small total area of these habitats (Steiner *et al.* 1983).

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Even though thermal stress may not be a limiting factor throughout the year in south Florida, eastern indigo snakes still seek and use underground refugia. On the sandy central ridge of central Florida, eastern indigo snakes 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 (Layne and Steiner 1996; Wilson and Porras 1983). 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.

Minimization Measures

The Service developed protection measures for the eastern indigo snake "Standard Protection Measures for the Eastern Indigo Snake" (Service 2013) located at: https://www.fws.gov/verobeach/ReptilesPDFs/20130812_EIS%20Standard%20Protection%20Measures_final.pdf . These protections measures (or the most updated version) are considered a minimization measure for projects proposed within eastern indigo snake habitat.

Determinations

If the use of this Key results in a determination of "**no effect**," no further consultation is necessary with the SFESO.

If the use of this Key results in a determination of "**NLAA**," the SFESO concurs with this determination and no further consultation is necessary for the effects of the proposed action on the eastern indigo snake.

For no effect or NLAA determinations, the Corps (or other Federal action agency) should make a note in the project file indicating the pathway used to reach your no effect or NLAA determination.

If a proposed project would impact less than 25 acres of vegetated eastern indigo snake habitat (not urban/ human-altered) completely surrounded by urban development, and an eastern indigo snake has been observed on site, the subsequent Key should not be used. The Service recommends formal consultation for this situation because of the expected increased value of the vegetated habitat within the individual's home range.

If the use of this Key results in a determination of "**may affect**," consultation may be concluded informally or formally depending on project effects to eastern indigo snakes. Technical assistance from the Service can assist you in making a determination prior to submitting a request for consultation. In circumstances where the Corps desires to proceed with a consultation request prior to receiving additional technical assistance from the Service, we recommend the Corps document the biological rationale for their determination and proceed with a request accordingly.

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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 most current guidance for Standard Protection Measures For The Eastern Indigo Snake (currently 2013) 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.....**may affect**

C. The project will impact less than 25 acres of eastern indigo snake habitat (*e.g.*, sandhill, scrub, pine flatwoods, pine rocklands, scrubby flatwoods, high pine, dry prairie, coastal prairie, mangrove swamps, tropical hardwood hammocks, hydric hammocks, edges of freshwater marshes, agricultural fields [including sugar cane fields and active, inactive, or abandoned citrus groves], and coastal dunes).....go to D

The project will impact 25 acres or more of eastern indigo snake habitat (*e.g.*, sandhill, scrub, pine flatwoods, pine rocklands, scrubby flatwoods, high pine, dry prairie, coastal prairie, mangrove swamps, tropical hardwood hammocks, hydric hammocks, edges of freshwater marshes, agricultural fields [including sugar cane fields and active, inactive, or abandoned citrus groves], and coastal dunes).....**may affect**

D. The project has no known holes, cavities, active or inactive gopher tortoise burrows, or other underground refugia where a snake could be buried, trapped and/or injured during project activities.....**NLAA**

The project has known holes, cavities, active or inactive gopher tortoise burrows, or other underground refugia where a snake could be buried, trapped and /or injured.....go to E

E. Any permit will be conditioned such that all gopher tortoise burrows, active or inactive, will be excavated prior to site manipulation in the vicinity of the burrow[1]. If an eastern 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 eastern indigo snake, no work will commence until the snake has vacated the vicinity of proposed work.....**NLAA**[2]

Permit will not be conditioned as outlined above.....**may affect**

End Key

[1] If excavating potentially occupied burrows, active or inactive, individuals must first obtain state authorization via a Florida Fish and Wildlife Conservation Commission 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.

[2] Please note, if the proposed project will impact less than 25 acres of vegetated eastern indigo snake habitat (not urban/ human-altered) completely surrounded by urban development, and an eastern indigo snake has been observed on site, NLAA is not the appropriate conclusion. The Service recommends formal consultation for this situation because of the expected increased value of the vegetated habitat within the individual's home range

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Working with the Fish and Wildlife Foundation of Florida, the Service has established a fund to support conservation and recovery for the eastern indigo snake. Any project that has the potential to affect the eastern indigo snake and/or its habitat is encouraged to make a voluntary contribution to this fund. If you would like additional information about how to make a contribution and how these monies are used to support eastern indigo snake recovery please contact Ashleigh Blackford, Connie Cassler, or José Rivera at 772-562-3559.

This revised Key is effective immediately upon receipt by the Corps. Should circumstances change or new information become available regarding the eastern indigo snake and/or implementation of the Key, the determinations herein may be reconsidered and this Key further revised or amended.

Thank you for your continued cooperation in the effort to conserve fish and wildlife resources. If you have any questions or comments regarding this Key, please contact the SFESO at 772-562-3909.

Sincerely,

Roxanna Hinzman
Field Supervisor
South Florida Ecological Services

Cc:
Corps, Jacksonville, Florida (Dale Beter, Muriel Blaisdell, Ingrid Gilbert, Angela Ryan, Irene Sadowski, Victoria White, Alisa Zarbo)
Service, Athens, Georgia (Michelle Elmore)
Service, Jacksonville, Florida (Annie Dziergowski)
Service, Panama City, Florida (Sean Blomquist)

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United States Department of the Interior

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

May 18, 2010

Donnie Kinard
Chief, Regulatory Division
Jacksonville District Corps of Engineers
Post Office Box 4970
Jacksonville, Florida 32232-0019

Service Federal Activity Code: 41420-2007-FA-1494
Service Consultation Code: 41420-2007-I-0964
Subject: South Florida Programmatic Concurrence
Species: Wood Stork

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Dear Mr. Kinard:

This letter addresses minor errors identified in our January 25, 2010, wood stork key and as such, supplants the previous key. The key criteria and wood stork biomass foraging assessment methodology have not been affected by these minor revisions.

The Fish and Wildlife Service's (Service) South Florida Ecological Services Office (SFESO) and the U.S. Army Corps of Engineers Jacksonville District (Corps) have been working together to streamline the consultation process for federally listed species associated with the Corps' wetland permitting program. The Service provided letters to the Corps dated March 23, 2007, and October 18, 2007, in response to a request for a multi-county programmatic concurrence with a criteria-based determination of "may affect, not likely to adversely affect" (NLAA) for the threatened eastern indigo snake (*Drymarchon corais couperi*) and the endangered wood stork (*Mycteria americana*) for projects involving freshwater wetland impacts within specified Florida counties. In our letters, we provided effect determination keys for these two federally listed species, with specific criteria for the Service to concur with a determination of NLAA.

The Service has revisited these keys recently and believes new information provides cause to revise these keys. Specifically, the new information relates to foraging efficiencies and prey base assessments for the wood stork and permitting requirements for the eastern indigo snake. This letter addresses the wood stork key and is submitted in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 *et seq.*). The eastern indigo snake key will be provided in a separate letter.

Wood stork

Habitat

The wood stork is primarily associated with freshwater and estuarine habitats that are used for nesting, roosting, and foraging. Wood storks typically construct their nests in medium to tall

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trees that occur in stands located either in swamps or on islands surrounded by relatively broad expanses of open water (Ogden 1991, 1996; Rodgers et al. 1996). Successful colonies are those that have limited human disturbance and low exposure to land-based predators. Nesting colonies 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.

Successful nesting generally involves combinations 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, which 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 sites, a variety of wetland types should be present, with both short and long hydroperiods. The Service (1999) describes a short hydroperiod as a 1 to 5-month wet/dry cycle, and a long hydroperiod as greater than 5 months. During the wet season, wood storks generally feed in the shallow water of the 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).

Wood storks occur in a wide variety of wetland habitats. Typical foraging sites for the wood stork include freshwater marshes and stock ponds, shallow, seasonally flooded roadside and agricultural ditches, narrow tidal creeks and shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs. Because of their specialized feeding behavior, wood storks forage most effectively in shallow-water areas with highly concentrated prey. Through tactolocation, or grope feeding, wood storks in south Florida feed almost exclusively on fish between 2 and 25 centimeters [cm] (1 and 10 inches) in length (Ogden et al. 1976). Good foraging conditions are characterized by water that is relatively calm, uncluttered by dense thickets of aquatic vegetation, and having a water depth between 5 and 38 cm (5 and 15 inches) deep, although wood storks may forage in other wetlands. Ideally, preferred foraging wetlands would include a mosaic of emergent and shallow open-water areas. The emergent 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 seasonal dry-down of the wetland.

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Conservation Measures

The Service routinely concurs with the Corps' "may affect, not likely to adversely affect" determination for individual project effects to the wood stork when project effects are insignificant due to scope or location, or if assurances are given that wetland impacts have been avoided, minimized, and adequately compensated such that there is no net loss in foraging potential. We utilize our *Habitat Management Guidelines for the Wood Stork in the Southeast Region* (Service 1990) (Enclosure 1) (HMG) in project evaluation. The HMG is currently under review and once final will replace the enclosed HMG. There is no designated critical habitat for the wood stork.

The SFESO recognizes a 29.9 kilometer [km] (18.6-mile) core foraging area (CFA) around all known wood stork colonies in south Florida. Enclosure 2 (to be updated as necessary) provides locations of colonies and their CFAs in south Florida that have been documented as active within the last 10 years. The Service believes loss of suitable wetlands within these CFAs may reduce foraging opportunities for the wood stork. To minimize adverse effects to the wood stork, we recommend compensation be provided for impacts to foraging habitat. The compensation should consider wetland type, location, function, and value (hydrology, vegetation, prey utilization) to ensure that wetland functions lost due to the project are adequately offset. Wetlands offered as compensation should be of the same hydroperiod and located within the CFAs of the affected wood stork colonies. The Service may accept, under special circumstances, wetland compensation located outside the CFAs of the affected wood stork nesting colonies. On occasion, wetland credits purchased from a "Service Approved" mitigation bank located outside the CFAs could be acceptable to the Service, depending on location of impacted wetlands relative to the permitted service area of the bank, and whether or not the bank has wetlands having the same hydroperiod as the impacted wetland.

In an effort to reduce correspondence in effect determinations and responses, the Service is providing the Wood Stork Effect Determination Key below. 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[1]. This Key is subject to revisitation as the Corps and Service deem necessary.

The Key is as follows:

A. Project within 0.76 km (0.47 mile)[2] of an active colony site[3] ..... "*may affect*[4]"

Project impacts Suitable Foraging Habitat (SFH)[5] at a location greater than 0.76 km (0.47 mile) from a colony site..... ....."*go to* B"

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[1] With an outcome of "no effect" or "NLAA" as outlined in this key, and the project has less than 20.2 hectares (50 acres) of wetland impacts, the requirements of section 7 of the Act are fulfilled for the wood stork and no further action is required. For projects with greater than 20.2 hectares (50 acres) of wetland impacts, written concurrence of NLAA from the Service is necessary.

[2] Within the secondary zone (the average distance from the border of a colony to the limits of the secondary zone is 0.76 km (2,500 feet, or 0.47 mi).

[3] An active colony is defined as a colony that is currently being used for nesting by wood storks or has historically over the last 10 years been used for nesting by wood storks.

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

[5] Suitable foraging habitat (SFH) includes wetlands that typically have shallow-open water areas that are relatively calm and have a permanent or seasonal water depth between 5 to 38 cm (2 to 15 inches) deep. Other shallow non-wetland water bodies are also SFH. 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, small ponds, shallow, seasonally flooded roadside or agricultural ditches, seasonally flooded pastures, narrow tidal creeks or shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs.

Project does not affect SFH……..…..*"no effect*[1]*"*.

B. Project impact to SFH is less than 0.20 hectare (one-half acre)[6]……..……*NLAA*[1]"

Project impact to SFH is greater in scope than 0.20 hectare (one-half acre)....……*go to* C

C. Project impacts to SFH not within the CFA (29.9 km, 18.6 miles) of a colony site ……..…….…….……*go to* D

Project impacts to SFH within the CFA of a colony site …….……...…….*go to* E

D. Project impacts to SFH have been avoided and minimized to the extent practicable; compensation (Service approved mitigation bank or as provided in accordance with Mitigation Rule 33 CFR Part 332) for unavoidable impacts is proposed in accordance with the CWA section 404(b)(1) guidelines; and habitat compensation replaces the foraging value matching the hydroperiod[7] of the wetlands affected and provides foraging value similar to, or higher than, that of impacted wetlands. See Enclosure 3 for a detailed discussion of the hydroperiod foraging values, an example, and further guidance[8]…….. *NLAA*[1]"

Project not as above.…….... "*may affect*[4]*"*

E. Project provides SFH compensation in accordance with the CWA section 404(b)(1) guidelines and is not contrary to the HMG; habitat compensation is within the appropriate CFA or within the service area of a Service-approved mitigation bank; and habitat compensation replaces foraging value, consisting of wetland enhancement or restoration matching the hydroperiod[7] of the wetlands affected, and provides foraging value similar

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[6] On an individual basis, SFH impacts to wetlands less than 0.20 hectare (one-half acre) generally will not have a measurable effect on wood storks, although we request that the Corps require mitigation for these losses when appropriate. Wood storks are a wide ranging species, and individually, habitat change from impacts to SFH less than one-half acre are 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.

[7] Several researchers (Flemming et al. 1994; Ceilley and Bortone 2000) believe that the short hydroperiod wetlands provide a more important pre-nesting foraging food source and a greater early nestling survivor value for wood storks than the foraging base (grams of fish per square meter) than long hydroperiod wetlands provide. Although the short hydroperiod wetlands may provide less fish, these prey bases historically were more extensive and met the foraging needs of the pre-nesting storks and the early-age nestlings. Nest productivity may suffer as a result of the loss of short hydroperiod wetlands. We believe that most wetland fill and excavation impacts permitted in south Florida are in short hydroperiod wetlands. Therefore, we believe that it is especially important that impacts to these short hydroperiod wetlands within CFAs are avoided, minimized, and compensated for by enhancement/restoration of short hydroperiod wetlands.

[8] For this Key, the Service requires an analysis of foraging prey base losses and enhancements from the proposed action as shown in the examples in Enclosure 3 for projects with greater than 2.02 hectares (5 acres) of wetland impacts. For projects with less than 2.02 hectares (5 acres) of wetland impacts, an individual foraging prey base analysis is not necessary although type for type wetland compensation is still a requirement of the Key.

to, or higher than, that of impacted wetlands. See Enclosure 3 for a detailed discussion of the hydroperiod foraging values, an example, and further guidance[8]……..*"NLAA[1]"*

Project does not satisfy these elements ……..……..…….*"may affect[4]"*

This Key does not apply to Comprehensive Everglades Restoration Plan projects, as they will require project-specific consultations with the Service.

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 where the effect determination was: "may affect, not likely to adversely affect." We request that the Corps send us an annual summary consisting of: project dates, Corps identification numbers, project acreages, project wetland acreages, and project locations in latitude and longitude in decimal degrees.

Thank you for your cooperation and effort in protecting federally listed species. If you have any questions, please contact Allen Webb at extension 246.

Sincerely yours,

Paul Souza
Field Supervisor
South Florida Ecological Services Office

Enclosures

cc: w/enclosures (electronic only)
Corps, Jacksonville, Florida (Stu Santos)
EPA, West Palm Beach, Florida (Richard Harvey)
FWC, Vero Beach, Florida (Joe Walsh)
Service, Jacksonville, Florida (Billy Brooks)

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APPENDIX E

Sand Skink and Blue-tailed Mole Skink Survey Technical Report

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Sand Skink and Blue-tailed Mole Skink SurveyTechnical Report

Florida Department of Transportation

District One

SR 35 (US 98) PD&E Study

Limits of Project: From North of West Socrum Loop Road to South of CR 54

Polk County, Florida

Financial Management Number: 436673-1-22-01

ETDM Number: 14334

Date: June 2021

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

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1 PROJECT DESCRIPTION

The Florida Department of Transportation (FDOT) is conducting a Project Development & Environment (PD&E) study to evaluate alternatives for widening US 98 from north of West Socrum Loop Road to south of County Road (CR) 54 from a two-lane undivided highway to a four-lane divided highway in unincorporated Polk County, a distance of 8.7 miles. The proposed project includes accommodations for pedestrian and bicycle traffic, safety improvements, and signage. A project location map is provided in Appendix A (Figure 1).

Certain areas along the mainline of this project are within the U.S. Fish and Wildlife Service (USFWS) consultation area for the sand skink (*Neoseps reynoldsi*) and blue-tailed mole skink (*Plestiodon egregious*). These skinks are listed by the USFWS as threatened species and are under the jurisdiction of the Endangered Species Act of 1973, as amended (ESA). As part of the PD&E study, a survey was conducted in accordance with the USFWS' *Sand Skinks and Blue-tailed Mole Skinks Survey Protocol Peninsular Florida* (updated July 31, 2020) (i.e., Survey Protocol) to determine the presence of these skinks within the project area. The purpose of this report is to summarize the existing conditions within the surveyed areas, the survey methodology, and results.

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2 EXISTING CONDITIONS

The project area lies within the consultation area for sand skinks and blue-tailed mole skinks and suitable soils in three small areas totaling 1.06 acres near the southern limits of the proposed project. A sand skink soils investigation was conducted to identify any suitable skink habitat, as defined in the USFWS Survey Protocol, within the project limits. The *Sand Skink Soils Investigation Report* is provided in Appendix B. As a result of the soils investigation, three areas approximately 0.4 mile north of Socrum Loop Road were identified as containing appropriate skink soils and were subsequently named Areas A (0.46 acres), B (0.35 acres), and C (0.25 acres). Elevations within the survey areas are 130 feet above sea level. Soils found in the survey areas belong to the Tavares Soils Series. As noted in the *Sand Skink Soils Investigation Report*, Areas A and B were historically mapped as Sparr sand. Upon the soils investigation, they were found to contain Tavares fine sand, 0-5 percent slope.

US 98 is adjacent to residential and agricultural properties. The western end of the proposed project is less developed with agricultural areas and open lands.

Survey areas were located within maintained right-of-way of US 98 that occasionally see off-road traffic, compacting the soil. Other unpaved areas throughout the corridor are used as driveways. Periodically, asphalt millings and trash were found throughout the project area mixed into the soils directly adjacent to the roadway.

Vegetation within the survey areas consisted of flatwoods and ruderal species common to roadway rights-of-way that are routinely mowed. The survey areas were mostly comprised of Bahia grass (*Paspalum notatum*) with patches of open soil. Other vegetation included beggars tick (*Bidens alba*), greenbriar (*Smilax* spp.), chalky bluestem (*Andropogon viginicus*), pineland threeawn (*Aristida stricta*), and tread softly (*Cnidoscolus stimulosus*). Area C also contained slash pine (*Pinus elliotti*) and muscadine (*Vitis rotundifolia*).

3 PEDESTRIAN SURVEY RESULTS

In accordance with the USFWS Survey Protocol, a pedestrian skink survey was conducted on April 14, 2021 within survey areas A, B, and C. No skink tracks were apparent within the project area based on the pedestrian survey. Subsequent pedestrian surveys also occurred during the coverboard survey. Area A contained equal amounts of Bahia grass and open soil. Area B was dominated by Bahia grass with minimal open soil. Area C was equal parts covered in vines, pine cover, and open soil. The survey areas were observed to be moderately disturbed and are within US 98 right-of-way.

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4 COVERBOARD SURVEY METHODOLOGY

In accordance with the Survey Protocol, 40 coverboards per acre were deployed. In total, 43 coverboards were deployed on April 14, 2021 in locations shown on Figure 2 in Appendix A. Based on total area 19 coverboards were placed in Area A, 14 coverboards were placed in Area B, and 10 coverboards were placed in Area C. The coverboards measured two feet by two feet and were placed on soil that had been cleared of vegetation with the use of hoes and rakes. The survey period was initiated on April 23, 2021. For four consecutive weeks, environmental scientists lifted coverboards and noted any skink tracks observed before raking the substrate and replacing the coverboards for the following week. Upon completion of the survey, the coverboards were removed from the area.

5 COVERBOARD SURVEY RESULTS

During the survey period of April 23 to May 13, 2021, no skink tracks were observed. No direct observation of sand or blue-tailed mole skinks was encountered while conducting the coverboard survey. Coverboards were picked up on May 13, 2021. Data Sheets are provided in Appendix C.

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Appendix A

Figures

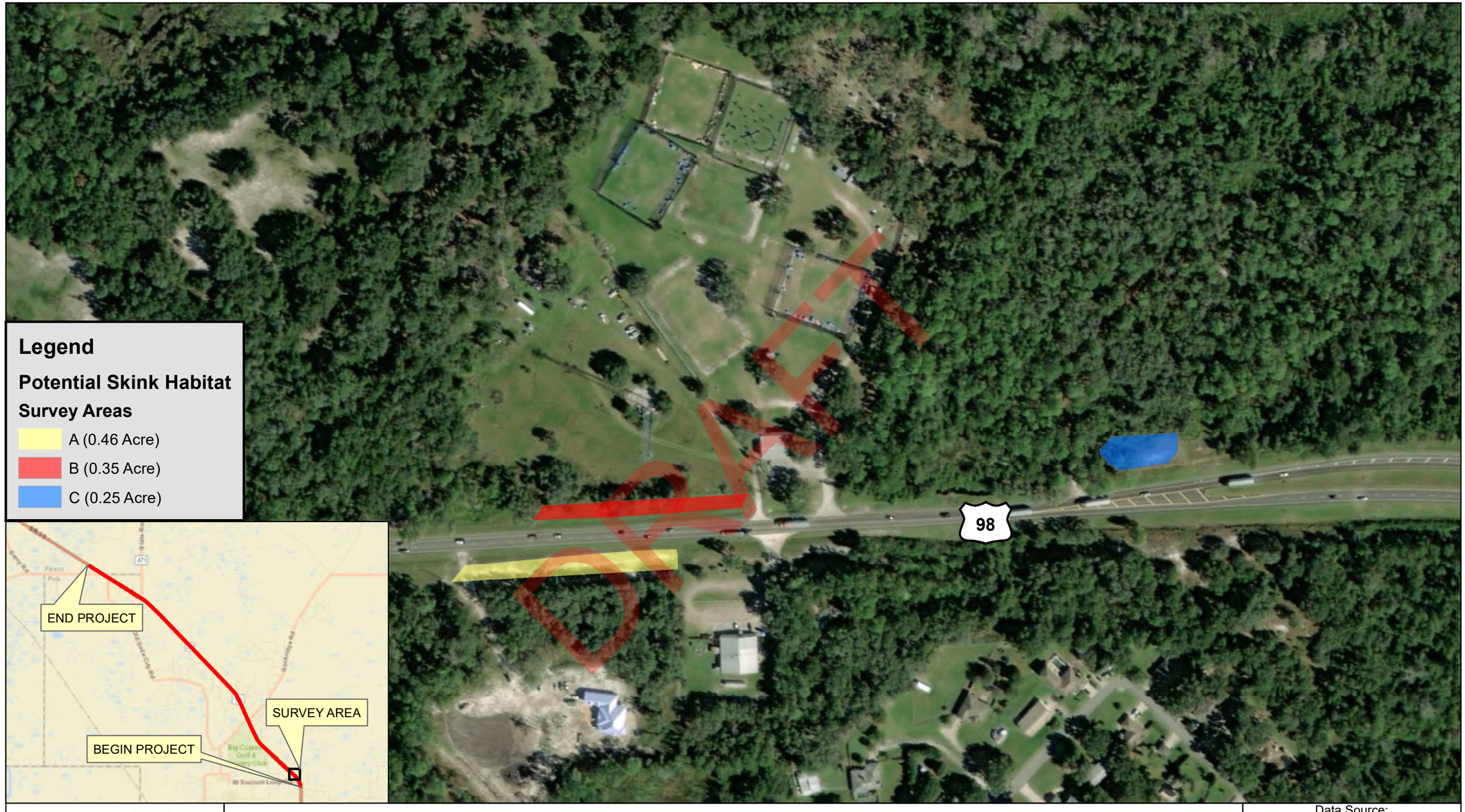
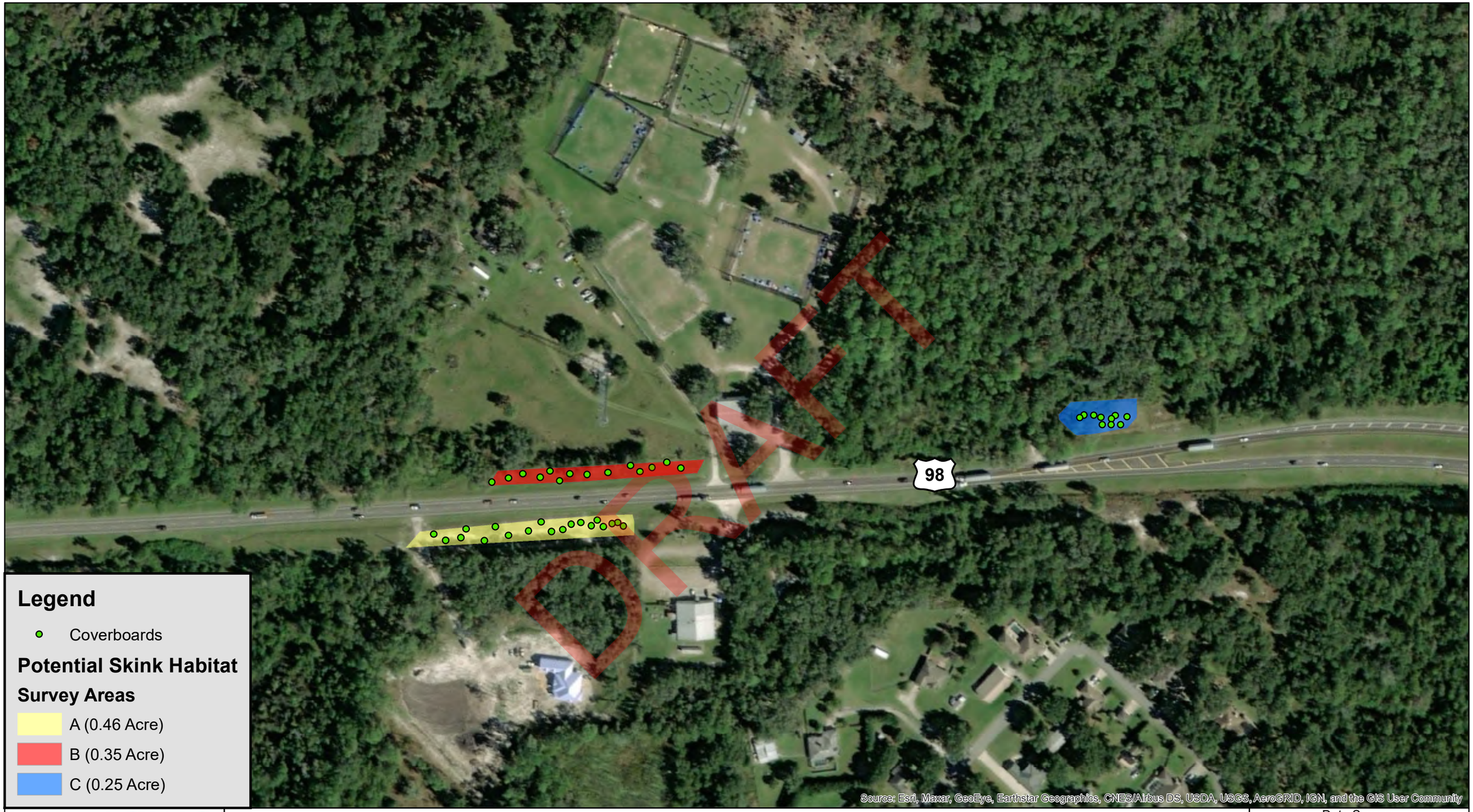


Figure 1 - Survey Area Location

FPID # 436673-1
US 98 from W Socrum Loop Rd to CR 54
Polk County, FL

Data Source:
- FDA
- ESRI
1 inch = 200 feet
0 100 200
Feet
Coordinate System: NAD 1983
Florida State Plane West

Document Path: H:\64800\Figures\Skink Survey Report\mxd\Figure_1_Skink_Habitat_New.mxd



Legend

- Coverboards

Potential Skink Habitat Survey Areas

- A (0.46 Acre)
- B (0.35 Acre)
- C (0.25 Acre)

FDOT

Figure 2 - Skink Survey Coverboard Locations

FPID # 436673-1
US 98 from W Socrum Loop Rd to CR 54
Polk County, FL

Data Source:
- FDA
- ESRI

1 inch = 200 feet

0 100 200

Feet

Coordinate System: NAD 1983 Florida State Plane West

Document Path: H:\64800\Figures\Skink Survey Report\mxd\Figure_2_Skink_Boards.mxd

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Appendix B

Soil Survey Report

SAND SKINK SOILS INVESTIGATION REPORT

Florida Department of Transportation

District 1

SR 35 (US 98)

Limits of Project: from North of W. Socrum Loop Road to South of CR 54

Polk County, Florida

Financial Management Number: 436673-1

ETDM Number: 14334

Date: April 2021

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

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SAND SKINK SOILS INVESTIGATION REPORT

SR 35 (US 98)
From North of W. Socrum Loop Road to South of CR 54
Polk County, Florida

Financial Project Identification (FPID): 436673-1

Prepared for:

Florida Department of Transportation
District One Environmental Management Office
801 North Broadway
P.O. Box 1249
Bartow, Florida 33831

Prepared by:

Atkins North America, Inc.
482 South Keller Road
Orlando, Florida 32810

March 31, 2021

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Field Investigation Dates: March 22, 2021.

Project / Location: Sand Skink (*Neoseps reynoldsi*) Soils Investigation / SR 35 (US 98), Polk County, Florida.

Client: Florida Department of Transportation (FDOT), District One.

Qualifications and Experience: This soils investigation was directed, and the report prepared by, Terry Zable an Atkins soil scientist and project manager. Mr. Zable earned a B.S.A. in Soil Science from the University of Florida and an M.P.A. in Public Administration from the University of Central Florida. He has 35 years of professional experience as a soil scientist which includes 16 years with the State of Florida, three years with the Florida Department of Health performing soils evaluations in the Onsite Sewage Disposal System program; followed by 12 years with the Florida Department of Environmental Protection (FDEP), performing hydric soils jurisdictional investigations for the FDEP's Environmental Resource Program and Jurisdictional Wetlands Team. Mr. Zable joined Atkins in 2001 and has been involved with soils investigations for various projects including hydric soils determinations, seasonal high groundwater evaluations, soil subsidence investigations related to groundwater withdrawals, sand skink suitable soils investigations, and soils evaluations for mitigation projects. He has been accepted as an expert witness in environmental permitting and soil science in administrative hearings (Florida Division of Administrative Hearings) as well as civil cases and criminal court cases.

Project Footprint: The project begins approximately 1,310 feet north of the intersection of SR 35 (US 98) and West Socrum Loop Rd. and continues approximately 8.8 miles northwest along both the north and south right-of-way (ROW) before terminating at the intersection of SR 35 (US 98) and CR 54, Polk County, Florida. The project construction impacts are confined to the project ROW along both sides of SR 35 (US 98), and the ROW varies in width depending upon location. **Exhibit 1** provides the overall project location and project footprint.

Introduction

At the client's request, the project site as described above was investigated to identify areas that have been mapped in the Polk County Soil Survey by the U.S. Department of Agriculture (USDA) – Natural Resources Conservation Service (NRCS) as containing soils that have been determined by the U.S. Fish and Wildlife Service (USFWS) to provide suitable habitat for the sand skink and blue-tailed mole skink. The investigation focused on identifying if the soils mapped exist within the project study areas, and if the soils have been subject to past soil alterations (construction, filling, excavation, or mixing) which may have sufficiently altered the soils such that they no longer exhibit surface or shallow surface characteristics required to meet the NRCS soil map unit criteria for the soil series that have been identified as providing suitable habitat for the sand skink and blue-tailed mole skink. The dominant mapped soil type occurring within much of the ROW of the project area is Pomona Fine Sand, which is classified as a non-suitable sand skink soil. However, the map units identified by the USFWS as potentially providing suitable sand skink habitat soils that have been mapped by the USDA – NRCS and occurring within the ROW of the project area consists of the Basinger, Smyrna and Myakka, Samsula Muck, and Tavares map units. Samsula Muck has been identified in the USFWS Peninsular Florida Species Conservation and Consultation Guide, July 31, 2020, as a "skink soil", however correspondence with USFWS staff

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have allowed the exclusion of areas supporting this organic, non-mineral soils from this investigation. The suitable sand skink soil series, as described in the NRCS online soil survey for Polk County, are described below:

The Basinger soil series (Siliceous, hyperthermic Spodic Psammaquents) are very poorly drained soils that formed from sandy marine deposits and are often found in low flats, depressions and poorly defined drainageways. Most areas of Basinger soils have been cleared and are used for improved pasture and rangeland. With water control, they are used for winter truck crops and tame pasture. Dominant vegetation: Slash pine (*Pinus elliottii*), longleaf pine (*Pinus palustris*), scattered cypress (*Taxodium sp.*), with an understory dominated by gallberry (*Ilex glabra*), pineland threeawn (*Aristida sp.*), cabbage palm (*Sabal palmetto*), scattered saw palmetto (*Serenoa repens*), St. Johns wort (*Hypericum spp.*), cutthroat grass (*Panicum abscissum*), blue maidencane (*Amphicarpum muehlenbergianum*), low panicum (*Panicum rigidulum*), wax-myrtle (*Morella cerifera*), and sand cordgrass (*Spartina bakeri*).

The Smyrna fine sand and Myakka sand map unit is an association of the Smyrna and Myakka soils that is composed of 41 percent Smyrna, 39 percent Myakka, and similar soils. Approximately 15 percent of this map unit is hydric, and the soils are found on flatwoods and marine terraces. The soil is classified as poorly drained, with an average depth to water table of 6 to 18 inches. Both soils are spodosols, however in the Symrna soil the spodic (Bh) horizon occurs at depths less than 20 inches, whereas in the Myakka soil the Bh horizon is found at a depth of 20-36 inches.

The Smyrna soil series (Sandy, siliceous, hyperthermic Aeric Alaquods) are soils that formed in thick deposits of sandy marine materials and are typically found on nearly level flatwoods areas with slopes of less than 2 percent. Smyrna soils are poorly to very poorly drained. They have slow internal drainage and slow to runoff when ponded. Natural vegetation consists of longleaf and slash pines with an undergrowth of saw palmetto, running oak (*Quercus pumila*), gallberry, wax myrtle, and pineland threeawn. Most areas are used for forest and range.

The Myakka soils series (Sandy, siliceous, hyperthermic Aeric Alaquods) are typically found in flatwoods. Other phases have been mapped on high tidal areas, flood plains, depressional areas and barrier islands. They formed in sandy marine deposits. Slopes range from 0 to 5 percent. Myakka soils are used for commercial forest production or native range. Large areas with adequate water control measures are used for citrus, improved pasture, and truck crops. Native vegetation includes longleaf and slash pine with an undergrowth of saw palmetto, running oak, gallberry, wax myrtle, huckleberry (*Gaylussacia spp.*), chalky bluestem (*Andropogon virginicus*), fetterbush (*Lyonia lucida*), and pineland threeawn.

The Tavares soil series (Hyperthermic, uncoated Typic Quartzipsamments) mainly occurs in South Central Florida Ridge, and to a lesser extent in Southern Florida Flatwoods. These soils consist of very deep, moderately well drained soils that formed in sandy marine or aeolian deposits. Tavares soils are on hills, ridges and knolls of the lower Coastal Plain. Some areas of Tavares soils are used for citrus. A few areas are used for corn, vegetable crops, watermelons, and improved pasture. In most places the natural vegetation consists of slash pine, longleaf pine, a few scattered blackjack oak (*Quercus incana*), turkey oak (*Quercus laevis*), post oak (*Quercus stellata*), and an understory of pineland threeawn.

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Methodology

The project area is located within the FDOT ROW of SR 35 (US 98) from approximately 1,310 feet north of the intersection of SR 35 (US 98) and West Socrum Loop Rd. and continuing along both the north and south ROW of SR 35 (US 98) before terminating at the intersection of SR 35 (US 98) and CR 54. The entire project area was field reviewed and soil borings and/or soil probes were collected to both verify the mapped soils, and to determine where soils in particular areas have been previously altered due to excavation (slope cuts, swales/ditches), fill (road beds, driveways, roadway intersections), or mixing due to roadway alterations, stormwater conveyances, underground utilities, signage features, or other underground construction activities. There are three locations within the overall project area where the NRCS and the Polk County Soil Survey has mapped soils identified by the USFWS as sand skink soils, **Exhibit 2.** In these locations additional soil borings or soil probes were collected to verify areas where natural, unaltered suitable soils were mapped, and where road construction activities appear to have not impacted the soil surface. In addition to the soil borings and probes, representative photographs were taken throughout the project area. The photographs are labeled by photo-point and are found in the map and **Photolog 1** of **Exhibit 3**.

The boring locations were selected utilizing the criteria described above regarding suitable soils and through inspections of aerial photographs and field review. Soil borings were conducted for each of the soil map units within the project area utilizing a hand bucket auger and were excavated to a depth of six (6) feet, or refusal. The borings were field analysed as they were conducted for soil texture, soil color, and soil horizonation to confirm that the soil mapped conforms to the mapped soil series criteria. In addition to the hand auger bores, hand soil probes were conducted at regular intervals to determine the limits of natural soil surface characteristics. The hand soil probes all begin at either the project boundary, or in areas supporting natural landscapes and then continue into the project area to the roadway. The soil probes were repeated as required but at intervals not exceeding 2-3 feet in the direction of the roadway until the surface feature characterizing one of the identified sand skink suitable soils were no longer observed because of soil disturbance. The surface disturbance commonly identified included fill material (lime rock, gravel, clay, asphalt, fill dirt), excavation (exposed subsurface horizons, organic material accumulation, evidence of wetness), or structures (driveways, intersecting roads, signage). The location of soil boring and probes was recorded utilizing a Trimble Global Positioning System (GPS) unit. In most locations, numerous hand probes were completed in the process of delineation of the limits of natural soil. The individual probes undertaken to identify the limits of the natural soils were not GPS recorded. Sections supporting natural and unaltered soils (Potential Sand Skink Habitat) are shown in **Exhibit 4**. These sections are also highlighted in red in **Photolog 1** of **Exhibit 3**. **Exhibit 5** contains **Photolog 2**, which includes soil probe/pit depictions.

Study Area

The project study area of SR 35 (US 98) from north of West Socrum Loop Rd to the intersection of SR 35 (US 98) and CR54, consists of a two-lane rural highway with a four-lane divided section that ends approximately 1,600 ft north of the project beginning. Land use within the project area consists of both rural and suburban uses, with the northern half of the project being rural and composed of pastures and forest with scattered residential housing. The southern half of the project

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area is more suburban in use, with several residential developments and golf course communities. Very few structures have been built immediately abutting the project area, with most residences and commercial structures setback from the ROW and accessible by driveways or access roads. The roadway travel lanes and the shoulders have been filled and contoured to facilitate drainage to the adjacent roadside ditch/swale system that vary in depth and slope dependent upon location. In some areas the ditch forms a connected system with culverts located under driveway and roadway crossings, and in other areas it consists of a less formal shallow swale system. The roadside ditch/swales begin at the outside of the roadway shoulder and often extend to the limits of the ROW. Utilities are primarily overhead with the supporting poles located along both east and west edges of the ROW depending upon location. Roadway signage in the study area is minimal. Soil disturbances are attributable to the roadway, shoulders, intersection and driveway construction, excavation for ditch/swales and underground utilities. There are three areas that support sand skink suitable soils and have been labeled Sections A, B, and C (**Exhibit 4, 4.1, 4.2, 4.3, 4.4)**. Sections A and B have been mapped in the Polk County Soil Survey as Sparr sand, 0-5% slope which has not been identified as a USFWS sand skink soil, however, investigation of this area showed that the soils in these two sections appear to be Tavares fine sand, which is similar to the soil type of Section C

Potentially Suitable Soil Areas

Section A is mapped as Sparr sand, 0-5% slope, however, appears to be comprised of Tavares fine sand, 0-5% slope, is approximately 500 ft. in length and encompasses 0.46 acres. Moving from northwest to southeast, the latitude and longitude start/end points for Section A are 81°58’52.27” W, 28°10’14.18” N (Start), 81°58’48.07” W, 28°10’10.89” N (End) (**Exhibit 4, 4.1, 4.2, 4.3**).

Section B is mapped as Sparr sand, 0-5% slope, however, appears to be comprised of Tavares fine sand, 0-5% slope, is approximately 475 ft. in length and encompasses 0.35 acres. Moving from northwest to southeast, the latitude and longitude start/end points for Section B are 81°58’49.8” W, 28°10’13.82” N (Start), 81°58’45.68” W, 28°10’10.84” N (End) (**Exhibit 4, 4.1, 4.2, 4.3**).

Section C is comprised of Tavares fine sand, 0-5% slope, is approximately 170 ft. in length and encompasses 0.25 acres. Moving from northwest to southeast, the latitude and longitude start/end points for Section C are 81°58’38.9” W, 28°10’5.99” N (Start), 81°58’37.43” W, 28°10’4.86” N (End) (**Exhibit 4, 4.1, 4.4**).

Results

From the completed field work and soil borings it can generally be assumed that the areas immediately adjacent to paved road surfaces, depending upon location, have been impacted by the construction of the roadway, roadway shoulders, swales and ditches, and driveways and access roads.

These activities have resulted in paved areas and filled soil profiles, truncated soil profiles from excavation, surface/subsurface alterations and compaction, and organic material accumulation or evidence of wetness from standing water in swales. In some areas the mixing of the natural soils with lime rock, gravel, fine texture materials such as clay or other similar road bedding material and building material was visible at the surface. Often adjacent areas located outside of the project

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area (ROW) exhibit intact soil profiles, and suitable habitat soils. However, the natural soil conditions begin to degrade within the ROW closer to the roadside swale and the roadway foundation/ system**.** The three sections supporting natural soils (Potential Sand Skink Habitat) are shown in **Exhibit 4 (4.1-4.4). Table 1** below details the soil types, map unit identifier and acreages of these sections.

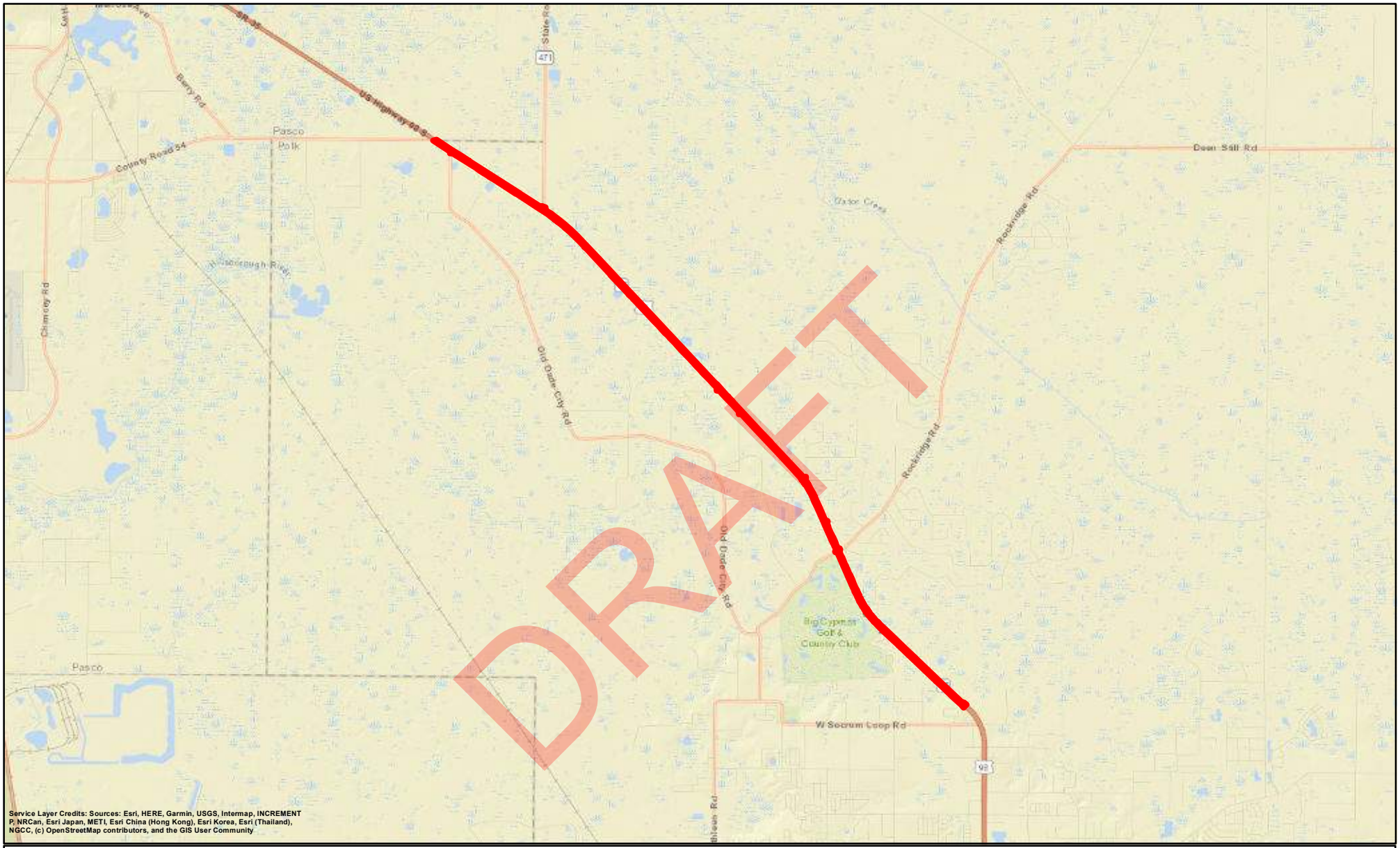
Table 1: Suitable Section Soils & Acreages

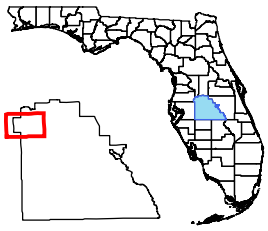
Section ID	Soil ID: Soil Type	Acres
A	Mapped as 14: Sparr sand, 0-5% slope, actually 15: Tavares fine sand, 0-5% slope	0.46
B	Mapped as 14: Sparr sand, 0-5% slope, actually 15: Tavares fine sand 0-5% slope	0.35
C	15: Tavares fine sand, 0-5% slope	0.25

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Exhibit 1: Location Map

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Study Area Footprint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Study Area Footprint

Exhibit 1

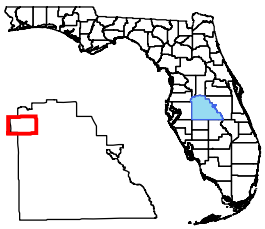
1 inch equals 1.5 miles

Date: 3/30/2021

Exhibit 2: Soil Survey Area Maps

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Soil Survey Areas Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

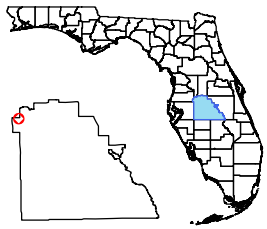
Project Study Area

Exhibit 2

1 inch equals 1.1 miles

Date: 3/30/2021





Soil Survey Areas Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Project Study Area

Exhibit 2.1

1 in = 200 ft

Date: 3/30/2021



Soil Survey Areas Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Project Study Area

Exhibit 2.2

1 in = 200 ft

Date: 3/30/2021



Soil Survey Areas Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Project Study Area

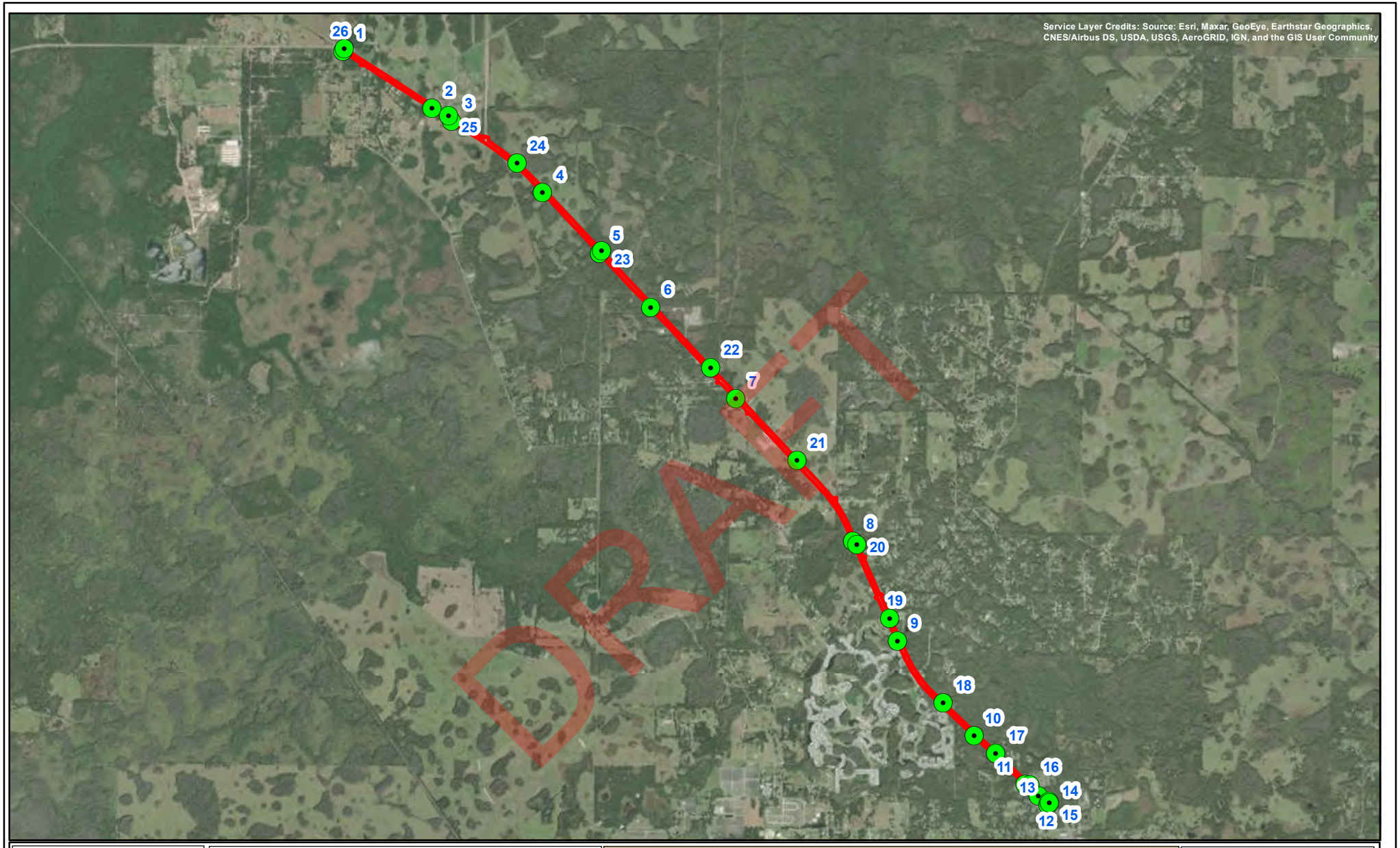
Exhibit 2.3

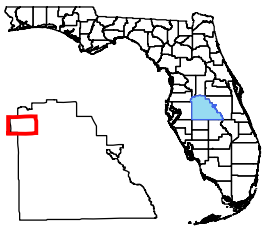
1 in = 225 ft

Date: 3/30/2021

Exhibit 3: Photopoint Location Map & Photolog 1

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Photopoint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Photopoints

Project Study Area

Exhibit 3

1 inch equals 1.1 miles

Date: 3/30/2021

N



Photopoint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Photopoints

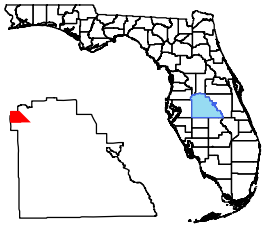
Project Study Area

Exhibit 3.1

1 in = 300 ft

Date: 3/30/2021





Photopoint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Photopoints

Project Study Area

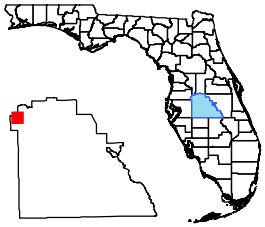
Exhibit 3.2

1 in = 300 ft

Date: 3/30/2021

N





Photopoint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Photopoints

Project Study Area

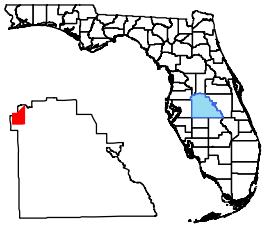
Exhibit 3.3

1 in = 300 ft

Date: 3/30/2021

N





Photopoint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Photopoints

Project Study Area

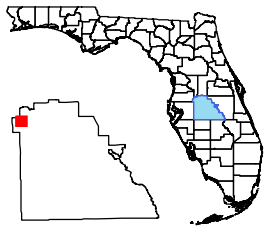
Exhibit 3.4

1 in = 300 ft

Date: 3/30/2021

N





Photopoint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Photopoints

Project Study Area

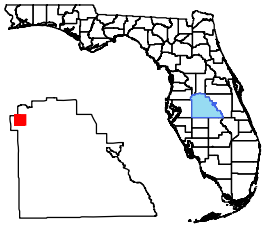
Exhibit 3.5

1 in = 300 ft

Date: 3/30/2021

N





Photopoint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Photopoints

Project Study Area

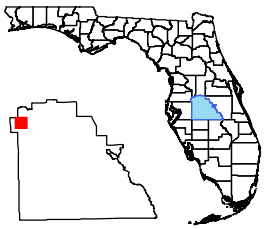
Exhibit 3.6

1 in = 300 ft

Date: 3/30/2021

N





Photopoint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Photopoints

Project Study Area

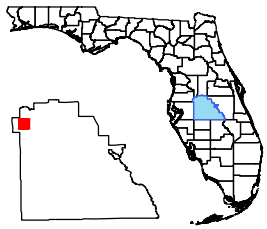
Exhibit 3.7

1 in = 300 ft

Date: 3/30/2021

N





Photopoint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Photopoints

Project Study Area

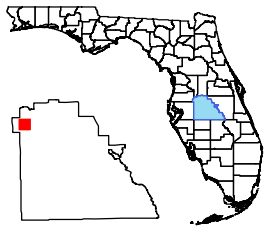
Exhibit 3.8

1 in = 300 ft

Date: 3/30/2021

N





Photopoint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Photopoints

Project Study Area

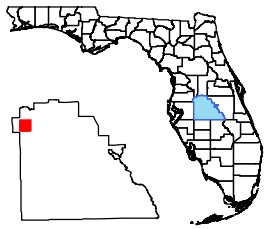
Exhibit 3.9

1 in = 300 ft

Date: 3/30/2021

N





Photopoint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Photopoints

Project Study Area

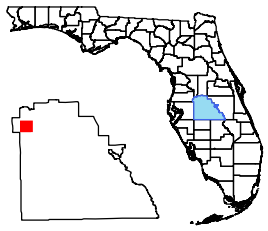
Exhibit 3.10

1 in = 300 ft

Date: 3/30/2021

N





Photopoint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Photopoints

Project Study Area

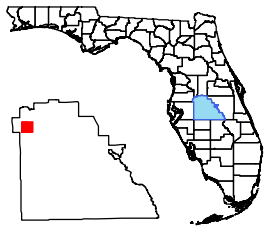
Exhibit 3.11

1 in = 300 ft

Date: 3/30/2021

N





Photopoint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Photopoints

Project Study Area

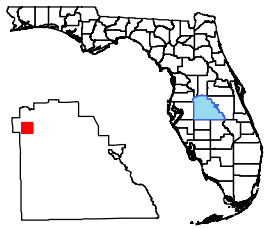
Exhibit 3.12

1 in = 300 ft

Date: 3/30/2021

N





Photopoint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Photopoints

Project Study Area

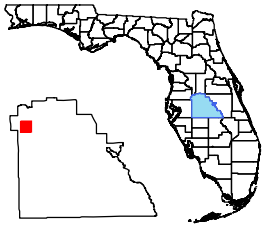
Exhibit 3.13

1 in = 300 ft

Date: 3/30/2021

N





Photopoint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Photopoints

Project Study Area

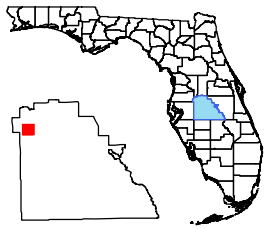
Exhibit 3.14

1 in = 300 ft

Date: 3/30/2021

N





Photopoint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Photopoints

Project Study Area

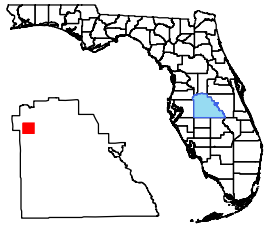
Exhibit 3.15

1 in = 300 ft

Date: 3/30/2021

N





Photopoint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Photopoints

Project Study Area

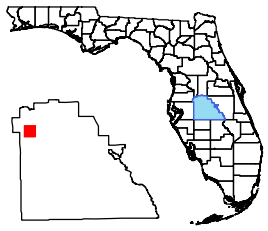
Exhibit 3.16

1 in = 300 ft

Date: 3/30/2021

N





Photopoint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Photopoints

Project Study Area

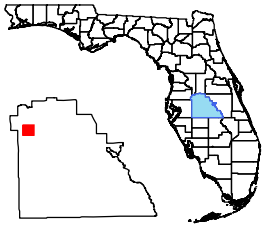
Exhibit 3.17

1 in = 300 ft

Date: 3/30/2021

N





Photopoint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Photopoints

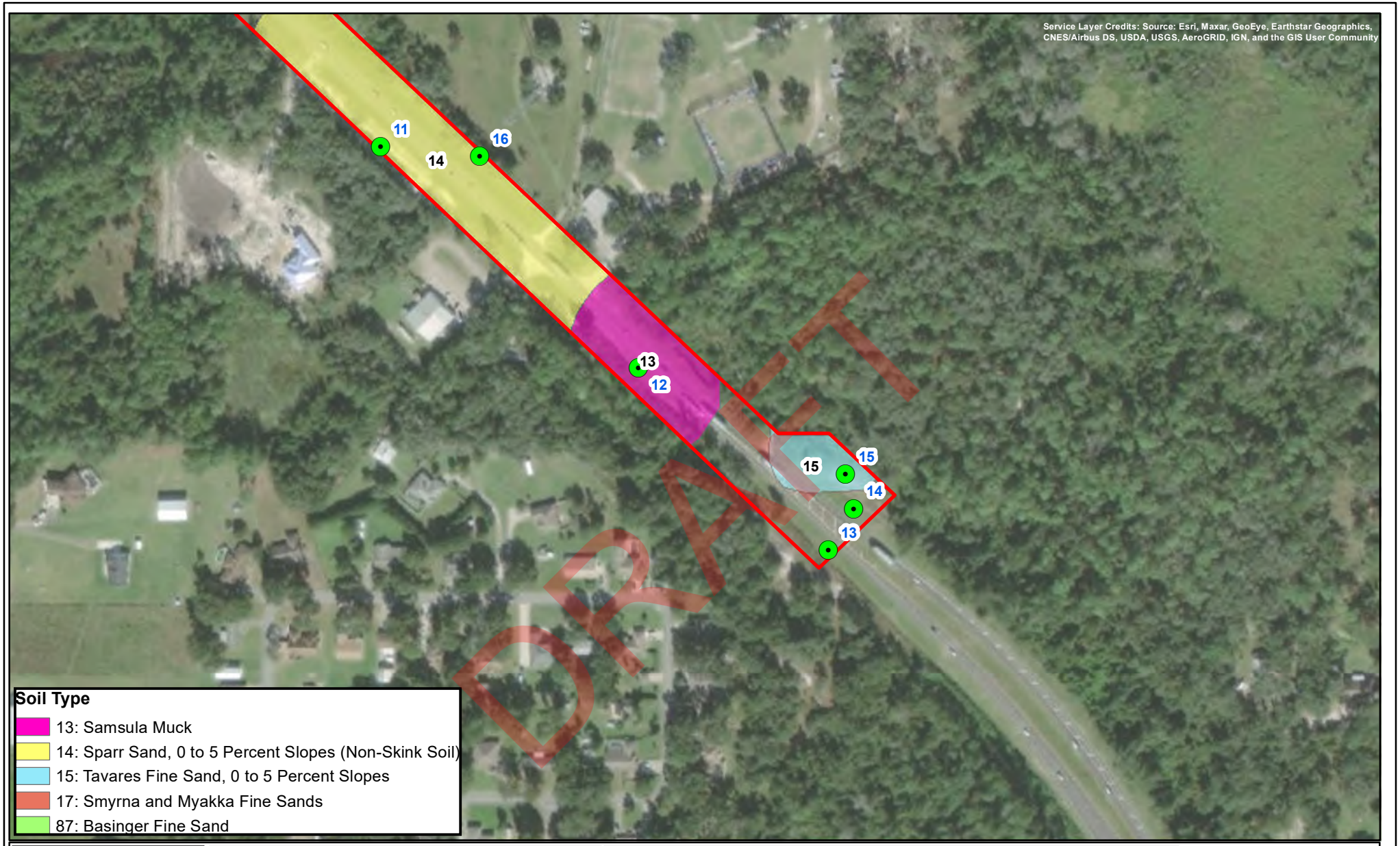
Project Study Area

Exhibit 3.18

1 in = 300 ft

Date: 3/30/2021

N



Photopoint Location Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Photopoints

Project Study Area

Exhibit 3.19

1 in = 300 ft

Date: 3/30/2021

N

Photolog 1

FDOT D1 - 436673-1 US98 Sand Skink Soils Investigation



Photo 1 – Looking Southeast



Photo 2 – Looking Southeast



Photo 3 - Looking Northwest



Photo 4 - Looking Northwest

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FDOT D1 - 436673-1 US98 Sand Skink Soils Investigation



Photo 5 – Looking Southeast



Photo 6 – Looking Southeast



Photo 7 - Looking Northwest



Photo 8 - Looking Northwest

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Photolog 1

FDOT D1 - 436673-1 US98 Sand Skink Soils Investigation



Photo 9 – Looking Southeast



Photo 10 – Looking Southeast



Photo 11 - Looking Southeast (Section A)



Photo 12 - Looking Southeast

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*Potential for Suitable Skink Soils

Photolog 1

FDOT D1 - 436673-1 US98 Sand Skink Soils Investigation



Photo 13 – Looking Northwest



Photo 14 – Looking Northwest



Photo 15 - Looking Northwest (Section C)



Photo 16 - Looking Northwest (Section B)

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*Potential for Suitable Skink Soils

Photolog 1

FDOT D1 - 436673-1 US98 Sand Skink Soils Investigation



Photo 17 – Looking Southeast



Photo 18 – Looking Southeast



Photo 19 - Looking Northwest



Photo 20 - Looking Northwest

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FDOT D1 - 436673-1 US98 Sand Skink Soils Investigation



Photo 21 – Looking Northwest



Photo 22 – Looking Northwest



Photo 23 - Looking Southeast



Photo 24 - Looking Southeast

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FDOT D1 - 436673-1 US98 Sand Skink Soils Investigation



Photo 25 – Looking Northwest

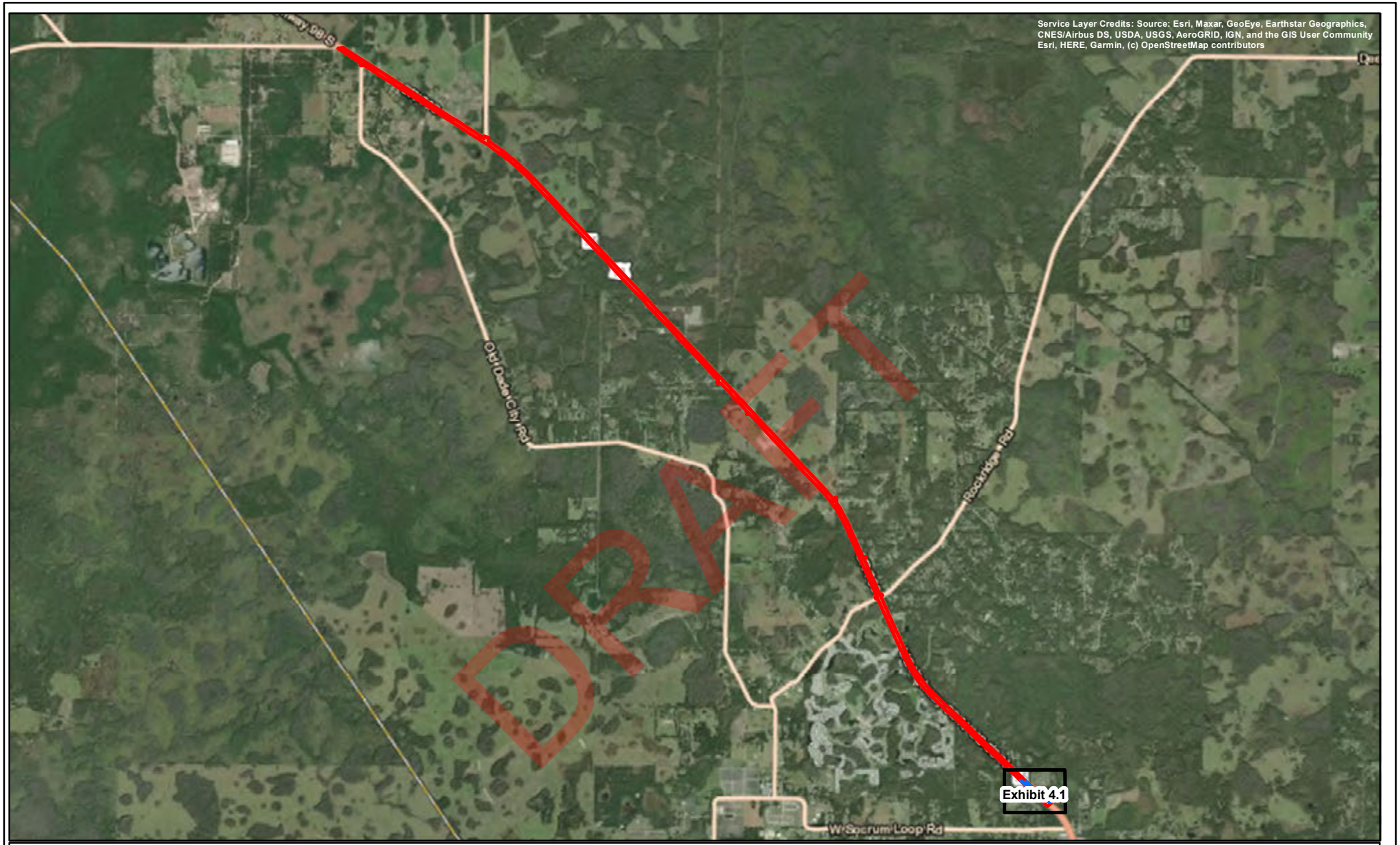


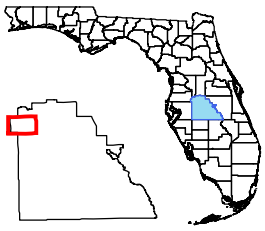
Photo 26 – Looking Southeast

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Exhibit 4: Potential Skink Soil Habitat Maps

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Potential Sand Skink Soil Sections Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Potential Sand Skink Habitat

Project Study Area

Exhibit 4

1 inch equals 1.1 miles

Date: 3/30/2021





Potential Sand Skink Soil Sections Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Potential Sand Skink Habitat

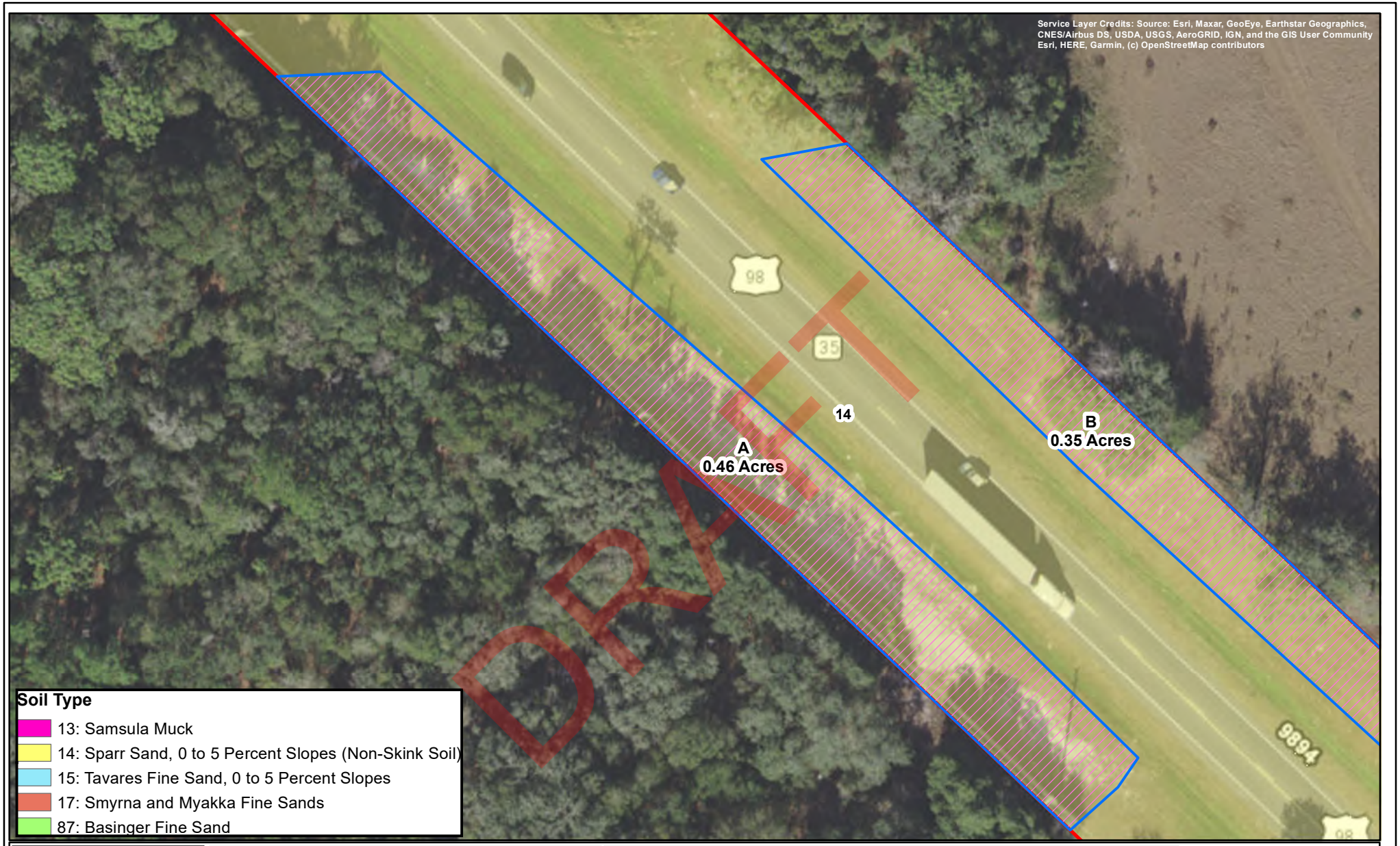
Project Study Area

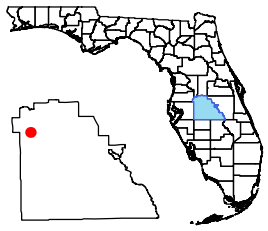
Exhibit 4.1

1 in = 225 ft

Date: 3/30/2021

N





Potential Sand Skink Soil Sections Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Potential Sand Skink Habitat

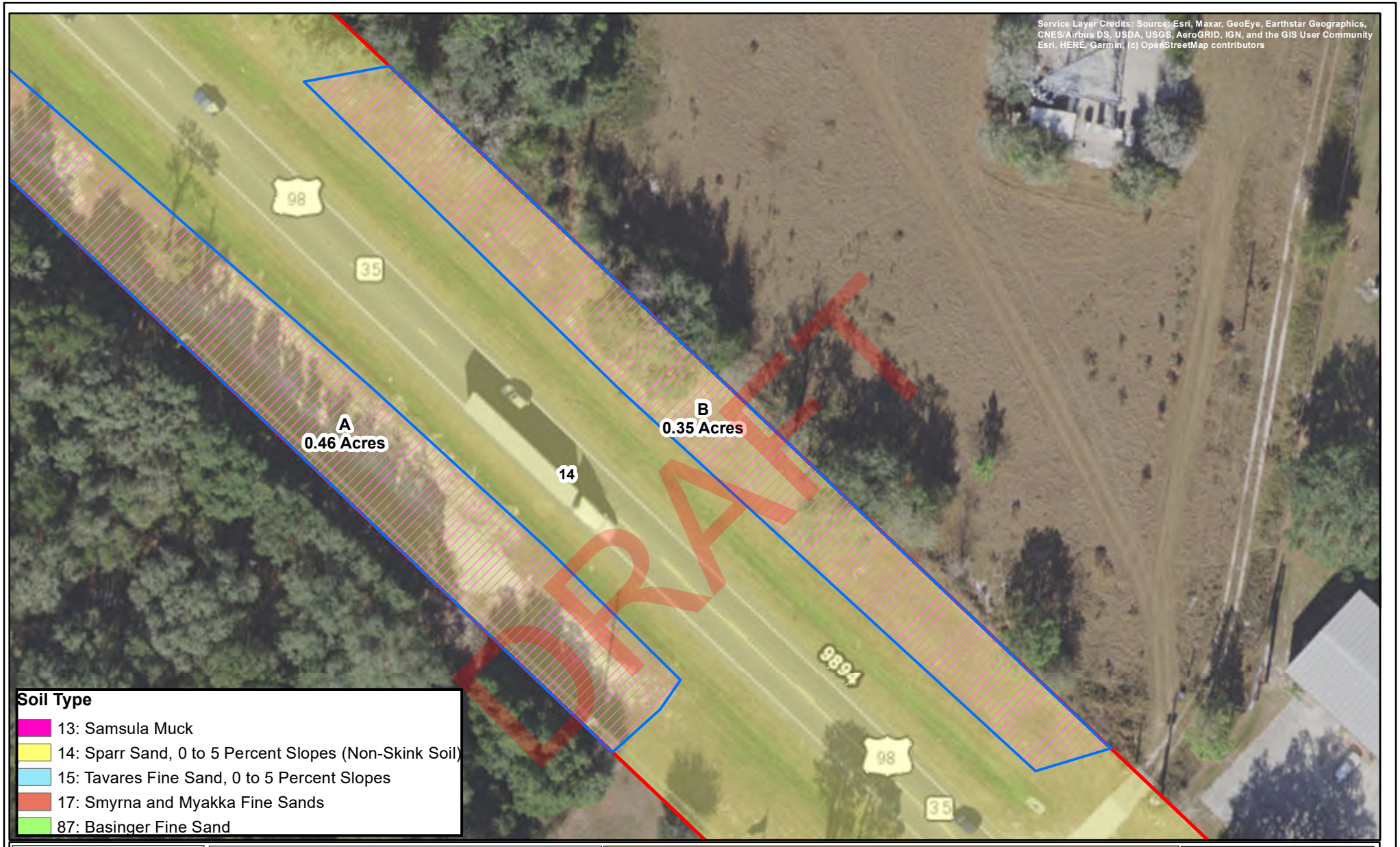
Project Study Area

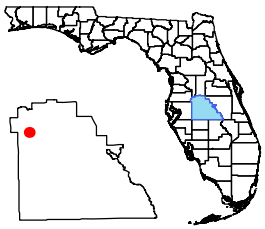
Exhibit 4.2

1 in = 60 ft

Date: 3/30/2021

N





Potential Sand Skink Soil Sections Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Potential Sand Skink Habitat

Project Study Area

Exhibit 4.3

1 in = 60 ft

Date: 3/30/2021

N



Potential Sand Skink Soil Sections Map
Sand Skink Soil Investigation

FPID 436673-1: US 98
(W. Socrum Loop Rd to CR 54)
Florida Department of Transportation
District 1
Polk County, Florida

Potential Sand Skink Habitat

Project Study Area

Exhibit 4.4

1 in = 60 ft

Date: 3/30/2021

N

Exhibit 5: Photolog 2

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Exhibit 5: Photolog 2

FDOT D1 - 436673-1 US98 Sand Skink Soils Investigation



13: Samsula Muck (Probe – Excluded)



14: Sparr Sand, 0 to 5 percent slopes (Non-skink Soil) (Probe – Potential)



14: Sparr Sand, 0 to 5 percent slopes (Non-skink Soil) (Probe – Potential)



15: Tavares Fine Sand, 0 to 5 percent slopes (Profile - Potential)

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Exhibit 5: Photolog 2

FDOT D1 - 436673-1 US98 Sand Skink Soils Investigation



17: Smyrna and Myakka Fine Sands (Probe - Excluded)



17: Smyrna and Myakka Fine Sands (Probe - Excluded)



87: Basinger Fine Sand (Probe - Excluded)



87: Basinger Fine Sand (Probe - Excluded)

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Appendix C

Data Sheets

Sand Skink/Blue-Tailed Mole Skink - Coverboard Survey Field Data Sheet

US 98 Improvements; FPID 436673-1

Survey Date: 2021.04.23	Begin Time: 11:30	End Time: 12:30
Weather Conditions Average Temperature: 80°F Wind Speed: E 11mph Wind Direction: East Visibility: clear Precipitation: No (rain on 4/19 + 4/20)		
Total Number of Skink Tracks Observed: None		
Coverboard Numbers for Observed Tracks: (include photo-documentation of tracks) NA		
Direct Observations of Skinks: NA		
Survey Staff Name: P.GRIFFIN		

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Sand Skink/Blue-Tailed Mole Skink - Coverboard Survey Field Data Sheet

US 98 Improvements; FPID 436673-1

Survey Date: 4/29/21	Begin Time: 10:00	End Time: 11:30

Weather Conditions
- Average Temperature: 81° F
- Wind Speed: 8mp
- Wind Direction: SW
- Visibility: clear / great
- Precipitation: none

Total Number of Skink Tracks Observed:

0

Coverboard Numbers for Observed Tracks:
(include photo-documentation of tracks)

n/a

Direct Observations of Skinks:

none

Survey Staff Name:

Niki Cribbs, Tia Norman

Boards 1, 2, 4, 5 + 7 had been moved + stacked up. The original locations were evident and still clear. It looked like this just happened. We replaced the boards

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Sand Skink/Blue-Tailed Mole Skink - Coverboard Survey Field Data Sheet

US 98 Improvements; FPID 436673-1

Survey Date: 2021-05-06	Begin Time: 133pm	End Time: 235
Weather Conditions Average Temperature: 89° Wind Speed: W 12mph Wind Direction: West Visibility: CLEAR Precipitation: NONE		
Total Number of Skink Tracks Observed: N/A		
Coverboard Numbers for Observed Tracks: (include photo-documentation of tracks) N/A		
Direct Observations of Skinks: N/A		
Survey Staff Name: PGRIFFIN		

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Sand Skink/Blue-Tailed Mole Skink - Coverboard Survey Field Data Sheet

US 98 Improvements; FPID 436673-1

Survey Date: 5/13/21	Begin Time: 9:40	End Time: 11:08
Weather Conditions Average Temperature: 78° Wind Speed: 5 mph Wind Direction: SE Visibility: Clear Precipitation: 0		
Total Number of Skink Tracks Observed: 0		
Coverboard Numbers for Observed Tracks: (include photo-documentation of tracks) 0		
Direct Observations of Skinks: 0		
Survey Staff Name: Allison Blakely Sam Szatyari		

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APPENDIX F

Crested Caracara Survey Technical Report

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Crested Caracara Survey Technical Report

Florida Department of Transportation

District One

SR 35 (US 98) PD&E Study

Limits of Project: From North of West Socrum Loop Road to South of CR 54

Polk County, Florida

Financial Management Number: 436673-1-22-01

ETDM Number: 14334

Date: July 2021

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

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2 METHODOLOGY 2

3 RESULTS 4

4 EFFECTS DETERMINATION 7

5 REFERENCES 7

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Table 2 Caracara Survey Dates and Results 4

Table 3 Other Species Observed and Protected Status 5

Table 4 Carion Observations During Spring 2021 Survey Season 7

APPENDICES

Appendix A Figures

Appendix B Survey Data Sheets

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1 Project Description

The Florida Department of Transportation (FDOT) is undertaking a Project Development and Environment (PD&E) Study to evaluate alternatives for widening a segment of US 98 (State Road 35/700) in the northwest portion of Polk County. The project study limits extend from West Socrum Loop to south of County Road (CR) 54, a distance of approximately 8.7 miles.

The study area falls within the US Fish and Wildlife Service (USFWS) Consultation Area for the crested caracara (*Caracara cheriway*). The crested caracara is listed by the USFWS threatened under the jurisdiction of the Endangered Species Act of 1973, as amended (ESA). According to the Florida Natural Areas Inventory (FNAI, 2021), the crested caracara has been documented within Polk County, but not within one mile of the project study area. As part of the PD&E study, a survey plan was developed based on the USFWS Crested Caracara Draft Survey Protocol (provided for the 2016-2017 Breeding Season) and was approved by USFWS to begin surveys in January 2021. Seven stations were established and surveyed from January 7, 2021, through April 30, 2021. A description of the survey methodology and results is provided below.

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2 METHODOLOGY

Development of the survey plan included analyzing suitable foraging and nesting habitat within 1,500 meters of the study limits via desktop aerial and review of available Geographic Information System (GIS) data. FNAI's Cooperative Land Cover GIS data was cross referenced with USFWS's survey protocol to identify suitable habitat (Table 1) and establish observation blocks and survey stations. Proposed observation blocks and survey stations were further verified with field reviews. It was noted during these verification field reviews that cabbage palms (*Sabal palmetto*) were remarkably absent from the landscape. Canopy-level vegetation included oaks (*Quercus* spp.), pines (*Pinus* spp.), and cypress (*Taxodium* spp.). Suitable habitats present within the study area are listed in the Table 1 below.

Table 1 Suitable Habitat Types within the Project Study Area

Suitable Habitat Description per USFWS Survey Protocol	FNAI Cover Code and Description
Lightly wooded areas	1500 – shrub and bushland
Scrub oaks	1200 – high pine and scrub
Cypress	2211 – cypress
Wet prairie	2100 – freshwater non-forested wetlands 2110 – prairies and bogs 2120 – marshes 2121 – isolated freshwater marsh
Improved pasture	183313 – improved pasture
Unimproved pasture	1830 – rural 18331 – cropland/pasture
Woodland pasture	18331 – cropland/pasture
Sod farm	18331 – cropland/pasture
Row crops	18331 – cropland/pasture
Rangeland	See improved, unimproved, and woodland pastures

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Seven observation blocks were selected based on the above habitat types and field reviews (**Appendix A**, Figure 1). Within those blocks, seven survey stations were established based on presence of suitable habitat and vantage points that provide expansive views that can easily observe suitable habitat with binoculars and scopes. All seven stations were observed every other week by four qualified biologists starting on January 7, 2021, and ending April 30, 2021. Surveys began 15 minutes before sunrise and continued for three hours afterwards, totaling 189 survey hours during the entire season.

Species activities were monitored by vehicle at each station. Cabbage palms and oak trees located within sight distance of the project corridor were monitored during each field visit for nesting, roosting, and foraging activity. During each survey, caracara presence/absence was noted in addition to other animal species observed. Observations were also made during transit from one station to the next, noting any species observed along the way, including carcasses located on the side of the road.

3 RESULTS

No crested caracara individuals or caracara nesting activity were observed within the survey area during the 2021 survey. Also, no caracaras were observed at any time during the additional wildlife surveys that were being conducted within the project limits during the same timeframe. Survey data sheets are located in **Appendix B.**

In addition to the 189 hours of crested caracara survey time, approximately 23 hours were spent in the field conducting sand and blue-tailed mole skink surveys to the east of Station 1 in the eastern limits of the project. Of all hours in the field from January through May 2021, no caracaras were observed at any time along the project study area. Table 2 lists dates and results of the caracara survey.

Table 2 Caracara Survey Dates and Results

Field Dates	Caracara Observed
January 7-10, 2021	No
January 19-22, 2021	No
February 2-5, 2021	No
February 16-19, 2021	No
March 1-5, 2021	No
March 16-19, 2021	No
March 31-April 2, 2021	No
April 14-16, 2021	No
April 28-30, 2021	No

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Other Species Observed

While no caracara were observed throughout the duration of the survey season, the following 41 birds and one mammal were observed between January and April 2021. Table 3 provides a list of observed species and their federal and state status.

Table 3 Other Species Observed and Protected Status

Common Name	Scientific Name	Federal Status	State Status
Florida Sandhill Crane	*Grus canadensis*	NL	T
Great Blue Heron	*Ardea herodias*	NL	NL
American Crow	*Corvus brachyrhynchos*	NL	NL
Warbler, Yellow-rumped	*Setophaga coronata*	NL	NL
Hawk, Red Shouldered	*Buteo lineatus*	NL	NL
Cattle Egret	*Bubulcus ibis*	NL	NL
Limpkin	*Aramus guarauna*	NL	NL
Mourning Dove	*Zenaida macroura*	NL	NL
Eastern Phoebe	*Sayornis phoebe*	NL	NL
Eastern Meadowlark	*Sturnella magna*	NL	NL
Southeastern American Kestrel (see note below)	*Falco sparverius paulus* or *F. sparverius sparverius*	NL	T
Wood Stork	*Mycteria americana*	T	T
White Ibis	*Eudocimus albus*	NL	NL
Northern Mockingbird	*Mimus polyglottos*	NL	NL
Eastern Bluebird	*Sialia sialis*	NL	NL
Great Egret	*Ardea alba*	NL	NL
Vireos	*Vireo* spp.	NL	NL
Turkey Vulture	*Cathartes aura*	NL	NL
Boat-tailed Grackle	*Quiscalus major*	NL	NL
Killdeer	*Charadrius vociferus*	NL	NL
Woodpecker, Red Bellied	*Melanerpes carolinus*	NL	NL
Little Blue Heron	*Egretta caerulea*	NL	T
Bald Eagle (see note below)	*Haliaeetus leucocephalus*	NL	P
Black Vulture	*Coragyps atratus*	NL	NL
Osprey	*Pandion haliaetus*	NL	NL
Red-tail Hawk	*Buteo jamaicensis*	NL	NL
Cormorant	*Phalacrocorax* spp.	NL	NL
Sparrow	*Passeridae* spp.	NL	NL
Anhinga	*Anhinga anhinga*	NL	NL
Northern Cardinal	*Cardinalis cardinalis*	NL	NL
Swallow Tail Kite	*Elanoides forficatus*	NL	NL
Muscovy Duck	*Cairina moschata*	NL	NL
Tri-colored Heron	*Egretta tricolor*	NL	T
American Robin	*Turdus migratorius*	NL	NL
Barn Swallow	*Hirundo rustica*	NL	NL
Woodpecker, Pileated	*Dryocopus pileatus*	NL	NL
Black-bellied Whistling Duck	*Dendrocygna autumnalis*	NL	NL
Belted Kingfisher	*Megaceryle alcyon*	NL	NL

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Snowy Egret	*Egretta thula*	NL	NL
Gnatcatcher	*Polioptilidae* spp.	NL	NL
Wild Turkey	*Meleagris gallopavo*	NL	NL
Blue Jay	*Cyanocitta cristata*	NL	NL
Southern fox squirrel (see note below)	*Sciurus niger niger*	NL	NL

Southeastern American Kestrel

There are two subspecies of the American kestrel (*Falco sparverius*) found in Florida: *F. sparverius sparverius* and *F. sparverius Paulus.* The former, a northern subspecies, winters here between September and April. The latter, the southeastern American kestrel is a year-round non-migratory subspecies. Kestrels seen in Florida during May-June are resident southeastern American kestrels (FWC, 2011).

Bald Eagle

A bald eagle's nest was observed off of SR 471 from Station 7 in the northern tree line outside of the project limits. Both adult and juvenile eagles were observed throughout the survey. The nest is located more than 660 feet from the project study area.

Southern fox squirrel

The southern fox squirrel (*Sciurus niger niger*) is one of four subspecies of fox squirrel found in Florida. It was previously classified as the Sherman's Fox Squirrel, *S. n. shermani* and was listed as a species of special concern. However, it was delisted in Florida Fish and Wildlife Conservation Commission's (FWC) 2016-2026 Imperiled Species Management Plan (ISMP). Currently, the only subspecies of fox squirrel listed as state threatened in the ISMP is the Big Cypress fox squirrel (*S. n. avicennia*) found in southwestern peninsular Florida, outside of the project study area.

Carrion Observed

FWC's "Recommended Management Practices for Crested Caracaras" state that caracara can often be observed foraging on carrion along roadways. They have been known to feed with other raptors, such as vultures and bald eagles. Multiple foraging opportunities (i.e., carrion) for caracara were observed within the project study area during the January 2021 to April 2021 caracara survey. During this time, black vultures and turkey vultures were observed

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foraging on carrion, but no caracara individuals were observed. Table 4 below lists the animal carcasses observed throughout the survey timeframe.

Table 4 Carion Observations During Spring 2021 Survey Season

Date	Location	Carrion Observed
January 7, 2021	Station 2 – Keen Rd.	Hog and white-tailed deer
February 2, 2021	Station 3	Opossum, raccoon, and cat
April 29, 2021	Station 4	White-tailed deer

4 EFFECTS DETERMINATION

No caracaras were documented within the project limits during the previous field reviews or the spring 2021 survey season. Therefore, it has been determined that the proposed project will have "no effect" on the crested caracara for the entirety of the proposed project limits. Each segment should be resurveyed during design and permitting if the results of the 2021 survey are more than one year old.

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5 REFERENCES

Florida Fish and Wildlife Conservation Commission (FWC). (n.d.) *Imperiled Species Management Plan 2016-2026*. https://myfwc.com/wildlifehabitats/wildlife/plan/

FWC. (n.d.). *Big Cypress fox squirrel*. https://myfwc.com/wildlifehabitats/profiles/mammals/land/big-cypress-fox-squirrel/

FWC. (n.d.). *Southern fox squirrel.*

https://myfwc.com/wildlifehabitats/profiles/mammals/land/southern-fox-squirrel/

FWC. (n.d.). *Fox squirrel.* https://myfwc.com/wildlifehabitats/profiles/mammals/land/fox-squirrel/

FWC. (n.d.). *American kestrel.* https://myfwc.com/wildlifehabitats/profiles/birds/raptors-and-vultures/american-kestrel/

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Appendix A

Figures

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

This portion of the study area was not considered to be suitable nesting or foraging habitat and no observation points are proposed.

BEGIN STUDY LIMITS

ROCKRIDGE RD

POLK

2

KEENE RD

KELAND ACRES RD

1

W SOCRUM LOOP RD

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Legend

- Limits of Study
- State Counties
- Suitable Habitat
- Observation Block
- 1500-m Buffer
- Non-Suitable Habitat
- Observation Station

FDOT

Figure 1- Proposed Observation Stations

Page 1 of 2

FPID 436673-1-22-01

US 98 (SR 35/700) from West Socrum Loop Road to South of CR 54

Polk County, FL

Data Source:
- FDA
- ESRI

1 inch = 2,200 feet

0 1,100 2,200

Feet

Coordinate System: NAD 1983 Florida State Plane West

N

Document Path: K:\Marketing\Pursuits\21136 US 98 Socrum Loop PD&E 7-20\Sub to AIM\Research\FP Stage\Figure 2 Proposed Observation Points.mxd

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

END STUDY LIMITS

PASCO

POLK

CR 54

OLD DADE CITY RD

SR 471

LAKELAND ACRES RD

7

4

3

5

6

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Legend

- Limits of Study
- State Counties
- Suitable Habitat
- Observation Block
- 1500-m Buffer
- Non-Suitable Habitat
- Observation Station

Figure 1- Proposed Observation Stations

Page 2 of 2

FPID 436673-1-22-01

US 98 (SR 35/700) from West Socrum Loop Road to South of CR 54

Polk County, FL

Data Source:
- FDA
- ESRI

1 inch = 2,200 feet

0 1,100 2,200

Feet

Coordinate System: NAD 1983 Florida State Plane West

Document Path: K:\Marketing\Pursuits\21136 US 98 Socrum Loop PD&E 7-20\Sub to AIM\Research\FP Stage\Figure 2 Proposed Observation Points.mxd

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Appendix B

Survey Data Sheets

USFWS Crested Caracara Draft Survey Protocol – Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: 1

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
1/8/21	7:00	10:00	Shannon Ladd

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 7:00	52°F	0	25%	altocumulus	some low fog in pastures
Finish: 10:00	68°F	W 13 mph	60%	cirrus & ~~strato~~ cumulus	no

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
maintained residential roadway shoulder; low density residential + pasture land great egrets in flight; wood stork in flight to SW red-shouldered hawk perched on utility pole

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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USFWS Crested Caracara Draft Survey Protocol – Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Block: 60 28.242446, -82.005770

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
01/08	7:00	10:10	P. GRIFFIN Primary

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	55°	2mph W	<25%	stratus	low fog
Finish:	63°	11mph W	<50%	stratus	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
pasture w/ cypress/pine breaks woodstork, red shouldered hawk, crow, sandhill cranes, red tailed hawk

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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USFWS Crested Caracara Draft Survey Protocol – Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: 2

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
1/7/21	7:06	10:06	Shannon Ladd

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 7:06	44°F	0	75%	Stratus + Stratocumulus	no
Finish: 10:06	56°F	E 5 mph	90%	Stratus + Stratus	no

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
grassed roadside median w/ adjacent farmlands & low density development wood stork in flight to N; crows in flight + perched on util. cattle egrets in pastures; GBH in flight to E BACK multiple deer + hog carcasses on Keen Rd

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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Florida sandhill cranes in flight to W & in pasture
White Ibis in pasture to W
common dove perched on wire
mockingbird perched on wire
eastern blue birds perched on wire
great egret in flight to S
Vultures on ground | fence & VIREOS TOO
eastern phoebe perched on fence
red-shouldered hawk pair perched in pine & in flight
Turkey vulture in flight

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USFWS Crested Caracara Draft Survey Protocol –
Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: 4

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
1/7/21	7:05 AM	10:06 AM	Niki Gibbs Qualified Observer

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	48°	Calm	25%	Stratocumulus	none
Finish:	58°	Calm	75%	Cirrus, strato-cumulus	none

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Actively grazed, improved pastures w/ cypress wetlands, horse farm + residence, slash pines are prominent along cypress edges

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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Other spp:
FSC GBH Meadowlarks Kestrel
American crow
warblers - yellow rumped
Hawk - unk spp red shoulder or red tailed
Cattle egret
Limpkin Eastern phoebe
mourning dove

USFWS Crested Caracara Draft Survey Protocol –
Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Station 7

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
1/7/21	7:06	10:06	Sam Szanyi (1 season) + Allison Blakely (new)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather Cloudy

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 7:06	47°F	0 mph	80%.	whispy/cirrus	
Finish: 10:06	56°F	5 mph W	95%.	whispy/cirrus	

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
pastures, pine trees, cypress trees, palms

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
Other species →			Blue Heron, crow, wood stork, Bald Eagle White Heron, cattle egret, cormorant, red shoulder hawk, black vulture

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: 3

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
1/7/21	7:05 AM	10:06 AM	Niki Gibbs Qualified Observer

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	48°	Calm	25%	Stratocumulus	none
Finish:	58°	Calm	75%	cirrus, strato-cumulus	none

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Actively grazed, improved pastures w/ cypress wetlands, horse farm + residence, slash pines are prominent along cypress edges

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: 3

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
1/7/21	7:05 AM	10:06 AM	Niki Gibbs Qualified Observer

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	48°	Calm	25%	Stratocumulus	none
Finish:	58°	Calm	75%	Cirrus, strato-cumulus	none

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Actively grazed, improved pastures w/ cypress wetlands, horse farm + residence, slash pines are prominent along cypress edges

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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Other spp:
FSC GBH
American crow
warblers - yellow rumped
Hawk - unk spp red shoulder or red tailed
Cattle egret
Limpkin
mourning dove
meadow larks
Kestrel
Eastern phoebe

* Sherman's Fox Squirrel Observed *

USFWS Crested Caracara Draft Survey Protocol –
Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Station 5

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
1/8/21	7:06	10:06	Sam Statyari (1 season), Allison Brady (New)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 7:06	52°F	0 mph	50%	cumulus	Fog (ground)
Finish: 10:06	61°F	10mph E	80%	cumulus	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Cypress trees, pastures, residential houses, pine trees, mowed + maintained ROW

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Cormorant, Crows, Red Shouldered hawk, Wood Stork, Cattle egret, snowy egret, Bald Eagle, Belted Kingfisher
			Vulture, Mourning Dove, White Ibis

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Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: BLOCK 4

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
1-10	700	1020	PGRIFFIN PRIMARY

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 700	35°	NNE 3 mph	<25%	stratus	—
Finish: 1020	51°	NE 7 mph	<25%	stratus	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
crow, red shoulder hawk, red tailed hawk, woodstork, ibis, great egret, little blue heron, killdeer

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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USFWS Crested Caracara Draft Survey Protocol –
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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Block Lo

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2021-01-19	700	1010	PGRIFFIN - PRIMARY

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 700	35°	NNE 2mph	0	—	frost
Finish: 1010	61°	ENE 8mph	0	—	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Pasture w/ cypress and pine breaks red shoulder hawk, crow, black vulture

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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USFWS Crested Caracara Draft Survey Protocol – Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: 3

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
1/20/21	7:05	10:05	Shannon Ladd (Exp. Observer)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 7:05	39°F	0	0	clear-no clouds	low fog in pastures
Finish: 10:05	60°F	0	0	clear	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
maintained R/W adj to US 98; surrounding land cover incl. wetland, pastureland & ROW

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

DRAFT

GBH
great egret } flyover to W
flock of ibis

crow flyover | perched on util. + eating trash roadside
juvenile bald eagle flyover foraging in
hawk audible (red shouldered or tailed?)
woodpecker audible
red shouldered hawk perched in cypress
eastern phoebe perched on fence
wood stork foraging in wetland on E side of TB

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USFWS Crested Caracara Draft Survey Protocol – Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long:

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
1/21/21	7:05	10:05	Nicole Cribbs, qual. OBs.

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	41°F	0	0	—	—
Finish:	62°F	W 5mph	0	—	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Rural neighborhood - ranchettes, adjacent to MHP

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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			N. Cell tower – no activity

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Sparrows – perched on wire
Turkey Vulture – Fly over
Bis flying
Blue jays
Killdeer
Barn swallow

Cattle egrets fly over
Red shouldered hawk, perching on wooden util pole
Ducks flying out of MHP } to N.
great egret " " "
Sandhill crane fly over to N
Am. Crows – fly over
Mourning dove – perching
Northern Cardinal

Red bellied woodpecker – on wood pole w/cavity

Grackles fly, perch on OT
Eastern bluebirds, forag

Phoebe – in grass, fence
Antlion Fly

USFWS Crested Caracara Draft Survey Protocol –
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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: station 2

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
1/21/21	7:05	10:06	SS & AB

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 7:05	41°F	0mph	0%	N/A	N/A
Finish: 10:05	59°F	0 mph	0%	N/A	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Cypress, open fields, maintained row, pine/oak habitat, white heron

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Blue heron, crows, woodstork, FSHC x2,

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Station #5

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
1/22/20	7:05	10:05	AB + SS

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 7:05	55 °F	7mph N	0%	N/A	N/A
Finish: 10:05	65°F	6mph NE	15%	Cirrus	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Maintained Row, Cypress, Pine, Pasture land

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
Station 5			Crow, Cattle egret, Grey Heron, Mocking bird Wood stork, White heron, Red bellied woodpecker Sandhill Cranes, Sherman's Fox Squirrel
			Red shouldered Hawk, White Ibis, Turkey Vulture

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USFWS Crested Caracara Draft Survey Protocol –
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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: 7

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
1/22/21	7:05	10:05	Nicole Cribbs, Qual. Obsv.

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	54°F	Calm	20%	Cirrus	—
Finish:	65°F	SW 6 mph	—	—	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Actively grazed cattle pasture

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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Bald eagle (mature) flew from N → perch in snag by US 98
nest in treeline to N
Medowlarks in pasture
Wood storks foraging in ag pond
wading birds- egets
Osprey flyover - ag pond. pasture
GBH, anhinga on island in pond

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Block 4

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2021.01.22	700	1010	PGRIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 700	54°	SW 5 mph	0	—	low fog
Finish: 1010	68°	WSW 10 mph	0	—	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
white ibis, crow, red shoulder hawk, turkey vulture, osprey US 98 and pasture w/ pine & cypress

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Station 3

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2/2/21	6:59	9:59	Sam Szollyari (1 season)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 6:59	44°F	SW 12mph	100%	Alto-stratus	N/A
Finish: 9:59	44°F	NW 17mph	5%	Cirrus	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
open pasture, cypress dome, pine habitat

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Crow, turkey vulture, wood stork (flying W from SE), black vultures, red-bellied robin, red shoulder hawks
			Roadkill opossum, raccoon, & cat

DRAFT

Feb 2nd
Sunrise 7:16am

USFWS Crested Caracara Draft Survey Protocol – Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: BLOCK 6

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2021.02.02	700	1015	PBRIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 700	43°	NNW 15 mph	50%	stratus	—
Finish: 1015	46°	NW 15 mph	0	—	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Pasture w/ cypress + pine clumps crow, black & turkey vulture, woodstork

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

DRAFT

USFWS Crested Caracara Draft Survey Protocol – Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: 4

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2/3/21	6:59	9:59	Channen Ladd | Qualified

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 6:59	37°F	0	clear	none	—
Finish: 9:59	48°F	8mph N	Clear	none	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
maintained roadway R/W w/ adjacent wetlands & pasture w/ cattle

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

DRAFT



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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Station 2

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2/4	6:59	9:59	AB and NC

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 6:59	32°	0	15 %	Cirrus	N/A
Finish: 9:59	47°	4 mph W	30%	Cirrus	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Maintained ROW, Slash pine, Cypress, Wax myrtle Live Oak

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			White Ibis, Crow, Wood Stork Sandhill Crane, Tricolored Heron Mourning Dove

DRAFT

USFWS Crested Caracara Draft Survey Protocol –
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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: BLOCK 1

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2021-02-05	700	1000	PGRIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 700	46°	S 6mph	10%	stratus	—
Finish: 1000	66°	SSW 11mph	10%	stratus	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
rural residential / agricultural sandhill cranes, cows, egret, grackle, dove, bluebird, vulture, blue jay

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

DRAFT

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Station 5

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2/5/21	6:59	9:59	Sam Stamar. (qualified obs.)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 6:59	43	4mph N	1%	Cirrus	N/A
Finish: 9:59	64	10mph N	5%	Cirrus	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
pasture, cypress, pine, mowed Row

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
Flyers:			Crow, FSHC, great egret, black/turkey vultures
Perched:			red shouldered hawk
Foraging:			snowy egret, cattle egret
Other animals:			sherman fox squirrel

DRAFT

USFWS Crested Caracara Draft Survey Protocol – Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: T

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
	6:59	9:59	Shannon Ladd / qualified

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 6:59	42°F	4mph S	25%.	Cirrus	—
Finish: 9:59	64°F	10 mph S	30%.	cumulus & altostratus	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
maintained R/W w/ adjacent pasture land w/ cattle, drainage ditches, & forested uplands

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

DRAFT

great egrets flyover
bald eagle, adult, perched on snag
crow perched on tree + foraging on ground
GBH flyover
snowy egret perched on tree in offsite
pond in pasture
meadowlark audible + foraging in pasture
bald eagle, adult, perched in offsite nest
hawk (red-shouldered or red-tailed) audible
warbler, yellow rumped perched on
fence
killdeer foraging in pasture
turkey vulture flyover

DRAFT

USFWS Crested Caracara Draft Survey Protocol –
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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Block 7

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2021.02.19	645	950	PGRIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 645	72°	SSW 8 mph	50%	low stratus	—
Finish: 950	77°	SW 13 mph	75%	loc stratus	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
pasture w/ pine + oak bald eagle, great blue heron, wood stork

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

DRAFT

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: BLOCK 6

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2021-02-16	6:45	1000	PGRIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 645	62°	WNW 10	100%	stratocomulus	—
Finish: 955	64°	WNW 10	100%	stratocomulus	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
agriculture pasture w/ cypress & pine red tailed hawk, black vulture, turkey vulture, turkey, crow

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

DRAFT

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Station 1

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2/17/21	6:50	9:50	SS (one season)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 6:50	56°F	SW 6mph	99%	Stratus	Rain on ~~off~~
Finish: 9:50	59°F	S 7mph	100%	Stratus	Rain on ~~off~~

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Residential houses, open fields, pine habitat

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
Flyover			Woodstork (NE) ~~444~~ TTN. 1, great egret, black vulture, crow
Perched			Dove, eastern bluebird, crow.
Foraging			Sparrows, eastern bluebird

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: 2

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2/17/24	6:50	9:50	Shannon Ladd / experienced

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 6:50	56°F	NW 6 mph	95%	cumulostratus	N
Finish: 9:50	59°F	NE 7mph	100%	+ altostratus	~~N~~ Y light rain

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
maintained R/W w/ adjacent church, low density residential & pastureland

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

DRAFT

mockingbird perch to flyover
warblers perched on fence + foraging in pasture
american robin foraging in pasture
great egret flyover
doves perched on utilities
killdeer foraging in pasture
wood stork flyover
american crow flyover

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Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: 4

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2/18/21	6:50	9:50	Allison Blakely, Niki Cribbs

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	71F	8mph S	100%	cirrus	none
Finish:	77F	10 mph SSE	70%	cumulus	none

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
open pastures

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

DRAFT

DRAFT

Great egret
Turkey vulture
Eagle fly in from W, perched on power pole
Meadow lark
anhinga
woodstork flying over

USFWS Crested Caracara Draft Survey Protocol –
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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: 5

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2/18/21	6:49	9:49	Shannon Ladd | qualified

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 6:49	71°F	S 12 mph	100%	Stratus | alto-stratus	—
Finish: 9:49	77°F	S 10 mph	50%	cumulus	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
maintained R/W w/ adjacent active pastureland (cows & horses), upland forested, wetland forested & low density residential

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

DRAFT

Crow flyover
Warblers perched on fence
great egret flyover + foraging in roadside wetland
Osprey flyover + perched on nest in cell tower
Snowy egret foraging in roadside ditch
Red shouldered hawk perched in oak
Black vultures circling
FSC pair foraging in offsite pasture

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Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: 3

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2/19/21	6:49	9:49	AB: Trainee NC; Qualified observer.

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	72°	7mph N	95%	Cirrus	N/A
Finish:	73	10 mph S	95%	Cumulus	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
maintained Row, Cypress, Sweet gum, Pasture, Slash Pine

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			American Crow, Cattle Egret Sandhill crane Pair, wood Stork Meadow lark, eastern Phoebe Killdeer, Robin
			barnswallows, turkey vulture Little Blue Heron Bald Eagle white heron
			Redshouldered hawk

DRAFT

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Block 7

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2021-03-01	645	1000	PGRIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 645	69°	ENE 3 mph	50%	stratus	—
Finish: 1000	73°	ESE 5 mph	25%	stratos	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
improved pasture w/ oak cypress pine bald eagle, greater egret, red shouldered hawk, wood stork

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

DRAFT

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Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: BLOCK 6e

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2021.03.01	645	1000	PGRIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 645	72°	S 5 mph	50%	low stratus	—
Finish: 1000	78°	SSW 10 mph	50%	low stratus	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
improved pasture w/ pine and cypress red tailed hawk, black vulture, crow

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

DRAFT

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Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: \

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
3/2/21	6:37	9:37	Shannon Ladd | Qualified

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 6:37	70 F	S 7 mph	100 %	altostratus	NO
Finish: 9:37	71 F	NE 4 mph	85 %	cumulus | stratus	NO

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
maintained R/W w/ adjacent low density residential + cattle pasture

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

DRAFT

red shouldered hawk perched on util.
dove perched on util.
cattle egret in pasture + snowy egrets
wood stork flyover
eastern bluebird perched on util.
mocking bird perched on util.
crow flyover
black vulture flyover
osprey flyover
great egret flyover
white ibis foraging in pasture
sandhill crane flyover
warblers perched on fence

DRAFT

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Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: 2

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
3/2/21	6:37	9:37	Niki Gribbs Qual. Obs.

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	70°F	E 6mph	100	overcast	none
Finish:	71°F	NE 4 mph	90	overcast	none

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
active pastures, low density residential/ranchettes Scattered cypress domes in open pastures laurel oaks + Pine, Church

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Red shoulder Hawk perching on Post Am. crow, mourning dove
			Mockingbirds perching white ibis – flying + landing behind church (x2) Cattle egret fly over
			meadow lark perching Robins in pasture foraging pair of eagle flyover W ⇒ E

DRAFT

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Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Station 4

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
3/3/21	6:36	9:36	SS (one sen) AB

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 6:36	70°F	10mph E	100%	Cumulonimbus	Rain
Finish: 9:36	70	16	98%	"	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Cow pastures, cypress domes, mowed/maintained ROW

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Crow, Red shouldered hawk cattle egret

DRAFT

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Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Station 3

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
3/5/21	6:35	9:35	SS (one season)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 6:35	46°F	5mph - South	5%	Cirrus	N/A
Finish: 9:35	61°F	5mph - South	0%		N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
open pasture, pine habitat, & cypress domes

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Flyovers: American Crow, Black Vulture
			Perched: Red shoulder hawk

DRAFT

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: 5

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
3/5/21	6:35	9:35	N. Cubbs - Qualified, Allison Blakely

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	44°	0 mph	10%	high cirrus	light ground mist in pastures
Finish:	61°	NNE 5 mph	10%	"	Clear

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
pastures w/ranches and smaller rural residences live oaks, laurel, cypress, small ag ponds

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Osprey @ N cell tower, osprey bringing nest material to nest @ BH fly over to south iBis in pasture
			black vultures, ibis flock robin in pasture meadow larks perching on wires
			Eastern pheobe Knot catches Swallow tail kite over pasture

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USFWS Crested Caracara Draft Survey Protocol –
Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: BLOCK 7

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
3/19/2021	715	1030	PGRIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 715	60°	NW 7mph	50%	stratus	—
Finish: 1030	65°	NW 11 mph	50%	stratus	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
pasture, pine/oak/cypress woodstork, bald eagle, vulture, crow, red ~~shouldered~~ hawk,

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Station 5

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
3/16	7:21	10:21	SS (one season) + AB (new)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 7:21	63°F	N 4MPH	0%	N/A	N/A
Finish: 10:21	74°F	N 8MPH	10%	Cumulus	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Pasture, cypress domes, mowed/maintained R/W

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Perched: Robin, Limpkin
			Flyover: Crow, white ibis, Great Blue Heron, Woodstork, Vulture

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USFWS Crested Caracara Draft Survey Protocol – Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: 1

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
3/17/21	7:20	10:20	Nicole Cribbs Qualified

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	63	SE 5 MPH	0	0	none
Finish:	74	S 10 MPH	10%	Cirrus	none

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Rural residential nighborhood, small pastures + homes, buildings

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			grackles anhinga flying - uses pond in front of house unk. ducks flying
			FSC (4) flying to N mourning doves on wire juvenile eagle flying N-S
			cattle egrets in pasture swallow tail kites-4 over pasture turkey vulture
			GBH flying N-S w/ibis

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USFWS Crested Caracara Draft Survey Protocol –
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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Station 4

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
3/17/21	7:20	10:20	SS and AB

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	63°F	0	0	N/A	N/A
Finish:	74	10 mph N	10%	Cirrus	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
	Flyovers:		Crows, wood stork x2 mourning dove, Meadowlark Black vulture, Great Blue Heron
			Cattle Egret

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USFWS Crested Caracara Draft Survey Protocol – Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: BLOCK 6

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
3/18/2021	715	1015	PGRIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 715	67°	S 8mph	100%	stratus	—
Finish: 1015	75°	SSW 10mph	100%	stratus	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
pasture / pine and cypress hammocks turkey, vulture, crows, red tailed hawk

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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USFWS Crested Caracara Draft Survey Protocol –
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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: 2

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
3/19/21	7:18	10:18	Nicole Gibbs, Qualified

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	60°F	~~0~~	25	Cumulus	~~0~~
Finish:	63°F	WNW 14	90	"	~~0~~

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			mourning doves cattle egret mocking birds
			wood stork flying to south Red shoulder hawk turkey vulture

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USFWS Crested Caracara Draft Survey Protocol –
Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Station 3

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
3/19	7:18	10:18	SS (one season)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 7:18	58°F	0 mph	30%	cumulus	N/A
Finish: 10:18	63°F	14mph E	75%.	cumulus	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
pasture, pine/oak habitat, cypress domes, mowed/ maintained R/W

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
	Flyover:		Woodstork (N), crow, FSHC (S), great egret (N), ibises, swallowtail kite, black vulture
	Perched:		Crow, pileated woodpecker

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Station 3

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
3/31/21	7:04	10:04	SS and AB

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: ~~7:04~~	69°	4 mph ESE	40%	Cirrus	N/A
Finish: 10:04	78	7mph SSE	50%	Cirrus	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Maintained ROW, Small Slash Pines, open land, Pasture, roadway

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
		Flyover:	Red Shouldered hawk, Crow Great Egret, Vulture
		Perching	

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: _____

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4/2/2021	715	1015	PGRIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 715	48°	N 9 mph	0	—	—
Finish: 1015	55°	N 15 mph	0	—	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
pastures, oak pine cypress wood storks, great blue heron, cattle egrets, bald eagle, red shoulder hawk

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Station 4

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
~~4~~ 4/1/21	7:03	10:03	SS (one season) + AB (training)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 7:03	66°F	0 MPH	100%		Fog 100%
Finish: 10:03	70°F	8 MPH NNW	35%	Cirrus	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Cypress trees, pasture, mowed ROW

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Flyovers: crow, morning dove, FSHC
			Perched: cattle egrets

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: STATION 6

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4/01/21	715	1015	PGRIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 715	60°	calm	100%	fog/stratos	light fog
Finish: 1015	72°	NW 10	100%	stratos	intermitten sprinkle

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Pasture w/ cypress & pine intermitten sprinkles turkey, crow, greater egret, vulture

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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USFWS Crested Caracara Draft Survey Protocol – Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: /

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4/1/21	7:03	10:04	Niki Cibbs Qualified

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	66°F	calm	50	cumulus	light fog
Finish:	70°F	NNW 8mph	60%	"	none

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			white ibis foraging in residential pond mourning dove on OH wire Blue jay, crow
			SHC in pasture - walking (adult, one bird) making bird meadowlark

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: 2

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4/2/21	7:02	10:02	Niki Cubbs, Qualified

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	43°F	Calm	0	0	—
Finish:	52°F	NNE 15mph	0	0	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			white ibis meadowlark turkey vultures
			mocking bird GBH flying over crows

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Station 5

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4/2/21	7:02	10:02	SS (one season)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 7:02	44°F	10 MPH S	0%	N/A	N/A
Finish: 10:02	52°F	15 MPH SW	0%	N/A	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
pasture, cypress trees, oaks, mowed ROW

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Flyovers: crows, ibis, great blue heron, black vulture
			Perched: Robin

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: STATION 7

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4/16/2021	0645	1000	PGRIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 0645	65°	calm	–	–	thick fog
Finish: 1000	70°	NE 3	90%	stratocumulus	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Pasture w/ oak, pine + cypress grackle, crow, wood stork, bald eagle, black vulture

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: STATION 5

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4/13/2021	650	10:10	PGRIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 650	56°	N 1mph	–	—	thin fog
Finish: 1010	73°	NNE 7mph	–	—	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Pasture w/pine cypress crows, bald eagle, greater egret, black vulture

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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Location/Observation Block/Lat-Long: Station 1

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4/14/21	6:48	9:48	SS (one season)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 6:48	59°F	0 MPH	N/A	N/A	Fog 100%
Finish: 9:48	72°F	9 MPH NW	30%	cirrus	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
residential houses, mowed pasture, oaks, & pine

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Flyovers: ibis, morning doves, muscovy ducks, great egret
			Perched: cardinal Foraging: cattle egret

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USFWS Crested Caracara Draft Survey Protocol – Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: 3

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4/14/21	6:48	9:48	Niki Cribbs, Qualified

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	60°F	NNE 6mph	0	0	light fog
Finish:	72°F	ESE 9mph	20%	high cirrus	clear

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Active pasture, cypress dome wetlands

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Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			mourning dove – perching on OH wire, Fence Post meadowlark Crow
			white ibis Great egret Swallow tailed kite
			GBH Snowy Egret @ culvert

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Location/Observation Block/Lat-Long: STATION 6e

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4/14/21	6:45	1000	PGRIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 6:45	58°	N 5 mph	25%	cirrus/stratus	thin low fog
Finish: 10:00	72°	SE 9 mph	25%	cirrus + stratus	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Pasture w/ cypress + pine crow, red shoulder, black vulture + turkey vulture

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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Location/Observation Block/Lat-Long: station 2

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4/16	6:48	9:48	SS (one season)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 6:48	65°F	0 MPH	N/A	N/A	Fog 100%
Finish: 9:48	69°F	0 MPH	100%	Stratus	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Mowed ROW + pasture, cypress ~~trees~~, pine, oaks

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Perched: Crow, Mourning dove, Northern mockingbird
			Flyover: Ibis, sparrow, crow
			~~[illegible]~~ Foraging: Ibis

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E & S4

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: 4

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4/16/21	6:48	9:48	Nicole Cubbs Qualified

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	65°F	Calm	0	0	lt. fog
Finish:	70°F	Calm	75	cumulus	clear

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Meadowlark Turkey vulture Swallow tail kite
			Mourning dove

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USFWS Crested Caracara Draft Survey Protocol –
Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Station 7

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2021-04-28	635	935	PGRIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 635	58°	NE 3mph	—	—	—
Finish: 935	75°	E @ 9mph	—	—	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Pasture w/ oak, pine + cypress great blue heron, wood stork, bald eagle, turkey + black vulture

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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USFWS Crested Caracara Draft Survey Protocol –
Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: STATION 5

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2021.04.26	635	935	T GRIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 635	55°	CALM	—	—	low fog
Finish: 935	72°	NE 6mph	—	—	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
rural pasture w/ pine, oak, cypress black vulture, red shoulder, crow, eagle

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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USFWS Crested Caracara Draft Survey Protocol –
Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Station 1

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4/27	[redacted]	[redacted]	SS (one season)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

6:36 9:51

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 6:36 [redacted]	68°F	W 6MPH	45%	Cirrus	N/A
Finish: 9:36	75°F	W 9 MPH	15%	"	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
pasture, pine trees, oak, residential houses

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
		Perched:	Redbellied woodpecker, FSHC, crow
		Flyovers:	Ibis, morning doves, blue jay, blackbird (grackle), muscovy ducks, swallowtail kites, osprey, Black vulture

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USFWS Crested Caracara Draft Survey Protocol –
Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Station 6

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2021_04_27	630	945	FGRIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 630	62°	NE 3mph	—	—	—
Finish: 945	75	NE 9mph	—	—	—

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
Pasture w/ pine and cypress vulture, red tailed hawk, turkey, crows

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

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USFWS Crested Caracara Draft Survey Protocol –
Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Station 2

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4/28	6:36	9:36	SS (one season)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 6:36	59°F	S 4 MPH	1%	Cirrus	Fog (minimal)
Finish: 9:36	72°F	W 8 MPH	1%	"	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area
pasture, cypress, pines, cabbage palms, mowed row

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
		Perched:	morning doves, northern mockingbird
		Flyover:	crow, cattle egret, ibis, great blue heron, great egret, black vulture

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USFWS Crested Caracara Draft Survey Protocol – Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: _____

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4/29/21	6:32A	9:35A	Tia Norman/experienced

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	67°	6 mph ESE	0%	none	min. ground fog
Finish:	77°	8 mph SE	10%	cumulus	none

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
4			-meadowlarks (audible) perched on low veg -boat-tail grackles (perched/flyover) W -white ibis (flyover) NW -great blue heron (flyover) NE
			-Sandhill cranes (foraging) -mourning dove (flyover - NE) -Swallow-tail kite circling block -cattle egrets (flyover - SE)
		12:30P	Vultures observed foraging on deer carcass on east side of US 98 @ south end of Cypress Lake

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USFWS Crested Caracara Draft Survey Protocol –
Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: _____

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4/30	6:34A	9:34A	Tia Norman/experienced

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	65°	0mph	20%	cirrus	none
Finish:	77°	6mph WNW	50%	cumulus	none

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
3			- crow (flyover - E) - black-bellied whistler ducks (flyover - S) - meadowlarks (audible, foraging, perched)
			- white ibis (flyover - W) - great egret (flyover - E) - cattle egrets (flyover - SW) + foraging - red-bellied woodpecker (audible)
			- cardinals (audible)

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APPENDIX G

Wood Stork Foraging Analysis

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Wood Stork Foraging Analysis

Florida Department of Transportation

District One

SR 35 (US 98) PD&E Study

Limits of Project: From North of West Socrum Loop Road to South of CR 54

Polk County, Florida

Financial Management Number: 436673-1-22-01

ETDM Number: 14334

Date: October 2021

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

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1 INTRODUCTION

The Florida Department of Transportation (FDOT) is conducting a Project Development & Environment (PD&E) study to evaluate alternatives for widening US 98 from north of West Socrum Loop Road to south of County Road (CR) 54 from a two-lane undivided highway to a four-lane divided highway in unincorporated Polk County, a distance of 8.7 miles. The proposed project includes accommodations for pedestrian and bicycle traffic, safety improvements, and signage. A project location map is provided in **Figure 1-1** below.

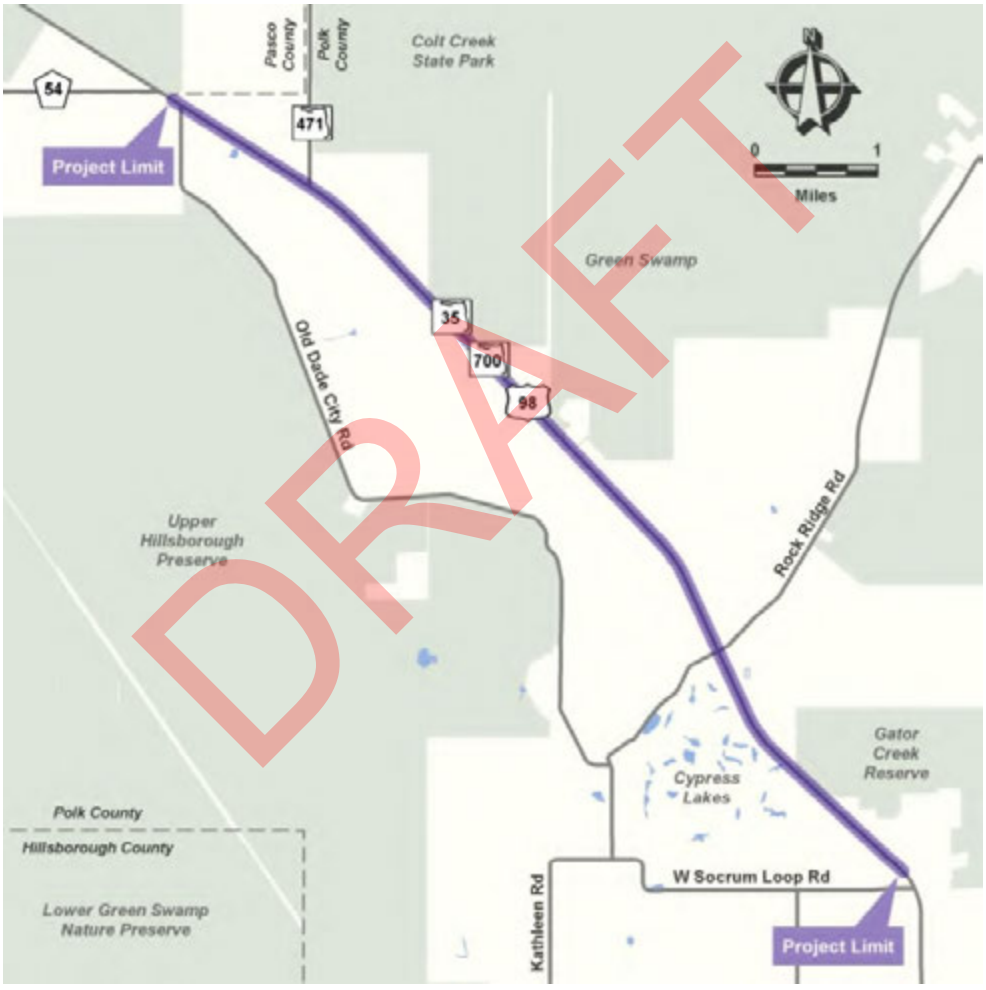


Figure 1-1 Project Location Map

In an effort to gather the information needed for the US Fish and Wildlife Service (USFWS) to initiate Section 7 Consultation as part of the PD&E Study, a Wood Stork Foraging Analysis has been prepared per the USFWS-approved "Wood Stork Foraging Habitat Assessment Methodology" dated July 12, 2012 (herein referred to as the "Methodology". The following sections outline the methodology and calculation of prey-base analysis, the

assessment of loss of suitable foraging biomass, and potential mitigation alternatives. The goal of the exercise was to determine the amount of compensation required to offset the loss of suitable wood stork foraging habitat associated with the Proposed Project.

2 FORAGING ASSESSMENT METHODOLOGY

Wood stork foraging biomass calculations were conducted for all wetlands impacted by the proposed project that can be considered potential wood stork foraging habitat. The proposed project will result in a total of 23.48 acres of impact to potential wood stork foraging habitat. **Table 2-1** below lists the acreage of proposed impact, by wetland number and classification, to suitable wood stork foraging habitat within the project limits. The locations of individual wetlands are depicted on **Figure A-9** of the Natural Resources Evaluation Report that was prepared as part of the PD&E Study. These wetlands are located within existing right-of-way of US 98. Only temporary impacts to existing other surface waters (i.e., ditches) may occur to accommodate the proposed project as they are proposed to be replaced in-kind; therefore, no net loss of wood stork suitable foraging habitat is anticipated as a result of proposed impacts to other surface waters.

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Table 2-1 Proposed Impacts to Suitable Wood Stork Foraging Habitat

Wetland ID	FLUCFCS Code and Description	USFWS Classification	Watershed/ERP Basin	Acres
WL 1	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.31
WL 2	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.07
WL 3	617 – Mixed Wetland Hardwoods	PFO1C	Withlacoochee River	0.08
WL 4	617 – Mixed Wetland Hardwoods/641 – Freshwater Marsh	PFO1C/PEM1C	Withlacoochee River	0.51
WL 5	631 – Wetland Scrub	PSS1C	Withlacoochee River	<0.01
WL 6	630 – Forested Wetland Mix	PFO1/2C	Withlacoochee River	0.05
WL 7	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.81
WL 8	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.70
WL 9	630 – Forested Wetland Mix	PFO1/2C	Withlacoochee River	0.60
WL 10	630 – Forested Wetland Mix	PFO1/2C	Withlacoochee River	0.26
WL 11	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.03
WL 12	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.56
WL 13	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.76
WL 14	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.24
WL 15	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.31
WL 16	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.43
WL 17	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.15

Wetland ID	FLUCFCS Code and Description	USFWS Classification	Watershed/ERP Basin	Acres
WL 18	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.22
WL 19	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.58
WL 20	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.43
WL 21	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.05
WL 22	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.27
WL 23	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.12
WL 24	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.15
WL 25	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.21
WL 26	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.30
WL 27	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.47
WL 28	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.09
WL 29	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.25
WL 30	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.01
WL 31	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.56
WL 32	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	1.27
WL 33	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.29
WL 34	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.05
WL 35	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.09
WL 36	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.03
WL 37	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.25
WL 38	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.21
WL 39	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.30
WL 40	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.13
WL 41	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.05
WL 42	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.67
WL 43	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.33
WL 44	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.45
WL 45	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.38
WL 46	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.41
WL 47	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.35
WL 48	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	0.53
WL 49	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.46
WL 50	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	0.15
WL 51	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	0.28
WL 52	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.48
WL 53	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.11
WL 54	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.49
WL 55	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.68
WL 56	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.78
WL 57	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.34

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Wetland ID	FLUCFCS Code and Description	USFWS Classification	Watershed/ERP Basin	Acres
WL 58	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.73
WL 59	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.52
WL 60	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.58
WL 61	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.85
WL 62	621 – Cypress	PFO2C	Hillsborough River	0.87
WL 63	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.09
WL 64	631 – Wetland Scrub	PSS1C	Withlacoochee River	0.28
WL 65	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.42
			TOTAL	**23.48**

Sources: FDOT, 1999; Cowardin *et al.,* 1979; FDA, 2021.

Wetlands were evaluated based on four parameters in accordance with the Methodology: the density of the vegetation within suitable wood stork foraging habitat, the hydroperiod of each impacted wetland, the size of available prey, and potential competition from other wading bird species.

To calculate the wood stork foraging biomass potentially lost as a result of the proposed project, each impacted wetland was assigned an appropriate hydroperiod class based on data collected during field reviews. Hydroperiod classes range from Class 1, which includes inundation for 0-60 days, to Class 7, which includes inundation for 330-365 days per year. The USFWS defines wetlands that are inundated for 0 to 180 days per year as having a "short hydroperiod" and includes Classes 1 through 3. Wetlands inundated for 180 days to 360 days per year are considered as having a "long hydroperiod" and include Classes 4 through 7 (as provided in Parameter 2- Wetland Hydroperiod of the Methodology). All wetlands included in the foraging analysis for the proposed project have short hydroperiods and determined to be within the hydroperiod Class 2 (inundated 60-120 days). The hydroperiod class table is found in Table WSM 4 of the Methodology.

Prior to conducting biomass calculations, the acreage of impact to each wetland was converted to square meters (m^2). The conversion of 23.48 acres of total direct wetland impacts equates to 95,020 m^2 .

The total biomass per hydroperiod class was established using Table WSM 11 in the Methodology. Each wetland was assigned a total biomass number based on class according to Table WSM 11. Using Table WSM 3 from the Methodology, each wetland was assigned a Wood Stork Foraging Suitability Index ranging from 1.00 for exotic coverage between 0-25 percent cover, 0.64 for exotic coverage between 26-50 percent, 0.37 for exotic coverage between 51-75 percent, and 0.03 for exotic coverage between 76-100 percent. The values used to determine the forage biomass loss is provided in **Table 2** below.

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Table 2-2 Forage Biomass Lost

Hydroperiod Class[1]	Area (m^2)	Average Percent Nuisance/Exotic Vegetation	Foraging Suitability Index	Total Biomass[2]	Forage Biomass Lost (Kilograms)[3]
Class 2	95,020	26-50	0.64	0.2015 gram/m^2	12.25

[1] As defined by the USFWS Wood Stork Foraging Habitat Assessment Methodology dated July 12, 2012 (Table WSM 4).
[2] As defined by the USFWS Wood Stork Foraging Habitat Assessment Methodology dated July 12, 2012 (Table WSM 11).
[3] Calculations based on total direct impact area (m2) multiplied by the total biomass hydroperiod and the exotic suitability foraging index. The total was divided by 1000 to convert to kilograms.

According to Kahl's estimate (1964), 201 kilograms of forage is required for a successful wood stork nest. Based on the proposed project's total biomass loss of 12.25 kilograms, this represents the loss of 0.06 nest.

3 CONCLUSION

To compensate for the loss of wood stork foraging habitat, the FDOT is committed to purchasing USFWS-approved wood stork credits from a mitigation bank that, at a minimum, offset 12.25 kilograms of short hydroperiod forage biomass losses. There are several private wetland mitigation banks available that service the Hillsborough River and Withlacoochee Watersheds, are state and federally permitted, and provide wood stork foraging habitat. Each wetland impact will be mitigated dependent on the watershed it occurs in to satisfy state and federal mitigation requirements. **Table 3-1** below lists the current permitted mitigation banks servicing the Hillsborough River and Withlacoochee River Watersheds. It is anticipated that the FDOT will purchase wetland credits from one or more of the banks listed below to offset the loss of the wetland functions and wood stork foraging habitat resulting from the proposed project.

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Table 3-1 Current Wetland Mitigations Bank Options

Mitigation Bank	Watershed	Forested (F)/ Herbaceous (H) Credits
Hilochee	Withlacoochee River	F/H
Withlacoochee River	Withlacoochee River	F/H
Fox Branch	Hillsborough River	F/H
Hillsborough River	Hillsborough River	F/H
Two Rivers	Hillsborough River	F/H
Boarshead Ranch	Withlacoochee/Hillsborough River	F/H
Crooked River	Withlacoochee River	F/H
Wiggins Prairie	Hillsborough River	F/H
North Tampa	Hillsborough River	F
Green Swamp	Withlacoochee River	F

Conversion factors for the short hydroperiod will be dependent on the mitigation bank from which the FDOT chooses to purchase credits. As part of the PD&E Study, wetland impacts were assessed using the Uniform Mitigation Assessment Methodology (UMAM), Chapter 62-345, Florida Administrative Code. Based on the UMAM analyses performed, construction of the proposed project will result in the functional loss of approximately 14.93 credits (includes permanent and secondary wetland impacts).

Pursuant to the 2010 USFWS Wood Stork Effect Determination Key the Proposed Project is not located within 2,500 feet (0.47 mile) of an active nesting wood stork colony, and suitable foraging habitat will be compensated in accordance with Section 404(b) of the Clean Water Act and the USFWS Habitat Management Guidelines for the Wood Stork in the Southeast Region through purchase of federal credits at a federally approved mitigation bank. Based on this information, it has been determined that the proposed project “may affect, but is not likely to adversely affect” the Wood Stork.

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APPENDIX H

Wetland Descriptions and Photos

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APPENDIX H.1

Wetland Descriptions

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Wetland 1
Watershed: Withlacoochee River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 1 is located within the northbound US 98 right-of-way approximately 0.3 mile northwest of Hall Road/West Socrum Loop Road. Wetland 1 consists of a primrose willow (*Ludwigia peruviana*)-dominated freshwater marsh that extends outside of the right-of-way into a forested wetland system. A pipe culvert that runs underneath US 98 connects Wetland 16 to other offsite wetland systems. Other vegetation present within Wetland 1 includes smartweed (*Polygonom* spp.), maidencane (*Panicum hemitomon*), bulrush (*Scirpus* sp.), and torpedo grass (*Panicum repens*). Dominant vegetation within the adjacent forested wetland system includes red maple (*Acer rubrum*) and water oak (*Quercus nigra*). During the 2021 field reviews, surface water was observed throughout the wetland and soils observed indicated a dark surface with muck present. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 2
Watershed: Withlacoochee River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 2 is located within the northbound US 98 right-of-way approximately 0.6 mile northwest of Hall Road/West Socrum Loop Road. Wetland 2 is a maidencane-dominated freshwater marsh that extends outside of the right-of-way into a forested wetland system. Other vegetation present within Wetland 2 includes primrose willow, west Indian marshgrass (*Hymenachne amplexicaulis*), and smartweed. Vegetation observed within the wetland outside of the right-of-way consists of buttonbush (*Cephalanthus occidentalis*), Carolina willow (*Salix caroliniana*), and red maple. During the 2021 field reviews, the soils observed within Wetland 2 were saturated at the surface and comprised of organic matter indicating a dark surface. In addition to the saturation, hydrological indicators observed within this wetland system included water-stained leaves. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 3
Watershed: Withlacoochee River
FLUCFCS: 617 – Mixed Wetland Hardwoods
USFWS: PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 3 is located within the northbound US 98 right-of-way approximately 0.7 mile northwest of Hall Road/West Socrum Loop Road. Wetland 3 is a forested wetland that connects to other off-site wetlands via a cross drain that runs underneath US 98. Dominant vegetation within the canopy of Wetland 3 consists of red maple and water oak. Dominant groundcover species consists of primrose willow, beggarticks (*Bidens* sp.), limpograss (*Hemarthria altissima*), and elderberry (*Sambucus candadensis*). During the 2021 field reviews, the soils observed within Wetland 3 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 3 included a high water table, saturation, aquatic mosses/liverworts, elevated lichen lines, hummocks, and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species that is routinely mowed with no hydrological indicators present.

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Wetland 4
Watershed: Withlacoochee River
FLUCFCS: 617 – Mixed Wetland Hardwoods/641 – Freshwater Marsh
USFWS: PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded/PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 4 is located within the northbound US 98 right-of-way approximately 0.2 mile southeast of the entrance to Gator Creek Preserve and extends outside of the project area. Wetland 4 is comprised of both a forested and herbaceous system and is connected to wetland systems outside of the project area via a cross drain that runs underneath US 98. Dominant vegetation within the canopy of the forested portion of Wetland 4 consists of red maple, water oak, and sweetbay (*Magnolia virginiana*). The subcanopy and groundcover of the forested portion of the wetland predominantly consists of elderberry, buttonbush, bushy bluestem (*Andropogon glomeratus*), Virginia chain fern (*Woodwardia virginica*), primrose willow, blackberry (*Rubus* sp.). The freshwater marsh portion of Wetland 4 is dominated with cattail (*Typha* sp.). During the 2021 field reviews, the soils observed within the wetland consisted of a dark surface with muck present. Hydrological indicators observed included elevated lichen lines, saturation, high water table, and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 5
Watershed: Withlacoochee River
FLUCFCS: 631 – Wetland Scrub
USFWS: PSS1C – Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 5 is a scrub-shrub wetland located within the northbound US 98 right-of-way less than 0.1 mile southeast of the entrance to Gator Creek Preserve that extends outside of the right-of-way. Wetland 5 predominantly consists of red maple saplings, buttonbush, redroot (*Lachnanthes caroliana*), sand cordgrass (*Spartina bakeri*), coinwort (*Centella erecta*), and Virginia chain fern. During the 2021 field reviews, the soils observed within Wetland 5 consisted of a dark surface and oxidized rhizophores. Hydrological indicators observed included elevated lichen lines, water-stained leaves, and water marks. The adjacent uplands within the right-of-way consist of pine saplings (*Pinus* sp.), chalky bluestem, and redroot with sandy soils and no hydrological indicators present.

Wetland 6
Watershed: Withlacoochee River
FLUCFCS: 630 – Wetland Forested Mixed
USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 6 is a forested wetland located within the northbound US 98 right-of-way approximately 0.2 mile northwest of the entrance to Gator Creek Preserve. Wetland 6 extends outside of the right-of-way into a larger wetland system. The dominant vegetation within the canopy of this wetland consists of red maple and bald cypress (*Taxodium distichum*). The subcanopy and groundcover is comprised of cabbage palm (*Sabal palmetto*), wax myrtle (*Morella cerifera*), persimmon (*Diospyros virginiana*), and elderberry. During the 2021 field reviews, the soils observed within Wetland 6 consisted of a dark surface with muck present. Hydrological indicators observed included aquatic mosses/liverworts, elevated lichen lines, and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material and sandy soils with no hydrological indicators present.

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Wetland 7
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 7 is located within the northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Within the right-of-way, Wetland 7 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland community. Dominant vegetation within Wetland 7 includes primrose willow, bulrush, false hop sedge (*Carex lupuliformis*), smartweed, Virginia chain fern, netted chain fern (*Woodwardia areolate*), St. Augustine grass (*Stenotaphrum secundatum*), and red maple saplings. The canopy of the forested wetland adjacent to the right-of-way is comprised of cypress and water oak. During the 2021 field reviews, the soils observed within Wetland 7 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 7 included water-stained leaves, saturation, adventitious rooting, and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 8
Watershed: Hillsborough River
FLUCFCS: 630 – Wetland Forested Mixed
USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 8 is located directly northwest of Pioneer Drive within the northbound US 98 right-of-way. Wetland 8 is a forested wetland community that extends beyond the right-of-way into a larger system and connects to other wetland systems via a cross drain that runs underneath US 98. Dominant vegetation within the canopy of Wetland 8 consists of red maple, sweetbay, sweet gum (*Liquidambar styraciflua*), and bald cypress. Groundcover species predominantly consists of wild taro (*Colocasia esculenta*), primrose willow, and maidencane. During the field reviews, the soils observed within Wetland 8 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 8 included aquatic mosses/liverworts, elevated lichen lines, crayfish burrows, buttressing, hummocks, and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 9
Watershed: Withlacoochee River
FLUCFCS: 630 – Wetland Forested Mixed
USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 9 is located less than 0.1 mile southeast of the entrance to Gator Creek Campground within the northbound US 98 right-of-way. Wetland 9 is a forested wetland system that extends beyond the right-of-way. Dominant vegetation within the canopy consists of bald cypress, red maple, water oak, and laurel oak (*Q. laurefolia*). The subcanopy and groundcover predominately consists of wax myrtle, primrose willow, Virginia chain fern, bluestem, bulrush, and paragrass (*Urochloa mutica*). During the 2021 field reviews, the soils observed within Wetland 9 consisted of a dark surface within muck present. Hydrological indicators observed within Wetland 9 included high water table, elevated lichen lines, buttressed trunks, water-stained leaves, saturation, hummocks, water marks, and adventitious rooting. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

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Wetland 10
Watershed: Withlacoochee River
FLUCFCS: 630 – Wetland Forested Mixed
USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 10 is located directly north of the entrance to the Gator Creek Campground within the northbound US 98 right-of-way. This forested wetland system extends beyond the right-of-way and connects to other wetlands via a cross drain that runs underneath US 98. Dominant vegetation within the canopy of Wetland 10 consists of red maple, bald cypress, sweet bay, and red bay (*Persea borbonia*). The subcanopy and groundcover predominantly consists of primrose willow, paragrass, and torpedo grass. During the field reviews, the soils observed within Wetland 10 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 10 included saturation, high water table, adventitious rooting, and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 11
Watershed: Withlacoochee River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 11 is located approximately 0.1 mile southeast of Earnest Road within the northbound US 98 right-of-way. This herbaceous wetland extends into a forested wetland system beyond the right-of-way and connects to other wetlands via a cross drain that runs underneath US 98. Dominant vegetation within Wetland 11 consists of alligatorweed (*Alternanthera philoxeroides*), torpedo grass, sesban (*Sesbania* sp.), maidencane, smartweed, barnyard grass (*Echinochloa* sp.), and primrose willow. Adjacent to the right-of-way, this wetland system consists of red maple. During the 2021 field reviews, this wetland was inundated throughout. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 12
Watershed: Withlacoochee River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 12 is located directly northwest of Earnest Road within the northbound US 98 right-of-way. This herbaceous wetland extends into a forested wetland system beyond the right-of-way into a forested wetland system. Dominant vegetation within Wetland 12 consists of Carolina willow, red maple saplings, primrose willow, smartweed, barnyard grass, fireflag (*Thalia geniculata*), golden canna (*Canna flacida*), soft rush (*Juncus effusus*), Virginia chain fern, lizard's tail (*Saururus cernuus*), and bulrush. Adjacent to the right-of-way, this wetland system consists of red maple and cypress. During the 2021 field reviews, this wetland was inundated throughout with water levels ranging from six to 12 inches. In addition to surface water presence, hydrological indicators observed within Wetland 12 included water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 13
Watershed: Withlacoochee River

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FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 13 is located approximately 0.1 mile southeast of Perkle Road within the northbound US 98 right-of-way. This wetland extends into a forested wetland system outside of the right-of-way and is connected to other wetland systems via a cross drain that runs underneath US 98. Dominant vegetation within Wetland 13 consists of Carolina willow, saltbush (*Baccharis halimifolia*), caesarweed (*Urena lobata*), Mexican primrose willow (*Ludwigia octovalvis*), and shield fern (*Thelypteris* sp.). The forested wetland community adjacent to the right-of-way consists of cypress and red maple. During the 2021 field reviews, the soils observed within Wetland 13 consisted of a dark surface with muck present. Hydrological indicators observed included aquatic mosses/liverworts and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 14
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 14 is located within the northbound US 98 right-of-way approximately 0.1 mile northwest of Perkle Road. Within the right-of-way, Wetland 14 is comprised of an herbaceous wetland community that connects to a small forested system outside of the right-of-way. Dominant vegetation within Wetland 14 consists of red maple saplings, barnyard grass, primrose willow, water pennywort (*Hydrocotyle umbrellata*), coinwort, smartweed, and soft rush. Adjacent to the right-of-way, the forested canopy consists of red maple and cypress. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than 12 inches. Evidence of wildlife observed included small fish and crayfish burrows. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 15
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 15 is located approximately 0.4 mile northwest of Perkle Road within the northbound US 98 right-of-way. Within the right-of-way, Wetland 15 is comprised of an herbaceous wetland community that connects to a small forested system outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 15 to other offsite wetland systems. Dominant vegetation within this wetland consists of Carolina willow, primrose willow, cattail, Virginia chain fern, and west Indian marshgrass. Adjacent to the right-of-way, the forested canopy consists of cypress and water oak. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than 12 inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

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Wetland 16
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 16 is located approximately 0.1 mile southeast of Keen Road within the northbound US 98 right-of-way. Within the right-of-way, Wetland 16 is comprised of a primrose willow-dominated freshwater marsh that connects to a small forested system outside of the right-of-way. A pipe culvert that runs underneath US 98 connects Wetland 16 to other offsite wetland systems. Other vegetation present includes smartweed, and loosestrife (*Lythrum alatum*). Adjacent to the right-of-way, the forested canopy consists of cypress and red maple. During the 2021 field reviews, this wetland was inundated throughout with water levels reaching greater than six inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 17
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 17 is located approximately 0.1 mile southeast of Lakeland Acres Road within the northbound US 98 right-of-way. Wetland 17 is comprised of an herbaceous wetland community dominated with torpedo grass that extends into a small forested system outside of the right-of-way. Other vegetation present includes primrose willow and smartweed. Upland habitat consisting of pine and oak species occurs outside of the right-of-way adjacent to the wetland. During the 2021 field reviews, the soils observed within Wetland 17 consisted of a dark surface. Hydrological indicators observed included surface water ranging in depths of one to four inches deep and a high water table. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 18
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 18 is located directly across from Lakeland Acres Road within the northbound US 98 right-of-way. This wetland is an herbaceous system dominated by torpedo grass that extends into a forested wetland system outside of the right-of-way. Other vegetation present include sand cordgrass, primrose willow, and sesban. The forested wetland community adjacent to the right-of-way consists of cypress and red maple. During the 2021 field reviews, the soils observed within Wetland 18 consisted of a dark surface with muck present. Hydrological indicators observed included saturation and a high water table. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

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Wetland 19
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 19 is located approximately 0.5 mile northwest of Lakeland Acres Road within the northbound US 98 right-of-way. Within the right-of-way, Wetland 19 is comprised of an herbaceous wetland community that connects to a forested system outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 19 to other offsite wetland systems. Dominant vegetation within this wetland consists of torpedo grass, primrose willow, foxtail (*Setaria parviflora*), loosestrife, cattail, Virginia chain fern, buttonbush, and pickerelweed (*Pontederia cordata*). Adjacent to the right-of-way, the forested canopy consists of cypress and red maple. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. Evidence of wildlife observed included a great egret (*Ardea alba*) foraging in Wetland 19 during the 2021 field review. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 20
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 20 is located at the Duke Energy utility easement within the northbound US 98 right-of-way. Within the right-of-way, Wetland 20 is comprised of an herbaceous wetland community dominated by primrose willow that connects to a larger wetland system outside of the right-of-way. A pipe culvert runs underneath US 98 connects Wetland 20 to other offsite wetland systems. Other vegetation present includes of foxtail, cattail, loosestrife, Virginia chain fern, bulrush, and pickerelweed. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 21
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 21 is located approximately 0.1 mile northwest of the Duke Energy utility easement within the northbound US 98 right-of-way. Within the right-of-way, Wetland 21 is comprised of a torpedo-grass dominated freshwater marsh that extends outside of the right-of-way. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water, hydrological indicators observed within Wetland 21 on or near the fence posts included elevated lichen lines, hummocks, and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

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Wetland 22
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 22 is located within the northbound US 98 right-of-way approximately 0.2 mile northwest of the Duke Energy utility easement. Within the right-of-way, Wetland 22 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. Dominant vegetation within Wetland 22 includes maidencane, barnyard grass, and sesbania. Adjacent to the right-of-way, the forested canopy consists of cypress and red maple. During the 2021 field reviews, the soils observed within Wetland 22 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 22 included surface water and a high water table. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 23
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 23 is located within the northbound US 98 right-of-way approximately 0.3 mile northwest of the Duke Energy utility easement. Within the right-of-way, Wetland 23 is comprised of freshwater marsh habitat that extends outside of the right-of-way. Dominant vegetation within Wetland 23 includes torpedo grass, maidencane, buttonweed (*Diodia virginiana*), foxtail grass, arrowhead (*Sagittaria graminea*), coinwort, and natal grass (*Melanis repens*). Adjacent to the right-of-way, the freshwater marsh continues approximately 25 feet north before abutting mesic pine forest with saw palmetto. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than four inches. In addition to surface water and aquatic vegetation, hydrological indicators observed within Wetland 23 on or near the fence posts included water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 24
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 24 is located within the northbound US 98 right-of-way approximately 0.6 mile northwest of the Duke Energy utility easement. This wetland is comprised of a freshwater marsh that extends into a forested wetland system outside of the right-of-way and is connected to other wetland systems via a cross drain that runs underneath US 98. Dominant vegetation within Wetland 24 includes torpedo grass and maidencane with foxtail grass, Virginia chain fern, sesbania, and primrose willow. Adjacent to the right-of-way, the freshwater marsh continues approximately 25 feet north before abutting a forested wetland dominated by red maple and cypress. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water, hydrological indicators observed within Wetland 24 on or near the fence posts included water marks and elevated lichen lines. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

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Wetland 25
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 25 is located within the northbound US 98 right-of-way approximately 0.7 mile northwest of the Duke Energy utility easement. Within the right-of-way, Wetland 25 is comprised of maidencane-dominated freshwater marsh. Adjacent to the right-of-way is upland planted pine. During the 2021 field reviews, the soils observed within Wetland 25 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 25 included surface water and a high water table. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 26
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 26 is located within the northbound US 98 right-of-way approximately 1.0 mile northwest of the Duke Energy utility easement. Within the right-of-way, Wetland 26 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a scrub-shrub wetland. Dominant vegetation within Wetland 26 includes torpedo grass and maidencane with barnyard grass, primrose willow, bulrush. Adjacent to the right-of-way, the scrub-shrub wetland consists predominantly of buttonbush. During the 2021 field reviews, the soils observed within Wetland 26 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 26 included surface water, water marks on the fence posts, and a high water table. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 27
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 27 is located within the northbound US 98 right-of-way approximately 0.75 mile southeast of SR 471. Within the right-of-way, Wetland 27 is comprised of freshwater marsh habitat that extends outside of the right-of-way. Dominant vegetation within Wetland 27 includes maidencane with torpedo grass, barnyard grass, arrowhead, and buttonweed. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 28
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 28 is located within the northbound US 98 right-of-way approximately 0.6 mile southeast of SR 471. Within the right-of-way, Wetland 28 is comprised of a maidencane-dominated freshwater marsh that

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extends outside of the right-of-way. Additional vegetation present includes primrose willow and red maple saplings along the right-of-way fence. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 29
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 29 is located within the northbound US 98 right-of-way approximately 0.4 mile southeast of SR 471. Within the right-of-way, Wetland 29 is comprised of freshwater marsh habitat that extends outside of the right-of-way and connects to a forested wetland system. Dominant vegetation within Wetland 29 includes maidencane and alligatorweed. Additional vegetation present along the right-of-way includes primrose willow and saltbush. Adjacent to the right-of-way, herbaceous wetland habitat consists of pickerelweed, and the forested canopy is dominated by cypress and red maple. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water, hydrological indicators observed included water marks on the fence posts. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 30
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 30 is located within the northbound US 98 right-of-way approximately 0.3 mile southeast of SR 471. Within the right-of-way, Wetland 30 is comprised of freshwater marsh habitat that extends outside of the right-of-way. Dominant vegetation within Wetland 30 includes maidencane, arrowhead, buttonweed, coinwort, sand cordgrass, and bahiagrass (*Paspalum notatum*). During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water and aquatic vegetation, hydrological indicators observed included water marks on the fence posts. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 31
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 31 is located within the northbound US 98 right-of-way directly northwest of SR 471. Within the right-of-way, Wetland 31 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. A cross drain that runs underneath US 98 connects Wetland 31 to other offsite wetland systems. Dominant vegetation within Wetland 31 includes paragrass and torpedo grass with barnyard grass, and primrose willow. The forested wetland outside of the right-of-way consists of cypress, red maple, and fireflag. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. Evidence of wildlife observed within Wetland 31 included frogs.

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The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 32
Watershed: Hillsborough River
FLUCFCS: 617 – Mixed Wetland Hardwoods
USFWS: PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 32 is located on the east side of SR 471, north of US 98. Within the right-of-way, Wetland 32 is comprised of a forested wetland. Dominant vegetation within Wetland 32 includes red maple, water oak, Carolina willow, and persimmon. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than three inches and littered with trash. Adjacent land cover outside of the right-of-way consists of planted pine. In addition to surface water, hydrological indicators observed liverworts, elevated lichen lines, hummocks, and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 33
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 33 is located within the southbound US 98 right-of-way approximately 260 feet southeast of CR 54. Within the right-of-way, Wetland 33 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland system. Dominant vegetation within Wetland 33 includes alligatorweed and torpedo grass with primrose willow, bahiagrass, smartweed, and maidencane. Adjacent to the right-of-way, the forested wetland canopy consists of cypress and red maple. During the 2021 field reviews, the soils observed within Wetland 33 consisted of a dark surface with muck present. Hydrological indicators observed included surface water and a high water table. The majority of Wetland 33 appeared to be disturbed by truck and equipment rutting throughout the right-of-way. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 34
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 34 is located within the southbound US 98 right-of-way approximately 0.1 mile southeast of Old Dade City Road. Within the right-of-way, Wetland 34 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. Dominant vegetation within Wetland 34 includes torpedo grass, maidencane, and smartweed. The forested wetland adjacent to the right-of-way consists of cypress. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water, hydrological indicators observed included cypress knees. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

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Wetland 35
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 35 is located within the southbound US 98 right-of-way approximately 0.4 mile southeast of Old Dade City Road. Within the right-of-way, Wetland 35 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. Dominant vegetation within Wetland 35 includes torpedo grass with some bulrush. The forested wetland adjacent to the right-of-way consists of red maple and Chinese tallow (*Triadica sebifera*). During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 36
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 36 is located within the southbound US 98 right-of-way approximately 0.5 mile southeast of Old Dade City Road. Within the right-of-way, Wetland 36 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. Dominant vegetation within Wetland 36 includes torpedo grass with maidencane, foxtail grass, arrowhead, dogfennel (*Eupatorium capillifolium*), and bahiagrass. The forested wetland adjacent to the right-of-way consists of red maple, water oak, and Chinese tallow. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water and aquatic vegetation, hydrologic indicators observed included liverworts, and algal mats. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 37
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 37 is located within the southbound US 98 right-of-way approximately 0.4 mile northwest of SR 471. Within the right-of-way, Wetland 37 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. Dominant vegetation within Wetland 37 includes maidencane, alligatorweed, and pickerelweed. The forested wetland adjacent to the right-of-way consists of red maple, water oak, cypress, and wax myrtle. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

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Wetland 38
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 38 is located within the southbound US 98 right-of-way approximately 0.1 mile northwest of SR 471. Within the right-of-way, Wetland 38 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. A cross drain that runs underneath US 98 connects Wetland 38 to other offsite wetland systems. Dominant vegetation within Wetland 38 includes torpedo grass, smartweed, pickerelweed, maidencane, foxtail grass, primrose willow, Mexican primrose (*Ludwigia octovalvis*), elderberry, and red maple saplings. The forested wetland adjacent to the right-of-way consists of red maple, water oak, and cypress. During the 2021 field reviews, the soils observed within Wetland 38 consisted of a dark surface with muck present. In addition to aquatic vegetation, hydrological indicators observed within Wetland 38 included liverworts, high water table, and water marks. Evidence of wildlife observed within Wetland 38 included small fish and tadpoles. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 39
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 39 is located within the southbound US 98 right-of-way approximately 0.4 mile southeast of SR 471. Within the right-of-way, Wetland 39 is comprised of freshwater marsh habitat that extends outside of the right-of-way. Dominant vegetation within Wetland 39 includes foxtail, sesban, beakrush (*Rhynchospora* spp.), primrose willow, and blue maidencane (*Amphicarpum muehlenbergianum*). During the 2021 field reviews, the soils observed within Wetland 39 consisted of a dark surface with muck present. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 40
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 40 is located within the southbound US 98 right-of-way approximately 0.5 mile southeast of SR 471. Within the right-of-way, Wetland 40 is comprised of freshwater marsh habitat that extends outside of the right-of-way. Dominant vegetation within Wetland 40 includes West Indian marshgrass, alligatorweed, torpedo grass, maidencane, and soft rush. Adjacent to the right-of-way, the freshwater marsh continues approximately 25 feet south before abutting a forested wetland dominated by red maple and cypress. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than 12 inches. In addition to surface water, hydrologic indicators observed included elevated lichen lines and water marks on the fence posts. Evidence of wildlife observed within the wetland included frogs. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

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Wetland 41
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 41 is located within the southbound US 98 right-of-way approximately 0.6 mile southeast of SR 471. Within the right-of-way, Wetland 41 is comprised of freshwater marsh habitat that extends outside of the right-of-way. Dominant vegetation within Wetland 41 includes torpedo grass with red maple saplings, arrowhead, maidencane, alligatorweed, and soft rush. Adjacent to the right-of-way, the freshwater marsh continues approximately 25 feet south before abutting a forested wetland dominated by red maple and cypress. During the 2021 field reviews, the soils observed within Wetland 41 consisted of a dark surface with muck present. Hydrologic indicators observed within Wetland 41 included liverworts, elevated lichen lines and water marks on the fence posts, surface water, and high water table. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 42
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 42 is located within the southbound US 98 right-of-way approximately 0.8 mile southeast of SR 471. Within the right-of-way, Wetland 42 is comprised of a primrose willow-dominated freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. Dominant vegetation within Wetland 42 includes primrose willow with cattail, and pickerelweed. The forested wetland adjacent to the right-of-way consists of red maple and cypress. During the 2021 field reviews, the soils observed within Wetland 42 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 42 included elevated lichens and waters marks on the fence posts, and surface water. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 43
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 43 is located within the southbound US 98 right-of-way approximately 0.9 mile southeast of SR 471. Within the right-of-way, Wetland 43 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. Dominant vegetation within Wetland 43 includes torpedo grass and alligatorweed with pickerelweed, soft rush, and spatterdock (*Nuphar advena*). The forested wetland adjacent to the right-of-way consists of cypress. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than 12 inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

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Wetland 44
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 44 is located within the southbound US 98 right-of-way approximately 0.9 mile northwest of the Duke Energy utility easement. Within the right-of-way, Wetland 44 is comprised of freshwater marsh habitat that extends outside of the right-of-way. Dominant vegetation within Wetland 44 includes alligatorweed, torpedo grass, primrose willow, maidencane, buttownwood, arrowhead, and water hyssop (*Bacopa* sp.). Adjacent to the right-of-way, the freshwater marsh continues beyond 25 feet south before abutting a forested wetland dominated by red maple and cypress. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 45
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 45 is located within the southbound US 98 right-of-way approximately 0.2 mile northwest of the Duke Energy utility easement. Within the right-of-way, Wetland 45 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. Dominant vegetation within Wetland 45 includes primrose willow, pickerelweed, maidencane, barnyard grass, and alligatorweed. The forested wetland adjacent to the right-of-way consists of red maple, cypress, dahoon holly (*Ilex cassine*), buttonbush, and soft rush. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than 10 inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 46
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 46 is located within the southbound US 98 right-of-way approximately 0.1 mile northwest of the Duke Energy utility easement. Within the right-of-way, Wetland 46 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. Dominant vegetation within Wetland 46 includes maidencane, barnyard grass, sand cordgrass, buttonweed, Virginia chain fern, and primrose willow. The forested wetland adjacent to the right-of-way consists of red maple, cypress, and buttonbush. During the 2021 field reviews, the soils observed within Wetland 46 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 46 included a high water table and surface water. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

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Wetland 47
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 47 is located within the southbound US 98 right-of-way at the Duke Energy utility easement. Within the right-of-way, Wetland 47 is comprised of a cattail-dominated freshwater marsh habitat that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 47 to other offsite wetland systems. Other vegetation present includes Carolina willow, pickerelweed, primrose willow, and torpedo grass. The forested wetland adjacent to the right-of-way consists of red maple and cypress. During the 2021 field reviews, the soils observed within Wetland 47 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 47 included surface water presence. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 48
Watershed: Hillsborough River
FLUCFCS: 617 – Mixed Wetland Hardwoods
USFWS: PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 48 is located within the southbound US 98 right-of-way directly southeast of the Duke Energy utility easement. Wetland 48 is comprised of a forested wetland system that extends outside of the right-of-way. Dominant vegetation within the canopy of Wetland 48 includes water oak, swamp bay (*Persea palustris*), laural oak (*Quercus laurifolia*), and red maple. The understory and groundcover predominantly consist of wax myrtle, Virginia chain fern, and maiden fern (*Thelyptris* sp.). During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water, hydrologic indicators observed included mosses, elevated lichen lines, hummocks, water marks, and adventitious rooting. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 49
Watershed: Hillsborough River
FLUCFCS: 630 – Wetland Forested Mixed
USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 49 is located within the southbound US 98 right-of-way approximately 0.4 mile northwest of Lakeland Acres Road. Wetland 49 is comprised of a forested wetland system that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 49 to other offsite wetland systems. Dominant vegetation within the canopy of Wetland 49 includes cypress, Chinese tallow, and red maple. The understory and groundcover predominantly consist of Carolina willow, primrose willow, soft rush, and maidencane. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water, hydrologic indicators observed included elevated lichen lines and cypress knees. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

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Wetland 50
Watershed: Hillsborough River
FLUCFCS: 617 – Mixed Wetland Hardwoods
USFWS: PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 50 is located within the southbound US 98 right-of-way approximately 0.5 mile northwest of Lakeland Acres Road. Wetland 50 is comprised of a forested wetland system that extends outside of the right-of-way. Dominant vegetation within the canopy of Wetland 50 includes red maple and water oak. The understory and groundcover predominantly consist of primrose willow, whitetop sedge (*Rhynchospora colorata*), creeping oxeye (*Sphagneticola trilobata*), Virginia chain fern, wax myrtle, and bahia grass. During the 2021 field reviews, surface water was observed throughout the wetland and soils observed indicated a dark surface with muck present. In addition to surface water, hydrologic indicators observed included water-stained leaves and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 51
Watershed: Hillsborough River
FLUCFCS: 617 – Mixed Wetland Hardwoods
USFWS: PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 51 is located within the southbound US 98 right-of-way approximately 0.2 mile northwest of Lakeland Acres Road. Wetland 51 is comprised of a forested wetland system that extends outside of the right-of-way. Dominant vegetation within the canopy of Wetland 51 includes red maple and water oak. The understory and groundcover predominantly consist of primrose willow, Virginia chain fern, and elderberry. During the 2021 field reviews, surface water was observed throughout the wetland and soils observed indicated a dark surface with muck present. In addition to surface water, hydrologic indicators observed included water-stained leaves, hummocks, and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 52
Watershed: Hillsborough River
FLUCFCS: 630 – Wetland Forested Mixed
USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 52 is located within the southbound US 98 right-of-way approximately 0.1 mile southeast of Keen Road. Wetland 52 is comprised of a forested wetland system that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 52 to other offsite wetland systems. Dominant vegetation within the canopy of Wetland 52 includes cypress, red maple, and water oak. The understory and groundcover predominantly consist of primrose willow and Virginia chain fern. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than 12 inches. In addition to surface water, hydrologic indicators observed included water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

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Wetland 53
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 53 is located within the southbound US 98 right-of-way approximately 0.5 mile southeast of Keen Road. Wetland 53 is comprised of a primrose willow-dominated freshwater marsh that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 53 to other offsite wetland systems. During the 2021 field reviews, surface water was observed throughout the wetland and soils observed indicated a dark surface with muck present. In addition to surface water, hydrologic indicators observed included water-stained leaves and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 54
Watershed: Hillsborough River
FLUCFCS: 630 – Wetland Forested Mixed
USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 54 is located within the southbound US 98 right-of-way approximately 0.4 mile northwest of Perkle Road. Wetland 54 is comprised of a forested wetland system that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 54 to other offsite wetland systems. Dominant vegetation within the canopy of Wetland 54 includes cypress, red maple, and water oak. The understory and groundcover predominantly consist of primrose willow. During the 2021 field reviews, this wetland was inundated throughout. In addition to surface water, hydrologic indicators observed included water marks, elevated lichen lines, moss, and adventitious rooting. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 55
Watershed: Hillsborough River
FLUCFCS: 630 – Wetland Forested Mixed
USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 55 is located within the southbound US 98 right-of-way adjacent to the east side of Old Soldier Road. Wetland 55 is comprised of a forested wetland system that extends outside of the right-of-way. Dominant vegetation within the canopy of Wetland 55 includes cypress, red maple, and water oak. The understory and groundcover predominantly consist of Virginia chain fern, netted chain fern, maiden fern, pickerelweed, and cattail. During the 2021 field reviews, surface water was observed throughout the wetland and soils observed indicated a dark surface with muck present. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

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Wetland 56
Watershed: Hillsborough River
FLUCFCS: 630 – Wetland Forested Mixed
USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 56 is located within the southbound US 98 right-of-way less than 0.1 mile southeast of Perkle Road. Wetland 56 is comprised of a forested wetland system that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 56 to other offsite wetland systems. Dominant vegetation within the canopy of Wetland 56 includes cypress, red maple, and water oak. The understory and groundcover predominantly consist of Virginia chain fern and primrose willow. During the 2021 field reviews, surface water was observed throughout the wetland and soils observed indicated a dark surface with muck present. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 57
Watershed: Hillsborough River
FLUCFCS: 630 – Wetland Forested Mixed
USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 57 is located within the southbound US 98 right-of-way approximately 0.2 mile northwest of Earnest Road. Wetland 57 is comprised of a forested wetland system that extends outside of the right-of-way. Dominant vegetation within the canopy of Wetland 57 includes cypress and red maple. The understory and groundcover predominantly consist of primrose willow. During the 2021 field reviews, surface water was observed throughout the wetland with water levels greater than six inches and soils observed indicated a dark surface with muck present. In addition to surface water, hydrologic indicators observed included water-stained leaves. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 58
Watershed: Hillsborough River
FLUCFCS: 630 – Wetland Forested Mixed
USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 58 is located within the southbound US 98 right-of-way across from Earnest Road. Wetland 58 is comprised of a forested wetland system that extends outside of the right-of-way. Dominant vegetation within the canopy of Wetland 58 includes cypress and red maple. The understory and groundcover predominantly consist of Virginia chain fern and primrose willow. During the 2021 field reviews, surface water was observed throughout the wetland and soils observed indicated a dark surface with muck present. In addition to surface water, hydrologic indicators observed included water-stained leaves, moss, and elevated lichen lines. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

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Wetland 59
Watershed: Hillsborough River
FLUCFCS: 630 – Wetland Forested Mixed
USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 59 is located within the southbound US 98 right-of-way approximately 0.1 mile southeast of Earnest Road. Wetland 59 is comprised of a forested wetland system that extends outside of the right-of-way. A pipe culvert that runs underneath US 98 connects Wetland 59 to other offsite wetland systems Dominant vegetation within the canopy of Wetland 59 includes cypress and red maple. The understory and groundcover predominantly consist of Virginia chain fern, buttonbush, wild taro, bulrush, swamp fern (*Blechnum serrulatum*), lizard's tail, and primrose willow. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water, hydrologic indicators observed included water marks and elevated lichen lines. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 60
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 60 is located within the southbound US 98 right-of-way adjacent to the east side of Rockridge Road. Wetland 60 is comprised of a freshwater marsh dominated by primrose willow and Carolina willow that extends outside of the right-of-way into a forested wetland. Additional species observed includes Virginia chain fern, red root, and caesarweed. The forested wetland community adjacent to the right-of-way consists of cypress and red maple. During the 2021 field reviews, surface water was observed throughout the wetland and soils observed indicated a dark surface with muck present. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 61
Watershed: Hillsborough River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 61 is located within the southbound US 98 right-of-way approximately 0.2 mile southeast of Rockridge Road. Wetland 61 is comprised of a primrose-willow dominated freshwater marsh that extends outside of the right-of-way into a forested wetland. Additional vegetation observed within Wetland 61 includes redroot, Virginia chain fern, and Carolina willow with few red maple and cypress trees encroaching into the right-of-way. The forested wetland adjacent to the right-of-way consists of red maple and cypress. During the 2021 field reviews, surface water was observed throughout the wetland and soils observed indicated a dark surface with muck present. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

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Wetland 62
Watershed: Hillsborough River
FLUCFCS: 621 - Cypress
USFWS: PFO2C – Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded

Wetland 62 is located within the southbound US 98 right-of-way directly west of Big Cypress Boulevard. Wetland 62 is comprised of a forested wetland that extends outside of the right-of-way. Dominant vegetation within Wetland 62 consists of cypress, primrose willow, Mexican primrose, pickerelweed, Carolina willow, buttonbush, and smartweed. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than 12 inches. In addition to surface water, hydrologic indicators observed included moss, water marks, and buttressing. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 63
Watershed: Hillsborough River
FLUCFCS: 630 – Wetland Forested Mixed
USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 63 is located within the southbound US 98 right-of-way approximately 0.3 mile southeast of Big Cypress Boulevard. Wetland 63 is comprised of a forested wetland system that extends outside of the right-of-way. Dominant vegetation within the canopy of Wetland 63 includes cypress, swamp bay, and red maple. The understory and groundcover predominantly consist of Virginia chain fern, swamp fern, and buttonbush. During the 2021 field reviews, this wetland was inundated throughout. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 64
Watershed: Withlacoochee River
FLUCFCS: 631 – Wetland Scrub
USFWS: PSS1C – Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 64 is located within the southbound US 98 right-of-way approximately 0.3 mile northwest of West Socrum Loop Road. Wetland 64 is comprised of a scrub-shrub wetland that extends outside of the right-of-way into a forested wetland. A pipe culvert that runs underneath US 98 connects Wetland 64 to other offsite wetland systems. Dominant vegetation within Wetland 64 includes red maple, Carolina willow, primrose willow, and smartweed. The forested wetland adjacent to the right-of-way consists of red maple and cypress. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

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Wetland 65
Watershed: Withlacoochee River
FLUCFCS: 641 – Freshwater Marsh
USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 65 is located within the southbound US 98 right-of-way directly west of West Socrum Loop Road. Wetland 65 is comprised of a primrose-willow dominated freshwater marsh that extends outside of the right-of-way into a forested wetland. A cross drain that runs underneath US 98 connects Wetland 65 to other offsite wetland systems. Additional vegetation observed within Wetland 65 includes Carolina willow, red maple, wild taro, cattail, Virginia chain fern, and buttonbush. The forested wetland adjacent to the right-of-way consists of red maple and sweet bay. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

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APPENDIX H.2

Wetland Photos

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Wetland 1 facing east.



Wetland 2 facing northeast.

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Wetland 3 facing east.



Wetland 4 facing east.

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Wetland 5 facing east, outside of right-of-way.



Wetland 6 facing north.

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Wetland 7 facing north.



Wetland 8 facing north.

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Wetland 9 facing east.



Wetland 10 facing north.

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Wetland 11 facing north.



Wetland 12 facing east.

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Wetland 13 facing east.



Wetland 14 facing south.

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Wetland 15 facing north.



Wetland 16 facing east.

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Wetland 17 facing east.



Wetland 18 facing north.

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Wetland 19 facing east.



Wetland 20 facing north.

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Wetland 21 facing north.



Wetland 22 facing southeast.

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Wetland 23 facing north.



Wetland 24 facing east.

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Wetland 25 facing north.



Wetland 26 facing west.

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Wetland 27 facing east.



Wetland 28 facing south.

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Wetland 29 transitioning into upland facing south.



Wetland 30 extending beyond the right-of-way facing north.

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Wetland 31 transitioning into upland facing south.



Wetland 32 facing east.

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Wetland 33 facing south.



Wetland 34 facing south.

DRAFT



Wetland 35 facing west.



Wetland 36 facing west.

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Wetland 37 facing east.



Wetland 38 facing south.

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Wetland 39 facing south.



Wetland 40 facing southwest.

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Wetland 41 facing west.



Wetland 42 facing west.

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Wetland 43 facing west.



Wetland 44 facing south.

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Wetland 45 facing south.



Wetland 46 facing south.

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Wetland 47 facing west.

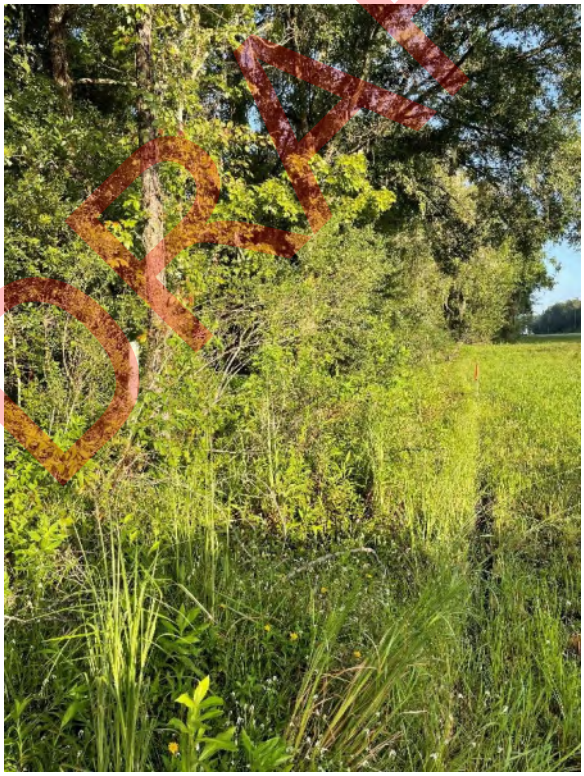


Wetland 48 facing south.

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Wetland 49 facing west.



Wetland 50 facing northwest.



Wetland 51 facing south.



Wetland 52 facing southeast.

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Wetland 53 facing southwest.



Wetland 54 facing west.

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Wetland 55 facing southwest.



Wetland 56 facing south.

DRAFT



Wetland 57 facing south.



Wetland 58 facing south.

DRAFT



Wetland 59 facing south, southwest.



Wetland 60 facing south.

DRAFT



Wetland 61 facing south, southwest.



Wetland 62 facing south.

DRAFT



Wetland 63 facing south, southwest.



Wetland 64 facing west.

DRAFT



Wetland 65 facing west.

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APPENDIX I

UMAM Worksheets

DRAFT

APPENDIX I.1

UMAM Worksheets – Mainline Direct Impacts

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 1

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.31

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

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

Within the US 98 northbound right-of-way, the assessment area is an herbaceous wetland that extends beyond the right-of-way into an offsite, forested wetland system.

Assessment area description

The assessment area consists of a primrose willow-dominated freshwater marsh that extends outside of the right-of-way into a forested wetland system. Other vegetation present within Wetland 1 includes smartweed, maidencane, bulrush, and torpedo grass.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.3 mile north of Hall Road/West Socrum Loop Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 1
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way into an offsite forested wetland system to the north. The assessment area is located within the northbound US 98 right-of-way. Residential and commercial development is located west and northwest of the assessment area. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential/commercial development. The majority of the plant community composition in the assessment area consists of invasive exotic species that adversely affect the functions provided by the assessment area.	6	0
.500(6)(b)Water Environment (n/a for uplands)	During the 2021 field reviews, surface water was observed throughout the assessment area. Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of the plant cover and presence is comprised of invasive exotic plant species (primrose willow) with minimal desirable species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.	4	0

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

Delta = [with-current]
-0.57

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

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

For impact assessment areas
FL = delta x acres =
0.57 x 0.31 = **0.18**

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

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 2

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.07

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

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

Within the US 98 northbound right-of-way, the assessment area is an herbaceous wetland that extends beyond the right-of-way into an offsite, forested wetland system.

Assessment area description

The assessment area consists of a maidencane-dominated freshwater marsh that extends outside of the right-of-way into a forested wetland system. Other vegetation present includes primrose willow, west Indian marshgrass, and smartweed.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.6 mile north of Hall Road/West Socrum Loop Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 2
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	0	The assessment area is an herbaceous wetland that extends beyond the right-of-way into an off-site forested wetland system to the north. The assessment area is located within the northbound US 98 right-of-way. Residential development and improved pasture is located northeast of the assessment area. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential/pasture use. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	0	During the 2021 field reviews, soils were saturated at the surface throughout the assessment area. Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	0	Majority of the plant cover and presence is comprised of desirable wetland species with minimal invasive, exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a pipe culvert within the wetland and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.63

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 =
0.63 x 0.07 = **0.04**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 3

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
617 - Mixed Wetland Hardwoods	PFO1C - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded	Impact	0.08

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

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

Within the US 98 northbound right-of-way, the assessment area is forested wetland that connects to other off-site wetlands via a crossdrain that runs underneath US 98.

Assessment area description

Dominant vegetation within the canopy of the assessment area consists of red maple (*Acer rubrum*) and water oak (*Quercus nigra*). Dominant groundcover species consists of primrose willow (*Ludwigia peruviana*), beggarticks (*Bidens* sp.), limpograss (*Hemarthria altissima*), and elderberry (*Sambucus candadensis*).

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.7 mile north of Hall Road/West Socrum Loop Road. Gator Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 3
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested wetland that connects to off-site wetlands via a cross drain that runs underneath US 98. The assessment area is located within the northbound US 98 right-of-way. Improved pasture is located west and east of the assessment area; Upland forest habitat is located north of the assessment area. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and active pastures. The majority of the groundcover composition in the assessment area consists of invasive exotic species that adversely affect the functions provided by the assessment area.	6	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included a high water table, saturation, aquatic mosses/liverworts, elevated lichen lines, hummocks, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of the groundcover is comprised of invasive exotic plant species (primrose willow) and undesirable plant species. Desirable plant species are present within the canopy. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way and installation of pipe culverts and cross drains may affect natural recruitment or regeneraltion in the plant community.	5	0

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

Delta = [with-current]
-0.60

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 =
0.60 x 0.08 = **0.05**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 4

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
617 - Mixed Wetland Hardwoods	PFO1C - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded	Impact	0.39

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

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

Within the US 98 northbound right-of-way, the assessment area is the forested portion of a wetland that extends outside of the right-of way and connects to other offsite wetlands via a cross drain that runs underneath US 98.

Assessment area description

Dominant vegetation within the canopy of the forested portion of Wetland 4 consists of red maple, water oak, and sweetbay. The subcanopy and groundcover of the forested portion of the wetland predominantly consists of elderberry, buttonbush, bushy bluestem, Virginia chain fern, primrose willow, blackberry.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.2 mile southeast of the entrance to Gator Creek Preserve. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 4
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	0	The assessment area is the forested portion of a wetland that connects to offsite wetlands via a cross drain that runs underneath US 98. The assessment area is located within the northbound US 98 right-of-way. Improved pasture and residential land use is located east of the assessment area; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and pasture/residential use.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included elevated lichen lines, saturation, high water table, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	0	Majority of plant cover is by appropriate and desirable plant species. Minimal invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.00

Delta = [with-current]
-0.67

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 =
0.67 x 0.39 = **0.26**

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

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 4

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.12

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

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

Within the US 98 northbound right-of-way, the assessment area is the herbaceous portion of a wetland that extends outside of the right-of way and connects to other offsite wetlands via a cross drain that runs underneath US 98..

Assessment area description

The assessment area consists of a cattail-dominated freshwater marsh that extends outside of the right-of-way into a forested wetland system.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.2 mile southeast of the entrance to Gator Creek Preserve. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 4
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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: 6	with: 0	The assessment area is the herbaceous portion of a wetland that connects to offsite wetlands via a cross drain that runs underneath US 98. The assessment area is located within the northbound US 98 right-of-way. Improved pasture and residential land use is located east of the assessment area; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and pasture/residential use.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 0	During the 2021 field reviews, the assessment area was inundated throughout. Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 3	with: 0	The plant cover is entirely comprised of cattail. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.12 = **0.06**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 5

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
631 - Wetland Scrub	PSS1C - Palustine, Scrub-shrub, Broad-leaved Deciduous, Seasonally Flooded	Impact	0.003

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

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

Within the US 98 northbound right-of-way, the assessment area is a scrub-shrub wetland that extends outside of the right-of way adjacent to the Gator Creek Reserve.

Assessment area description

Dominant vegetation within the assessment area consists of red maple saplings, buttonbush, redroot, sand cordgrass, coinwort, and Virginia chain fern.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.1 mile southeast of the entrance to Gator Creek Preserve. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 5
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	0	The assessment area is a scrub shrub weltand that extends outside of the right-of-way adjacent to the Gator Creek Preserve. The assessment area is located within the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included elevated lichen lines, water-stained leaves, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	0	Majority of plant cover is by appropriate and desirable plant species. Minimal invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.00

Delta = [with-current]
-0.67

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 =
0.67 x 0.003 = **0.002**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 6

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.05

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

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

Within the US 98 northbound right-of-way, the assessment area is a forested wetland system that extends outside of the right-of-way into a larger wetland system associated with the Gator Creek Reserve.

Assessment area description

The dominant vegetation within the canopy of this wetland consists of red maple and bald cypress. The subcanopy and groundcover is comprised of cabbage palm, wax myrtle, persimmon, and elderberry.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.2 mile northwest of the entrance to Gator Creek Preserve. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 6
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	0	The assessment area is a forested wetland system that extends outside of the right-of-way into a larger wetland system associated with the Gator Creek Reserve. The assessment area is located within the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included aquatic mosses/liverworts, elevated lichen lines, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	0	Majority of plant cover is by appropriate and desirable plant species. Minimal invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.67	0.00

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

For impact assessment areas
FL = delta x acres =
0.67 x 0.05 = **0.03**

Delta = [with-current]
-0.67

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

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 7

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.81

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

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

Within the US 98 northbound right-of-way, the assessment area is an herbaceous wetland that extends beyond the right-of-way into an offsite, forested wetland system.

Assessment area description

Dominant vegetation within the herbaceous portion of Wetland 7 includes primrose willow, bulrush, false hop sedge, smartweed, Virginia chain fern, netted chain fern, St. Augustine grass, and red maple saplings.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 7
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	0	The assessment area is an herbaceous wetland that extends beyond the right-of-way into an offsite forested wetland system to the north. The assessment area is located within the northbound US 98 right-of-way. Residential development and improved pasture is located northwest of the assessment area. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential/pasture use. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included water-stained leaves, saturation, adventitious rooting, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	4	0	Majority of the plant cover is comprised of invasive, exotic species (primrose willow) with some desirable plant species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a pipe culvert within the wetland and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.57

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

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

For impact assessment areas
FL = delta x acres =
0.57 x 0.81 = **0.46**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 8

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.70

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

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

Within the US 98 northbound right-of-way, the assessment area is a forested wetland system that extends outside of the right-of-way into a larger wetland system and connects to other wetland systems via a cross drain that runs underneath US 98.

Assessment area description

Dominant vegetation within the canopy consists of red maple, sweetbay, sweet gum, and bald cypress. Groundcover species predominantly consists of wild taro, primrose willow, and maidencane.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way directly northwest of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

Evidence of wildlife observed includes crayfish burrows.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 8
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	0	The assessment area is a forested wetland system that extends outside of the right-of-way into a larger wetland system. The assessment area is located within the northbound US 98 right-of-way and adjacent to residential land use. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. ydrological indicators observed included aquatic mosses/liverworts, elevated lichen lines, crayfish burrows, buttressing, hummocks, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	0	Plant cover within the canopy is appropriate and desirable plant species. Invasive/exotic species are dominant within the understory. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way and installation of pipe culverts and cross drains may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.63

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 =
0.63 x 0.70 = **0.44**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 9

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.60

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

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

Within the US 98 northbound right-of-way, the assessment area is a forested wetland system that extends beyond the right-of-way.

Assessment area description

Dominant vegetation within the canopy consists of bald cypress, red maple, water oak, and laurel oak. The subcanopy and groundcover predominately consists of wax myrtle, primrose willow, Virginia chain fern, bluestem, bulrush, and paragrass.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located less than 0.1 mile southeast of the entrance to Gator Creek Campground within the northbound US 98 right-of-way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

Evidence of wildlife observed includes crayfish burrows.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 9
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	0	The assessment area is a forested wetland system that extends outside of the right-of-way. The assessment area is located within the northbound US 98 right-of-way and adjacent to a RV park/campground. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed included high water table, elevated lichen lines, buttressed trunks, water-stained leaves, saturation, hummocks, water marks, and adventitious rooting. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	0	Plant cover within the canopy is appropriate and desirable plant species. Invasive/exotic species are dominant within the understory. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.63

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 =
0.63 x 0.60 = **0.38**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 10

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.26

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

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

Within the US 98 northbound right-of-way, the assessment area is a forested wetland system extends beyond the right-of-way and connects to other wetlands via a cross drain that runs underneath US 98.

Assessment area description

Dominant vegetation within the canopy of Wetland 10 consists of red maple, bald cypress, sweet bay, and red bay. The subcanopy and groundcover predominantly consists of primrose willow, paragrass, and torpedo grass.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located directly north of the entrance to Gator Creek Campground within the northbound US 98 right-of-way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

Evidence of wildlife observed includes crayfish burrows.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 10
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	0	The assessment area is a forested wetland system that extends outside of the right-of-way and connects to other wetlands via a cross drain that runs underneath US 98.. The assessment area is located within the northbound US 98 right-of-way and adjacent to a RV park/campground. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed included saturation, high water table, adventitious rooting, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	0	Plant cover within the canopy is appropriate and desirable plant species. Invasive/exotic species are dominant within the understory. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way and installation of pipe culverts and cross drains may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.63

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 =
0.63 x 0.26 = **0.16**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 11

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.03

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

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

Within the US 98 northbound right-of-way, the assessment area is an herbaceous wetland that extends beyond the right-of-way into an offsite, forested wetland system and connects to other wetlands via a cross drain that runs underneath US 98.

Assessment area description

Dominant vegetation within Wetland 11 consists of alligatorweed, torpedo grass, sesban, maidencane, smartweed, barnyard grass, and primrose willow.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.1 mile southeast of Earnest Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 11
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	5	0	The assessment area is an herbaceous wetland that extends beyond the right-of-way into an offsite forested wetland system to the north. The assessment area is located within the northbound US 98 right-of-way. Adjacent land uses consists of residential and pasture. Minimal weltand and upland habitat is available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential/pasture use. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	4	0	Majority of the plant cover is comprised of invasive, exotic species with few desirable plant species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way and installation of pipe culverts and cross drains that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.03 = **0.02**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 12

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.56

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

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

Within the US 98 northbound right-of-way, the assessment area is an herbaceous wetland that extends beyond the right-of-way into an offsite, forested wetland system.

Assessment area description

Dominant vegetation within Wetland 12 consists of Carolina willow, red maple saplings, primrose willow, smartweed, barnyard grass, fireflag, golden canna, soft rush, Virginia chain fern, lizard's tail, and bulrush.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way directly northwest of Earnest Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 12
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	5	0	The assessment area is an herbaceous wetland that extends beyond the right-of-way into an offsite forested wetland system to the north. The assessment area is located within the northbound US 98 right-of-way. Adjacent land uses consists of residential development. Minimal wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential/pasture use. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout. Other hydrological indicators observed included water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	4	0	Majority of the plant cover is comprised of invasive, exotic species with few desirable plant species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way and installation of pipe culverts that may affect natural recruitment or regeneraltion in the plant community.

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

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

For impact assessment areas
FL = delta x acres =
0.53 x 0.56 = **0.30**

Delta = [with-current]
-0.53

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

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

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 13

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.76

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

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

Within the US 98 northbound right-of-way, the assessment area is an herbaceous wetland that extends into a forested wetland system outside of the right-of-way and is connected to other wetland systems via a cross drain that runs underneath US 98

Assessment area description

Dominant vegetation within Wetland 13 consists of Carolina willow, saltbush, caesarweed, Mexican primrose willow, and shield fern.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.1 mile southeast of Perkle Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 13
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way into an offsite forested wetland system to the north. The assessment area is located within the northbound US 98 right-of-way. Adjacent land uses consists of residential development. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential land use. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	6	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrological indicators observed included aquatic mosses/liverworts and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Some desirable and appropriate plant species are present. Invasive, exotic species present throughout. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way and installation of pipe culverts and cross drains that may affect natural recruitment or regeneraltion in the plant community.	5	0

DRAFT

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

Delta = [with-current]
-0.60

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 =
0.60 x 0.76 = **0.46**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 14

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

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

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

Within the US 98 northbound right-of-way, the assessment area is an herbaceous wetland community that connects to a small forested system outside of the right-of-way

Assessment area description

Dominant vegetation within Wetland 14 consists of mostly primrose willow with red maple saplings, barnyard grass, water pennywort, coinwort, smartweed, and soft rush.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.1 mile northwest of Perkle Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

. Evidence of wildlife observed included small fish and crayfish burrows.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 14
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way into an offsite forested wetland system to the north. The assessment area is located within the northbound US 98 right-of-way. Adjacent land uses consists of improved pasture. MInimal wetland and upland habitats are available outside of the assessment area; wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	4	0

DRAFT

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.00 = **0.00**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 15

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.31

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

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

Within the US 98 northbound right-of-way, the assessment area is an herbaceous wetland community that connects to a small forested system outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 15 to other offsite wetland systems.

Assessment area description

Dominant vegetation within this wetland consists of Carolina willow, primrose willow, cattail, Virginia chain fern, and west Indian marshgrass.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.4 mile northwest of Perkle Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 15
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way into an offsite forested wetland system to the north. The assessment area is located within the northbound US 98 right-of-way. Adjacent land uses consists of improved pasture. MInimal wetland and upland habitats are available outside of the assessment area; wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way and the installation of cross drains and pipe culverts that may affect natural recruitment or regeneraltion in the plant community.	4	0

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.31 = **0.17**

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

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 16

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.43

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

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

Within the US 98 northbound right-of-way, the assessment area is comprised of a primrose willow-dominated freshwater marsh that connects to a small forested system outside of the right-of-way. A pipe culvert that runs underneath US 98 connects Wetland 16 to other offsite wetland systems.

Assessment area description

In addition to primrose willow, other vegetation present includes smartweed, and loosestrife.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.1 mile southeast of Keen Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 16
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	5	0	The assessment area is an herbaceous wetland that extends beyond the right-of-way into an offsite forested wetland system to the north. The assessment area is located within the northbound US 98 right-of-way. Adjacent land uses consists of improved pasture and residential development. MInimal wetland and upland habitats are available outside of the assessment area; wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture/residential use. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	4	0	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way and the installation of cross drains and pipe culverts that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.43 = **0.23**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 17

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.15

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

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

Within the US 98 northbound right-of-way, the assessment area is comprised of a torpedo grass-dominated freshwater marsh that connects to a small forested system outside of the right-of-way. Adjacent forested wetland lies within the boundary of the Green Swamp.

Assessment area description

In addition to torpedo grass, other species present include primrose willow and smartweed.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.1 mile southeast of Lakeland Acres Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 17
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way into an offsite forested wetland system to the north. The assessment area is located within the northbound US 98 right-of-way. Adjacent land uses consists of improved pasture. MInimal wetland and upland habitats are available outside of the assessment area; wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	4	0

DRAFT

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.15 = **0.08**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 18

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.22

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

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

Within the US 98 northbound right-of-way, the assessment area is comprised of a torpedo grass-dominated freshwater marsh that connects to a small forested system outside of the right-of-way. Adjacent forested wetland lies within the boundary of the Green Swamp.

Assessment area description

In addition to torpedo grass, other species present include sand cordgrass, primrose willow, and sesban.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way directly across from Lakeland Acres Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 18
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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 assessment area is an herbaceous wetland that extends beyond the right-of-way into an offsite forested wetland system to the north. The assessment area is located within the northbound US 98 right-of-way. Adjacent land uses consists of improved pasture. Minimal wetland and upland habitats are available outside of the assessment area; wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, private fencing, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrological indicators observed included saturation and a high water table. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 4	with: 0	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.22 = **0.12**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 19

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.58

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

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

Within the US 98 northbound right-of-way, the assessment area is comprised of a freshwater marsh that connects to a small forested system outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 19 to other offsite wetland systems

Assessment area description

Dominant vegetation within this wetland consists of torpedo grass and primrose willow with foxtail, loosestrife, cattail, Virginia chain fern, buttonbush, and pickerelweed.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.5 mile northwest of Lakeland Acres Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

Evidence of wildlife observed included a great egret foraging within the assessment area.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 19
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	5	0	The assessment area is an herbaceous wetland that extends beyond the right-of-way into an offsite forested wetland system to the north. The assessment area is located within the northbound US 98 right-of-way. Adjacent land uses consists of the Duke Energy facility that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and the Duke Energy facility. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	4	0	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a cross drain and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

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

For impact assessment areas
FL = delta x acres =
0.53 x 0.58 = **0.31**

Delta = [with-current]
-0.53

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

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 20

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.43

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

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

Within the US 98 northbound right-of-way, the assessment area is comprised of an herbaceous wetland community dominated by primrose willow that connects to a larger wetland system outside of the right-of-way. A pipe culvert that runs underneath US 98 connects Wetland 20 to other offsite wetland systems

Assessment area description

Dominant vegetation within this wetland consists of primrose willow with foxtail, cattail, loosestrife, Virginia chain fern, bulrush, and pickerelweed.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way at the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 20
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	5	0	The assessment area is an herbaceous wetland that extends beyond the right-of-way into the Duke Energy utility easement. The assessment area is located within the northbound US 98 right-of-way. Adjacent land uses consists of the Duke Energy facility that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and the Duke Energy facility. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	4	0	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a pipe culvert and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

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

For impact assessment areas
FL = delta x acres =
0.53 x 0.43 = **0.23**

Delta = [with-current]
-0.53

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

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 21

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.05

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

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

Within the right-of-way, Wetland 21 is comprised of a torpedo-grass dominated freshwater marsh that extends outside of the right-of-way.

Assessment area description

Dominant vegetation within this wetland consists of solely of torpedo grass.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located approximately 0.1 mile northwest of the Duke Energy utility easement within the northbound US 98 right-of-way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 21
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way near the Duke Energy utility easement. The assessment area is located within the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and the Duke Energy facility. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	6	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout. In addition to surface water, hydrological indicators observed within Wetland 21 on or near the fence posts included elevated lichen lines, hummocks, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Nearly all of plant cover is comprised of invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	3	0

DRAFT

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.05 = **0.03**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 22

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.27

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

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

Wetland 22 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. Adjacent to the right-of-way, the forested canopy consists of cypress and red maple.

Assessment area description

Within the right-of-way, dominant vegetation within Wetland 22 includes maidencane, barnyard grass, and sesbania.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 22 is located within the northbound US 98 right-of-way approximately 0.2 mile northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique
Functions	**Mitigation for previous permit/other historic use**
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None
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)**
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 22
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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	6	0	The assessment area is an herbaceous wetland that extends beyond the right-of-way near the Duke Energy utility easement. The assessment area is located within the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and the Duke Energy facility. Nuisance vegetation species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the soils observed within Wetland 22 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 22 included surface water and a high water table. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98. A pipe culvert that runs underneath US 98 connects Wetland 22 to other offsite wetland systems.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	5	0	Nearly all of plant cover is comprised of a mix of native and invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.60

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 =
0.60 x 0.27 = **0.16**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 23

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.12

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

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

Within the right-of-way, Wetland 23 is comprised of freshwater marsh habitat that extends outside of the right-of-way. Adjacent to the right-of-way, the freshwater marsh continues approximately 25 feet north before abutting mesic pine forest with saw palmetto

Assessment area description

Dominant vegetation within Wetland 23 includes torpedo grass, maidencane, buttonweed, foxtail grass, arrowhead, coinwort, and natal grass.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 23 is located within the northbound US 98 right-of-way approximately 0.3 miles northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 23
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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	6	0	The assessment area is an herbaceous wetland that extends beyond the right-of-way near the Duke Energy utility easement. The assessment area is located within the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and the Duke Energy facility. Nuisance vegetation species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than four inches. In addition to surface water and aquatic vegetation, hydrological indicators observed within Wetland 23 on or near the fence posts included water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	5	0	Nearly all of plant cover is comprised of a mix of native and invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.60

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 =
0.60 x 0.12 = **0.07**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 24

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

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

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

Wetland 24 is comprised of a freshwater marsh that extends into a forested wetland system outside of the right-of-way and is connected to other wetland systems via a cross drain that runs underneath US 98. Adjacent to the right-of-way, the freshwater marsh continues approximately 25 feet north before abutting a forested wetland dominated by red maple and cypress.

Assessment area description

Dominant vegetation within Wetland 24 includes torpedo grass and maidencane with foxtail grass, Virginia chain fern, sesbania, and primrose willow.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 24 is located within the northbound US 98 right-of-way approximately 0.6 miles northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 24
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way near the Duke Energy utility easement. The assessment area is located within the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and the Duke Energy facility. Nuisance vegetation species are present that may adversely affect the functions provided by the assessment area.	6	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water, hydrological indicators observed within Wetland 24 on or near the fence posts included water marks and elevated lichen lines. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98. A cross drain that runs underneath US 98 connects Wetland 24 to other offsite wetland systems.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Nearly all of plant cover is comprised of a mix of native and invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	5	0

DRAFT

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

Delta = [with-current]
-0.60

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 =
0.60 x 0.00 = **0.00**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 25

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.21

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

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

Within the right-of-way, Wetland 25 is comprised of a freshwater marsh. Adjacent to the right-of-way is upland planted pine.

Assessment area description

Dominant vegetation within Wetland 25 is maidencane.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 25 is located within the northbound US 98 right-of-way approximately 0.7 miles northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 25
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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	6	0	The assessment area is an herbaceous wetland that extends beyond the right-of-way near the Duke Energy utility easement. The assessment area is located within the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and the Duke Energy facility. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the soils observed within Wetland 25 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 25 included surface water and a high water table. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	0	Nearly all plant cover consisted of native maidencane. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.63

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 =
0.63 x 0.21 = **0.13**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 26

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.30

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

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

Within the right-of-way, Wetland 26 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a scrub-shrub wetland. Adjacent to the right-of-way, the scrub-shrub wetland consists predominantly of buttonbush

Assessment area description

Dominant vegetation within Wetland 26 includes torpedo grass and maidencane with barnyard grass, primrose willow, bulrush.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 26 is located within the northbound US 98 right-of-way approximately 1.0 mile northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 26
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way near the Duke Energy utility easement. The assessment area is located within the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and the Duke Energy facility. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the soils observed within Wetland 26 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 26 included surface water, water marks on the fence posts, and a high water table. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover consists of a combination of native, nuisance, and invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	5	0

DRAFT

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

Delta = [with-current]
-0.57

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

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

For impact assessment areas
FL = delta x acres =
0.57 x 0.30 = **0.17**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 27

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.47

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

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

Within the right-of-way, Wetland 27 is comprised of freshwater marsh habitat that extends outside of the right-of-way.

Assessment area description

Dominant vegetation within Wetland 27 includes maidencane with torpedo grass, barnyard grass, arrowhead, and buttonweed.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 27 is located within the northbound US 98 right-of-way approximately 0.75 mile southeast of SR 471. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 27
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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 assessment area is an herbaceous wetland that extends beyond the right-of-way near SR 471. The assessment area is located within the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and SR 471. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 6	with: 0	Plant cover consists primarily of native species with nuisance and invasive, exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.60

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 =
0.60 x 0.47 = **0.28**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 28

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.09

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

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

Within the right-of-way, Wetland 28 is comprised of a maidencane-dominated freshwater marsh that extends outside of the right-of-way.

Assessment area description

Additional vegetation present includes primrose willow and red maple saplings along the right-of-way fence.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 28 is located within the northbound US 98 right-of-way approximately 0.6 mile southeast of SR 471. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 28
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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 assessment area is an herbaceous wetland that extends beyond the right-of-way near SR 471. The assessment area is located within the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and SR 471. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.		
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 0
Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.		
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 6	with: 0
Plant cover consists primarily of maidencane with minimal presence of invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.		

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

Delta = [with-current]
-0.60

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 =
0.60 x 0.09 = **0.05**

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

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 29

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.25

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

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

Within the right-of-way, Wetland 29 is comprised of freshwater marsh habitat that extends outside of the right-of-way and connects to a forested wetland system.

Assessment area description

Dominant vegetation within Wetland 29 includes maidencane and alligatorweed. Additional vegetation present along the right-of-way includes primrose willow and saltbush. Adjacent to the right-of-way, herbaceous wetland habitat consists of pickerelweed, and the forested canopy is dominated by cypress and red maple.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 29 is located within the northbound US 98 right-of-way approximately 0.4 mile southeast of SR 471. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 29
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way near SR 471 into a forested wetland system. The assessment area is located within the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and SR 471. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.	6	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water, hydrological indicators observed included water marks on the fence posts. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover consists of a mix of native and invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	5	0

DRAFT

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

Delta = [with-current]
-0.60

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 =
0.60 x 0.25 = **0.15**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 30

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.01

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

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

Within the right-of-way, Wetland 30 is comprised of freshwater marsh habitat that extends outside of the right-of-way.

Assessment area description

Dominant vegetation within Wetland 30 includes maidencane, arrowhead, buttonweed, coinwort, sand cordgrass, and bahiagrass (Paspalum notatum).

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 30 is located within the northbound US 98 right-of-way approximately 0.3 mile southeast of SR 471. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 30
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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	5	0	The assessment area is an herbaceous wetland that extends beyond the right-of-way near SR 471. The assessment area is located within the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and SR 471. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water and aquatic vegetation, hydrological indicators observed included water marks on the fence posts. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	0	Plant cover primarily consists of native with minimal presence of invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.60

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 =
0.60 x 0.01 = **0.01**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 31

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.56

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

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

Within the right-of-way, Wetland 31 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. A cross drain that runs underneath US 98 connects Wetland 31 to other offsite wetland systems.

Assessment area description

Dominant vegetation within Wetland 31 includes paragrass and torpedo grass with barnyard grass, and primrose willow. The forested wetland adjacent to the right-of-way consists of cypress, red maple, and fireflag.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 31 is located within the northbound US 98 right-of-way directly northwest of SR 471. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

Frogs were observed during field reviews.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 31
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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 assessment area is an herbaceous wetland that extends beyond the right-of-way into a forested wetland system adjacent to SR 471. The assessment area is located within the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and SR 471. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 4	with: 0	Plant cover within the right-of-way is nearly all comprised of invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.56 = **0.30**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 32

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
617 - Mixed Wetland Hardwoods	PFO1C - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded	Impact	1.27

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

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

Within the right-of-way, Wetland 32 is comprised of a forested wetland. Adjacent land cover outside of the right-of-way consists of planted pine.

Assessment area description

Dominant vegetation within Wetland 32 includes red maple, water oak, Carolina willow, and persimmon. During the field review, this area was littered with trash and debris.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 32 is located on the east side of SR 471, north of US 98. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 32
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	0	The assessment area is a disturbed, forested wetland. The assessment area is located on the east side of SR 471, north of US 98. Adjacacent land use includes planted pine, pastureland and Colt Creek State Park. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and SR 471.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than three inches and littered with trash. In addition to surface water, hydrological indicators observed liverworts, elevated lichen lines, hummocks, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	0	Majority of plant cover is by appropriate and desirable plant species. Trash and debris was present throughout the wetland during the field review. Minimal invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but installation of pipe culvert and routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.63

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 =
0.63 x 1.27 = **0.80**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 33

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.29

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

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

Within the right-of-way, Wetland 33 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland system. A cross drain that runs underneath US 98 connects this wetland to other wetland systems.

Assessment area description

Dominant vegetation within Wetland 33 includes alligatorweed and torpedo grass with primrose willow, bahiagrass, smartweed, and maidencane. Adjacent to the right-of-way, the forested wetland canopy consists of cypress and red maple. The majority of Wetland 33 appeared to be disturbed by truck and equipment rutting throughout the right-of-way.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 33 is located within the southbound US 98 right-of-way approximately 260 feet southeast of CR 54. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife utilization observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 33
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way into a forested wetland system adjacent to CR 54. The assessment area is located within the southbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and CR 54. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the soils observed within Wetland 33 consisted of a dark surface with muck present. Hydrological indicators observed included surface water and a high water table. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover within the right-of-way is comprised of primarily invasive, exotic species with presence of native species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	4	0

DRAFT

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.29 = **0.15**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 34

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.05

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

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

Within the US 98 southbound right-of-way, the assessment area is comprised of a freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. The wetland outside the right-of-way is dominated by cypress.

Assessment area description

Dominant vegetation within this wetland consists of torpedo grass, maindencane, and smartweed.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.1 mile southeast of Old Dade City Road. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 34
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way into a forested wetland. The assessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of the residential facilities that are bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential faclities. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout with water levels greater than six inches and cypress knees. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	4	0

DRAFT

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.05 = **0.03**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 35

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.09

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

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

Within the US 98 southbound right-of-way, the assessment area is comprised of a freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. The wetland outside the right-of-way consists of red maple and chinese tallow.

Assessment area description

Dominant vegetation within this wetland consists of torpedo grass with some bulrush mixed throughout.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.4 mile southeast of Old Dade City Road. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 35
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way into a forested wetland. The assessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of the residential facilities that are bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential faclities. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout with water levels greater than six inches. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	4	0

DRAFT

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.09 = **0.05**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 36

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.03

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

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

Within the US 98 southbound right-of-way, the assessment area is comprised of a freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. The forested wetland consisted of red maple, water oak, and Chinese tallow.

Assessment area description

Dominant vegetation within this wetland consists of torpedo grass with aidencane, foxtail grass, arrowhead, bahia grass, and dogfennel,

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.5 mile southeast of Old Dade City Road. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 36
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way into a forested wetland. The assessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of the residential facilities that are bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential faclities. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout with water levels greater than six inches, liverworts, and algal mats. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	4	0

DRAFT

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.03 = **0.02**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 37

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.25

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

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

Within the US 98 southbound right-of-way, the assessment area is comprised of a freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. The forested wetland consisted of red maple, water oak, cypress, and wax myrtle.

Assessment area description

Dominant vegetation within this wetland consists of maidencane, alligatorweed, and pickerelweed.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.4 mile northwest of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 37
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way into a forested wetland. The assessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of the residential facilities that are bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential faclities. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout with water levels greater than six inches. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover is comprised of invasive, exotic species with some desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	5	0

DRAFT

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

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

For impact assessment areas
FL = delta x acres =
0.57 x 0.25 = **0.14**

Delta = [with-current]
-0.57

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

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 38

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.21

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

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

Within the US 98 southbound right-of-way, the assessment area is comprised of a freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. A cross drain that runs underneath US 98 connects Wetland 38 to other offsite wetland systems.

Assessment area description

Dominant vegetation within this wetland consists of torpedo grass, smartweed, pickerelweed, maidencane, forxtail grass, primrose willow, Mexican primrose, elderberry, and red maple saplings. The forested wetland adjacent to the right-of-way consists of red maple, water oak, and cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.1 mile northwest of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

Evidence of wildlife observed were small fish and tadpoles.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 38
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way into a forested wetland. The assessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of the residential facilities that are bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area showed high water table, dark surfaces, liverworts, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	4	0

DRAFT

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.21 = **0.11**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 39

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.30

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

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

Within the US 98 southbound right-of-way, the assessment area is comprised of a freshwater marsh habitat that extends outside of the right-of-way.

Assessment area description

Dominant vegetation within this wetland consists of foxtail, sesban, beakrush, primrose willow, and blue maidencane.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.4 mile southeast of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 39
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of improved pasture that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area showed dark surfaces and muck. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	4	0

DRAFT

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.30 = **0.16**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 40

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.13

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

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

Within the US 98 southbound right-of-way, the assessment area is comprised of a freshwater marsh habitat that extends outside of the right-of-way approximately 25 feet before abutting a forested wetland dominated by red maple and cypress.

Assessment area description

Dominant vegetation within this wetland consists of West Indian marshgrass, alligatorweed, torpedo grass, maidencane, and soft rush.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.5 mile southeast of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

Evidence of wildlife observed within the wetland included frogs.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 40
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of improved pasture that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	6	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout, displayed elevated lichen lines, and high water marks on fence posts. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover is comprised of both desirable and invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	5	0

DRAFT

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

Delta = [with-current]
-0.60

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 =
0.60 x 0.13 = **0.08**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 41

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.05

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

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

Within the US 98 southbound right-of-way, the assessment area is comprised of a freshwater marsh habitat that extends outside of the right-of-way approximately 25 feet abutting a forested wetland. The forested wetland consists of red maple and cypress.

Assessment area description

Dominant vegetation within this wetland consists of torpedo grass with red maple saplings, arrowhead, maidencane, alligatorweed, and soft rush.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.6 mile southeast of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 41
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way abutting a foreted wetland. The assessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of improved pasture that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, improved pasture, and forested wetland. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	6	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout, displayed elevated lichen lines, and high water marks on fence posts. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	4	0

DRAFT

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

Delta = [with-current]
-0.57

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

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

For impact assessment areas
FL = delta x acres =
0.57 x 0.05 = **0.03**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 42

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.67

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

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

Within the US 98 southbound right-of-way, the assessment area is comprised of a primrose willow-dominated freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. The forested wetland consists of red maple and cypress.

Assessment area description

Dominant vegetation within this wetland consists of primrose willow with cattail, and pickerelweed

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.8 mile southeast of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 42
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of improved pasture that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, improved pasture, and forested wetland. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	6	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area displayed elevated lichen lines, surface water, dark surfaces, and high water marks on fence posts. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Nearly all of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	3	0

DRAFT

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.67 = **0.36**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 43

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.33

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

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

Within the US 98 southbound right-of-way, the assessment area is comprised of a freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. The forested wetland consists of cypress.

Assessment area description

Dominant vegetation within this wetland consists of torpedo grass and alligatorweed with pickerelweed, soft rush, and spatterdock.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.9 mile southeast of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 43
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of improved pasture that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	4	0

DRAFT

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.33 = **0.18**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 44

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.45

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

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

Within the US 98 southbound right-of-way, the assessment area is comprised of a freshwater marsh habitat that extends outside of the right-of-way. The freshwater marsh continues beyond 25 feet south before abutting a forested wetland dominated by red maple and cypress.

Assessment area description

Dominant vegetation within this wetland consists of alligatorweed, torpedo grass, primrose willow, maidencane, buttonwood, arrowhead, and water hyssop.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.9 mile northwest of the Duke Energy utility easement. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 44
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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	6	0	The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of undeveloped land with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	4	0	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.57

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

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

For impact assessment areas
FL = delta x acres =
0.57 x 0.45 = **0.26**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 45

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.38

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

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

Within the US 98 southbound right-of-way, the assessment area is comprised of a freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. The forested wetland consists of red maple, cypress, dahoon holly, buttonbush, and soft rush.

Assessment area description

Dominant vegetation within this wetland consists of primrose willow, pickerelweed, maidencane, barnyard grass, and alligatorweed.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.2 mile northwest of the Duke Energy utility easement. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique
Functions	**Mitigation for previous permit/other historic use**
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None
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)**
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 45
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of undeveloped land with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and undeveloped land. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	6	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	4	0

DRAFT

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

Delta = [with-current]
-0.57

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

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

For impact assessment areas
FL = delta x acres =
0.57 x 0.38 = **0.22**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 46

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.41

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

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

Within the US 98 northbound right-of-way, the assessment area comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. A pipe culvert is constructed within a ditch that connects to this wetland.

Assessment area description

Dominant vegetation within this wetland consists of maidencane, barnyard grass, sand cordgrass, buttonweed, Virginia chain fern, and primrose willow.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.1 mile northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 46
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	5	0	The assessment area is an herbaceous wetland that extends beyond the right-of-way into a forested wetland system and is located within the southbound US 98 right-of-way. Adjacent land uses includes residential development. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, residential development, and the Duke Energy utility easement. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	0	Majority of plant cover is comprised of desirable/appropriate species with few invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a pipe culvert and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.60

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 =
0.60 x 0.41 = **0.25**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 47

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.35

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

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

Within the US 98 northbound right-of-way, the assessment area comprised of cattail-dominated freshwater marsh habitat that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 47 to other offsite wetland systems.

Assessment area description

Dominant vegetation within this wetland consists of cattail. Other vegetation present includes Carolina willow, pickerelweed, primrose willow, and torpedo grass.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way at the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 47
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	0	The assessment area is an herbaceous wetland that extends beyond the right-of-way and is located within the southbound US 98 right-of-way. Adjacent land uses includes residential development and the Duke Energy utility easement. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, residential development, and the Duke Energy utility easement. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	4	0	Majority of the plant cover and presence is comprised of invasive exotic plant species with minimal desirable species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a cross drain and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.35 = **0.19**

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

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 48

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
617 - Mixed Wetland Hardwoods	PFO1C - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded	Impact	0.53

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

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

Within the US 98 southbound right-of-way, the assessment area is a forested system that extends outside of the right-of-way. A pipe culvert runs underneath the adjacent driveway connecting this wetland to adjacent wetlands.

Assessment area description

Dominant vegetation within the canopy of Wetland 48 includes water oak, swamp bay, laural oak, and red maple. The understory and groundcover predominantly consist of wax myrtle, Virginia chain fern, and maiden fern.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way directly southeast of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 48
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	6	0	The assessment area is a forested wetland that connects to offsite wetlands via a pipe culvert. The assessment area is located within the southbound US 98 right-of-way. Adjacacent land use includes the Duke Energy utility easement; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included surface water, mosses, elevated lichen lines, hummocks, water marks, and adventitious rooting. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	0	Majority of plant cover is by appropriate and desirable plant species. Minimal invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but installation of pipe culvert and routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.00

Delta = [with-current]
-0.67

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 =
0.67 x 0.53 = **0.35**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 49

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved, Deciduous, Seasonally Flooded	Impact	0.46

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

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

Within the US 98 southbound right-of-way, the assessment area is a forested system that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 49 to other offsite wetland systems.

Assessment area description

Dominant vegetation within the canopy of Wetland 49 includes cypress, Chinese tallow, and red maple. The understory and groundcover predominantly consist of Carolina willow, primrose willow, soft rush, and maidencane.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.4 mile northwest of Lakeland Acres Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 49
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	0	The assessment area is a forested wetland that connects to offsite wetlands via a cross drain. The assessment area is located within the southbound US 98 right-of-way. Adjacacent land use includes residential development; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential development.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included surface water, elevated lichen lines, and cypress knees. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	0	Majority of plant cover is by appropriate and desirable plant species. Minimal invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but installation of a cross drain and routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.63

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 =
0.63 x 0.46 = **0.29**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 50

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
617 - Mixed Wetland Hardwoods	PFO1C - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded	Impact	0.15

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

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

Within the US 98 southbound right-of-way, the assessment area is a forested system that extends outside of the right-of-way.

Assessment area description

Dominant vegetation within the canopy of Wetland 50 includes red maple and water oak. The understory and groundcover predominantly consist of primrose willow, whitetop sedge, creeping oxeye, Virginia chain fern, wax myrtle, and bahia grass.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.5 mile northwest of Lakeland Acres Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 50
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	6	0	The assessment area is a forested wetland and is located within the southbound US 98 right-of-way. Adjacacent land use includes the residential and commercial development; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included surface water, water-stained leaves and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	0	The plant cover within the canopy consists of appropriate and desirable plant species. The groundcover/understory consists of invasive/exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.63

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 =
0.63 x 0.15 = **0.10**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 51

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
617 - Mixed Wetland Hardwoods	PFO1C - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded	Impact	0.28

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

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

Within the US 98 southbound right-of-way, the assessment area is a forested system that extends outside of the right-of-way.

Assessment area description

Dominant vegetation within the canopy of Wetland 51 includes red maple and water oak. The understory and groundcover predominantly consist of primrose willow, Virginia chain fern, and elderberry.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.2 mile northwest of Lakeland Acres Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 51
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	0	The assessment area is a forested wetland and is located within the southbound US 98 right-of-way. Adjacacent land use includes the residential and commercial development; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, residential/commercial development, Lakeland Acres Road, and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included surface water, water-stained leaves, hummocks, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	0	The plant cover within the canopy consists of appropriate and desirable plant species. The groundcover/understory consists of invasive/exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.60

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 =
0.60 x 0.28 = **0.17**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 52

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.48

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

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

Within the US 98 southbound right-of-way, the assessment area is a forested system that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 52 to other offsite wetland systems.

Assessment area description

Dominant vegetation within the canopy of Wetland 52 includes cypress, red maple, and water oak. The understory and groundcover predominantly consist of primrose willow and Virginia chain fern.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.1 mile southeast of Keen Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 52
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	0	The assessment area is a forested wetland and is located within the southbound US 98 right-of-way. A cross drain that runs underneath US 98 connects this area to other offsite wetland systems. Adjacent land use includes Keen Road, an RV lot, and improved pasture; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, the RV lot, Keen Road, and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included surface water and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	0	The plant cover within the canopy consists of appropriate and desirable plant species. The groundcover/understory consists of invasive/exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but the installation of a cross drain and routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.60

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 =
0.60 x 0.48 = **0.29**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 53

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.11

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

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

Within the US 98 northbound right-of-way, the assessment area is comprised of primrose willow-dominated freshwater marsh habitat that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 53 to other offsite wetland systems.

Assessment area description

Dominant vegetation within this wetland consists of primrose willow.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.5 mile southeast of the Keen Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 53
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	0	The assessment area is an herbaceous wetland that extends beyond the right-of-way and is located within the southbound US 98 right-of-way. Adjacent land uses include improved pasture. Minimal wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout. Additional hydrologic indicators included water-stained leaves and water marks on the right-of-way fence. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	3	0	Nearly all of the plant cover is comprised of invasive/exotic plant species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a cross drain and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.50

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

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

For impact assessment areas
FL = delta x acres =
0.50 x 0.11 = **0.06**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 54

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.49

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

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

Within the US 98 southbound right-of-way, the assessment area is a forested system that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 54 to other offsite wetland systems.

Assessment area description

Dominant vegetation within the canopy of Wetland 54 includes cypress, red maple, and water oak. The understory and groundcover predominantly consist of primrose willow.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.4 mile northwest of Perkle Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 54
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	0	The assessment area is a forested wetland and is located within the southbound US 98 right-of-way. A cross drain that runs underneath US 98 connects this area to other offsite wetland systems. Adjacent land use includes residential development and improved pasture; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, residential development/improved pasture, and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included surface water, water marks, elevated lichen lines, moss, and adventitious rooting. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	0	The plant cover within the canopy consists of appropriate and desirable plant species. The groundcover/understory consists of mostly invasive/exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but the installation of a cross drain and routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.60

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 =
0.60 x 0.49 = **0.29**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 55

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.68

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

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

Within the US 98 southbound right-of-way, the assessment area is a forested system that extends outside of the right-of-way.

Assessment area description

Dominant vegetation within the canopy of Wetland 55 includes cypress, red maple, and water oak. The understory and groundcover predominantly consist of Virginia chain fern, netted chain fern, maiden fern, pickerelweed, and cattail.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way adjacent to the east side of Old Soldier Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 55
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	0	The assessment area is a forested wetland and is located within the southbound US 98 right-of-way. Adjacent land use includes residential development, improved pasture, and Old Soldier Road; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, residential development/improved pasture, Old Soldier Road, and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	0	The plant cover within the canopy and understory consists of appropriate and desirable plant species with minimal invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but the routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.63

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 =
0.63 x 0.68 = **0.43**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 56

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.78

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

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

Within the US 98 southbound right-of-way, the assessment area is a forested system that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 56 to other offsite wetland systems.

Assessment area description

Dominant vegetation within the canopy of Wetland 56 includes cypress, red maple, and water oak. The understory and groundcover predominantly consist of Virginia chain fern and primrose willow.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way less than 0.1 mile southeast of Perkle Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 56
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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 assessment area is a forested wetland and is located within the southbound US 98 right-of-way. A cross drain that runs underneath US 98 connects Wetland 56 to other offsite wetland systems. Adjacent land use includes residential development, improved pasture, and aquacultural farm; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, residential development/improved pasture, aquaculture, and US 98.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 6	with: 0	The plant cover within the canopy consists of appropriate and desirable plant species; however, the understory consists of invasive/exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but the installation of a cross drain and the routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.60

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 =
0.60 x 0.78 = **0.47**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 57

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.34

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

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

Within the US 98 southbound right-of-way, the assessment area is a forested system that extends outside of the right-of-way.

Assessment area description

Dominant vegetation within the canopy of Wetland 57 includes cypress and red maple. The understory and groundcover predominantly consist of primrose willow.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.2 mile northwest of Earnest Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 57
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	6	0	The assessment area is a forested wetland and is located within the southbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	0	The plant cover within the canopy consists of appropriate and desirable plant species; however, the understory consists predominantly of invasive/exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but the routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.63

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 =
0.63 x 0.34 = **0.22**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 58

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.73

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

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

Within the US 98 southbound right-of-way, the assessment area is a forested system that extends outside of the right-of-way.

Assessment area description

Dominant vegetation within the canopy of Wetland 58 includes cypress and red maple. The understory and groundcover predominantly consist of Virginia chain fern and primrose willow.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way across from Earnest Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 58
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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	6	0	The assessment area is a forested wetland and is located within the southbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). In addition to surface water, hydrologic indicators observed included water-stained leaves, moss, and elevated lichen lines. Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	0	The plant cover within the canopy consists of appropriate and desirable plant species; however, the understory consists predominantly of invasive/exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but the routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.63

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 =
0.63 x 0.73 = **0.46**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 59

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.52

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

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

Within the US 98 southbound right-of-way, the assessment area is a forested system that extends outside of the right-of-way. A pipe culvert that runs underneath US 98 connects Wetland 59 to other offsite wetland systems.

Assessment area description

Dominant vegetation within the canopy of Wetland 59 includes cypress and red maple. The understory and groundcover predominantly consist of Virginia chain fern, buttonbush, wild taro, bulrush, swamp fern, lizard's tail, and primrose willow.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.1 mile southeast of Earnest Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 59
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested wetland and is located within the southbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and commercial property.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland was inundated throughout. In addition to surface water, hydrologic indicators observed included water marks and elevated lichen lines. Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	The plant cover within the canopy consists of appropriate and desirable plant species; however, the understory consists predominantly of invasive/exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but the routine maintenance within the right-of-way and installation of the culvert may affect natural recruitment or regeneraltion in the plant community.	6	0

DRAFT

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

Delta = [with-current]
-0.60

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 =
0.60 x 0.52 = **0.31**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 60

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.58

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

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

Within the US 98 northbound right-of-way, the assessment area is comprised of an herbaceous wetland community dominated by primrose willow and Carolina willow that connects to a forested wetland outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 60 to other offsite wetland systems

Assessment area description

Additional vegetation within this wetland consists Virginia chain fern, red root, and caesarweed.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 adjacent to the east side of Rockridge Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 60
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way into the Duke Energy utility easement. The assessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of undeveloped land that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and commercial property. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a cross drain and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	4	0

DRAFT

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.58 = **0.31**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 61

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.85

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

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

Within the US 98 northbound right-of-way, the assessment area is comprised of a primrose-willow dominated freshwater marsh that extends outside of the right-of-way into a forested wetland. The forested wetland consists of red maple and cypress encroaching into the right-of-way.

Assessment area description

Dominant species within Wetland 61 include redroot, Virginia chain fern, and Carolina willow with few red maple and cypress trees

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 approximately 0.2 mile southeast of Rockridge Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 61
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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	5	0	The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of forested wetland isolated by commecial property that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and commercial property. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, surface water was observed throughout the wetland and soils observed indicated a dark surface with muck present. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	4	0	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a cross drain and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.85 = **0.45**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 62

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
621 - Cypress	PFO2C – Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.87

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

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

Within the right-of-way, wetland 62 is comprised of a forested wetland that extends outside of the right-of-way.

Assessment area description

Dominant vegetation within Wetland 62 consists of cypress, primrose willow, Mexican primrose, pickerelweed, Carolina willow, buttonbush, and smartweed.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 62 is located within the southbound US 98 right-of-way directly west of Big Cypress Boulevard. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife utilization observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 62
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an forested cypress dominated wetland that extends beyond the right-of-way. The assessment area is located within the southbound US 98 right-of-way directly west of Big Cypress Blvd. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential development. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than 12 inches. In addition to surface water, hydrologic indicators observed included moss, water marks, and buttressing. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover within the right-of-way is a mix of native and invasive, exotic species. Cypress trees dominate the tree canopy with native and invasive species present in the understory. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	7	0

DRAFT

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

Delta = [with-current]
-0.63

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 =
0.63 x 0.87 = **0.55**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 63

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved, Deciduous, Seasonally Flooded	Impact	0.09

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

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

Within the right-of-way, Wetland 63 is comprised of a forested wetland system that extends outside of the right-of-way.

Assessment area description

Dominant vegetation within the canopy of Wetland 63 includes cypress, swamp bay, and red maple. The understory and groundcover predominantly consist of Virginia chain fern, swamp fern, and buttonbush.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 63 is located within the southbound US 98 right-of-way approximately 0.3 mile southeast of Big Cypress Boulevard. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 63
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested wetland that extends outside the right-of-way. The assessment area is located within the southbound US 98 right-of-way. Adjacacent land use includes residential development; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential development.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover is solely covered by appropriate and desirable plant species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but installation of a cross drain and routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.	7	0

DRAFT

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

Delta = [with-current]
-0.63

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 =
0.63 x 0.09 = **0.06**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 64

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
631 - Wetland Scrub	PSS1C - Palustine, Scrub-shrub, Broad-leaved Deciduous, Seasonally Flooded	Impact	0.28

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

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

Wetland 64 is comprised of a scrub-shrub wetland that extends outside of the right-of-way into a forested wetland. A cross drain that runs underneath US 98 connects Wetland 64 to other offsite wetland systems.

Assessment area description

Dominant vegetation within Wetland 64 includes red maple, Carolina willow, primrose willow, and smartweed. The forested wetland adjacent to the right-of-way consists of red maple and cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 64 is located within the southbound US 98 right-of-way approximately 0.3 mile northwest of West Socrum Loop Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 64
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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 assessment area is a scrub shrub weltand that extends outside of the right-of-way into a forested wetland system. The assessment area is located within the southbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, residential development, and US 98. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current: 7 — with: 0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current: 6 — with: 0	Majority of plant cover is by appropriate and desirable plant species with invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.60

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 =
0.60 x 0.28 = **0.17**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 65

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.42

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

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

Wetland 65 is comprised of a primrose-willow dominated freshwater marsh that extends outside of the right-of-way into a forested wetland. A cross drain that runs underneath US 98 connects Wetland 65 to other offsite wetland systems.

Assessment area description

Additional vegetation observed within Wetland 65 includes Carolina willow, red maple, wild taro, cattail, Virginia chain fern, and buttonbush. The forested wetland adjacent to the right-of-way consists of red maple and sweet bay.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 65 is located within the southbound US 98 right-of-way directly west of West Socrum Loop Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife utilization observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 65
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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 assessment area is an herbaceous wetland that extends beyond the right-of-way into a forested wetland system. The assessment area is located within the southbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and W Socrum Loop Road. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. Hydrological indicators observed included surface water and a high water table. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 4	with: 0	Plant cover within the right-of-way is comprised of primarily invasive, exotic species with minimal presence of native species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

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

Delta = [with-current]
-0.53

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 =
0.53 x 0.42 = **0.22**

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

APPENDIX I.2

UMAM Worksheets – Mainline Secondary Impacts

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 1 (Secondary Impact)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 -Wetland Forested Mixed	PFO1/2C - Palustrine, Forested Broad-Leaved Deciduous, Seasonally Flooded	Secondary Impact	0.16

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

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

Within the US 98 northbound right-of-way, the Wetland 1 is an herbaceous wetland that extends beyond the right-of-way into an offsite, forested wetland system. The assessment area is a forested wetland system that extends offsite.

Assessment area description

Dominant vegetation within the adjacent forested wetland system includes red maple and water oak

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.3 mile north of Hall Road/West Socrum Loop Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 1 (Secondary Impact)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested wetland system that extends northeast located at the northbound US 98 right-of-way. Residential and commercial development is located west and northwest of the assessment area. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential/commercial development.	6	5
.500(6)(b)Water Environment (n/a for uplands)	During the 2021 field reviews, surface water was observed throughout the assessment area. Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	7
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	The caonopy of the assessment area consists of desirable species with invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.	5	4

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.60	0.53

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 0.16 = **0.01**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 2 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.07

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

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

Within the US 98 northbound right-of-way, the Wetland 2 is an herbaceous wetland that extends beyond the right-of-way into an offsite, forested wetland system.

Assessment area description

Vegetation observed within the assessment area consists of buttonbush, Carolina willow, and red maple.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.6 mile north of Hall Road/West Socrum Loop Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 2 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	5	The assessment area is a forested wetland system located at the northbound US 98 right-of-way. Residential development and improved pasture is located northeast of the assessment area. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential/pasture use. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	During the 2021 field reviews, soils were saturated at the surface throughout the assessment area. Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	5	Majority of the plant cover and presence is comprised of desirable wetland species with minimal invasive, exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a pipe culvert within the wetland and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.57

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 0.07 = **0.005**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 3 (Secondary Impact)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
617 - Mixed Wetland Hardwoods	PFO1C - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded	Impact	0.05

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

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

The assessment area is forested wetland that connects to other off-site wetlands via a crossdrain that runs underneath US 98.

Assessment area description

Dominant vegetation within the canopy of the assessment area consists of red maple and water oak. Dominant groundcover species consists of primrose willow, beggarticks, limpograss, and elderberry.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.7 mile north of Hall Road/West Socrum Loop Road. Gator Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 3 (Secondary Impact)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested wetland that connects to off-site wetlands via a cross drain that runs underneath US 98. The assessment area is located within the northbound US 98 right-of-way. Improved pasture is located west and east of the assessment area; Upland forest habitat is located north of the assessment area. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and active pastures. The majority of the groundcover composition in the assessment area consists of invasive exotic species that adversely affect the functions provided by the assessment area.	6	5
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included a high water table, saturation, aquatic mosses/liverworts, elevated lichen lines, hummocks, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	7
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of the groundcover is comprised of invasive exotic plant species (primrose willow) and undesirable plant species. Desirable plant species are present within the canopy. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way and installation of pipe culverts and cross drains may affect natural recruitment or regeneraltion in the plant community.	5	4

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.60	0.53

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 0.05 = **0.003**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 4 (Secondary Impact)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
617 - Mixed Wetland Hardwoods	PFO1C - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded	Impact	0.42

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

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

The assessment area is a forested wetland that extends offsite and connects to other offsite wetlands via a cross drain that runs underneath US 98.

Assessment area description

Dominant vegetation within the canopy consists of red maple, water oak, and sweetbay. The subcanopy and groundcover of the forested portion of the wetland predominantly consists of elderberry, buttonbush, bushy bluestem, Virginia chain fern, primrose willow, blackberry.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.2 mile southeast of the entrance to Gator Creek Preserve. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 4 (Secondary Impact)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	5	The assessment area is a forested wetland that connects to offsite wetlands via a cross drain that runs underneath US 98. The assessment area is located at the northbound US 98 right-of-way. Improved pasture and residential land use is located east of the assessment area; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and pasture/residential use.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included elevated lichen lines, saturation, high water table, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	Majority of plant cover is by appropriate and desirable plant species. Minimal invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.60

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 0.42 = **0.03**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 5

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
631 - Wetland Scrub	PSS1C - Palustine, Scrub-shrub, Broad-leaved Deciduous, Seasonally Flooded	Impact	0.02

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

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

The assessment area is a scrub-shrub wetland that extends offsite and is adjacent to the Gator Creek Reserve.

Assessment area description

Dominant vegetation within the assessment area consists of red maple saplings, buttonbush, redroot, sand cordgrass, coinwort, and Virginia chain fern.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.1 mile southeast of the entrance to Gator Creek Preserve. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 5
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a scrub shrub weltand adjacent to the Gator Creek Preserve. The assessment area is located at the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.	6	5
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included elevated lichen lines, water-stained leaves, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	7
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is by appropriate and desirable plant species. Minimal invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.	7	6

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Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.60

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 0.02 = **0.001**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 6 (Secondary)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.07

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

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

The assessment area is a forested wetland system associated with the Gator Creek Reserve.

Assessment area description

The dominant vegetation within the canopy of this wetland consists of red maple and bald cypress. The subcanopy and groundcover is comprised of cabbage palm, wax myrtle, persimmon, and elderberry.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.2 mile northwest of the entrance to Gator Creek Preserve. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 6 (Secondary)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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: 6	with: 5	The assessment area is a forested wetland associated with the Gator Creek Reserve. The assessment area is located within the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included aquatic mosses/liverworts, elevated lichen lines, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 7	with: 6	Majority of plant cover is by appropriate and desirable plant species. Minimal invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres: 0.67	with: 0.60

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 0.07 = **0.005**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 7 (Secondary Impact)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.59

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

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

The assessment area is a forested wetland system that extends offsite.

Assessment area description

Dominant vegetation within Wetland 7 includes primrose willow, bulrush, false hop sedge, smartweed, Virginia chain fern, netted chain fern, St. Augustine grass, and red maple saplings. The canopy of the forested wetland adjacent to the right-of-way is comprised of cypress and water oak.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 7 (Secondary Impact)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	5	The assessment area is a forested wetland system located at the northbound US 98 right-of-way. Residential development and improved pasture is located northwest of the assessment area. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential/pasture use. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included water-stained leaves, saturation, adventitious rooting, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	5	4	Majority of the plant cover within canopy is desirable plant species with invasive, exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a pipe culvert within the wetland and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.60	0.53

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 0.59 = **0.04**

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

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 8 (Secondary Impact)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.57

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

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

The assessment area is a forested wetland system that extends into a larger wetland system and connects to other wetland systems via a cross drain that runs underneath US 98.

Assessment area description

Dominant vegetation within the canopy consists of red maple, sweetbay, sweet gum, and bald cypress. Groundcover species predominantly consists of wild taro, primrose willow, and maidencane.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way directly northwest of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

Evidence of wildlife observed includes crayfish burrows.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 8 (Secondary Impact)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested wetland system that extends into a larger wetland system. The assessment area is located at the northbound US 98 right-of-way and adjacent to residential land use. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.	6	5
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. ydrological indicators observed included aquatic mosses/liverworts, elevated lichen lines, crayfish burrows, buttressing, hummocks, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	7
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover within the canopy is appropriate and desirable plant species. Invasive/exotic species are dominant within the understory. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way and installation of pipe culverts and cross drains may affect natural recruitment or regeneraltion in the plant community.	6	5

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.57

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 0.57 = **0.04**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 9 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.17

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

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

The assessment area is a forested wetland system that extends offsite.

Assessment area description

Dominant vegetation within the canopy consists of bald cypress, red maple, water oak, and laurel oak. The subcanopy and groundcover predominately consists of wax myrtle, primrose willow, Virginia chain fern, bluestem, bulrush, and paragrass.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located less than 0.1 mile southeast of the entrance to Gator Creek Campground within the northbound US 98 right-of-way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

Evidence of wildlife observed includes crayfish burrows.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 9 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	5	The assessment area is a forested wetland system that extends offsite. The assessment area is located at the northbound US 98 right-of-way and adjacent to a RV park/campground. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed included high water table, elevated lichen lines, buttressed trunks, water-stained leaves, saturation, hummocks, water marks, and adventitious rooting. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	5	Plant cover within the canopy is appropriate and desirable plant species. Invasive/exotic species are dominant within the understory. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.57

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 0.17 = **0.01**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 10 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.05

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

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

The assessment area is a forested wetland system that extends offsite and connects to other wetlands via a cross drain that runs underneath US 98.

Assessment area description

Dominant vegetation within the canopy consists of red maple, bald cypress, sweet bay, and red bay. The subcanopy and groundcover predominantly consists of primrose willow, paragrass, and torpedo grass.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located directly north of the entrance to Gator Creek Campground within the northbound US 98 right-of-way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

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

Evidence of wildlife observed includes crayfish burrows.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 10 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	5	The assessment area is a forested wetland system and connects to other wetlands via a cross drain that runs underneath US 98.. The assessment area is located at the northbound US 98 right-of-way and adjacent to a RV park/campground. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed included saturation, high water table, adventitious rooting, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	5	Plant cover within the canopy is appropriate and desirable plant species. Invasive/exotic species are dominant within the understory. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way and installation of pipe culverts and cross drains may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.57

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 0.05 = **0.003**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 11 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.36

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

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

The assessment area is small forested wetland system and connects to other wetlands via a cross drain that runs underneath US 98.

Assessment area description

Dominant vegetation within Wetland 11 consists of alligatorweed, torpedo grass, sesban, maidencane, smartweed, barnyard grass, and primrose willow. Adjacent to the right-of-way, this wetland system consists of red maple.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.1 mile southeast of Earnest Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 11 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	5	4	The assessment area is a small forested wetland system to the north. The assessment area is located at the northbound US 98 right-of-way. Adjacent land uses consists of residential and pasture. Minimal weltand and upland habitat is available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential/pasture use. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	5	4	Majority of the plant cover within the canopy is comprised of desirable plant species with invasive, exotic species in the subcanopy/groundcover. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way and installation of pipe culverts and cross drains that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.57	0.50

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 0.36 = **0.02**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 12 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.59

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

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

The assessment area is a forested wetland system.

Assessment area description

Dominant vegetation within Wetland 12 consists of Carolina willow, red maple saplings, primrose willow, smartweed, barnyard grass, fireflag, golden canna, soft rush, Virginia chain fern, lizard's tail, and bulrush. Adjacent to the right-of-way, this wetland system consists of red maple and cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way directly northwest of Earnest Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 12 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested wetland system located at the northbound US 98 right-of-way. Adjacent land uses consists of residential development. Minimal wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential/pasture use. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	5	4
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout. Other hydrological indicators observed included water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	7
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of the plant cover within the canopy is comprised desirable plant species with invasive, exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way and installation of pipe culverts that may affect natural recruitment or regeneraltion in the plant community.	5	4

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.57	0.50

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 0.59 = **0.04**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 13 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.35

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

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

The assessment area is a forested wetland system connected to other wetland systems via a cross drain that runs underneath US 98

Assessment area description

Dominant vegetation within Wetland 13 consists of Carolina willow, saltbush, caesarweed, Mexican primrose willow, and shield fern. The forested wetland community adjacent to the right-of-way consists of cypress and red maple.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.1 mile southeast of Perkle Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 13 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	5	The assessment area is a forested wetland system located at the northbound US 98 right-of-way. Adjacent land uses consists of residential development. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential land use. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrological indicators observed included aquatic mosses/liverworts and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	5	The canopy consists of desirable and appropriate plant species with invasive, exotic species present throughout. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way and installation of pipe culverts and cross drains that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.57

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 0.35 = **0.02**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 14 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 – Wetland Forested Mixed	PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.37

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

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

The assessment area is a small forested system outside of the right-of-way

Assessment area description

Dominant vegetation within Wetland 14 consists of mostly primrose willow with red maple saplings, barnyard grass, water pennywort, coinwort, smartweed, and soft rush. . Adjacent to the right-of-way, the forested canopy consists of red maple and cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.1 mile northwest of Perkle Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

. Evidence of wildlife observed included small fish and crayfish burrows.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 14 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is forested wetland system located at the northbound US 98 right-of-way. Adjacent land uses consists of improved pasture. MInimal wetland and upland habitats are available outside of the assessment area; wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	5	4
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	7
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover within the canopy is comprised of desirable/appropriate species with some invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	5	4

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.57	0.50

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 0.37 = **0.02**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 15 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.26

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

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

The assessment area is a small forested system outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 15 to other offsite wetland systems.

Assessment area description

Dominant vegetation within this wetland consists of Carolina willow, primrose willow, cattail, Virginia chain fern, and west Indian marshgrass. Adjacent to the right-of-way, the forested canopy consists of cypress and water oak.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.4 mile northwest of Perkle Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 15 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	5	4	The assessment area is a forested wetland system located at the northbound US 98 right-of-way. Adjacent land uses consists of improved pasture. MInimal wetland and upland habitats are available outside of the assessment area; wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	5	4	The canopy consists of desirable/appropriate species while the groundcover is comprised of invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way and the installation of cross drains and pipe culverts that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.57	0.50

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 0.26 = **0.02**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 16 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.30

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

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

The assessment area is comprised a small forested system outside of the right-of-way. A pipe culvert that runs underneath US 98 connects to other offsite wetland systems.

Assessment area description

Adjacent to the right-of-way, the forested canopy consists of cypress and red maple.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.1 mile southeast of Keen Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 16 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested wetland system located at the northbound US 98 right-of-way. Adjacent land uses consists of improved pasture and residential development. MInimal wetland and upland habitats are available outside of the assessment area; wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture/residential use. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	5	4
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	7
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover within canopy is comprised of desirable species with invasive, exotic species present within the understory. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way and the installation of cross drains and pipe culverts that may affect natural recruitment or regeneraltion in the plant community.	5	4

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.57	0.50

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 0.30 = **0.02**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 17 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 – Wetland Forested Mixed	PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.12

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

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

Wetland 17 is comprised of a torpedo grass-dominated freshwater marsh that connects to a small forested system outside of the right-of-way. Adjacent forested wetland lies within the boundary of the Green Swamp.

Assessment area description

In addition to torpedo grass, other species present include primrose willow and smartweed. The canopy consists of red maple and cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.1 mile southeast of Lakeland Acres Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 17 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	5	4	The assessment area is a forested wetland system located at the northbound US 98 right-of-way. Adjacent land uses consists of improved pasture. MInimal wetland and upland habitats are available outside of the assessment area; wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	5	4	The canopy consists of desirable/appropriate species. However, exotic/invasive species are present wihtin the understory. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.57	0.50

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 0.12 = **0.01**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 18 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.16

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

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

Wetland 18 is comprised of a torpedo grass-dominated freshwater marsh that connects to a small forested system outside of the right-of-way. Adjacent forested wetland lies within the boundary of the Green Swamp. The forested wetland community adjacent to the right-of-way consists of cypress and red maple.

Assessment area description

In addition to torpedo grass, other species present include sand cordgrass, primrose willow, and sesban.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way directly across from Lakeland Acres Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 18 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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: 4	The assessment area is an herbaceous wetland that extends beyond the right-of-way into an offsite forested wetland system to the north. The assessment area is located within the northbound US 98 right-of-way. Adjacent land uses consists of improved pasture. Minimal wetland and upland habitats are available outside of the assessment area; wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, private fencing, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrological indicators observed included saturation and a high water table. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 5	with: 4	The understory consists of invasive, exotic species. The canopy consists of desirable/appropriate species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres: 0.57	with: 0.50

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 0.16 = **0.01**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 19 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 – Wetland Forested Mixed	PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.45

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

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

The assessment area includes a small forested system outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 19 to other offsite wetland systems.

Assessment area description

The forested canopy consists of cypress and red maple.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.5 mile northwest of Lakeland Acres Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

Evidence of wildlife observed included a great egret foraging within the assessment area.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 19 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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: 4	The assessment area is a forested wetland system located at the northbound US 98 right-of-way. Adjacent land uses consists of the Duke Energy facility that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and the Duke Energy facility. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 5	with: 4	The canopy consists of desirable and appropriate species. Plant cover withn the understory includes presence of invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a cross drain and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.57	0.50

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

For impact assessment areas
FL = delta x acres =
0.07 x 0.45 = **0.03**

Delta = [with-current]
-0.07

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

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 20 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.32

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

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

The assessment area is comprised of an herbaceous wetland community dominated by primrose willow that connects to a larger wetland system. A pipe culvert that runs underneath US 98 connects Wetland 20 to other offsite wetland systems

Assessment area description

Dominant vegetation within this wetland consists of primrose willow with foxtail, cattail, loosestrife, Virginia chain fern, bulrush, and pickerelweed.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way at the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 20 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland at Duke Energy utility easement. The assessment area is located within the northbound US 98 right-of-way. Adjacent land uses consists of the Duke Energy facility that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and the Duke Energy facility. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	5	4
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	7
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a pipe culvert and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	4	3

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.53	0.47

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 0.32 = **0.02**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 21 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.05

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

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

The assessment area is comprised of a torpedo-grass dominated freshwater marsh.

Assessment area description

Dominant vegetation within this wetland consists of solely of torpedo grass.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located approximately 0.1 mile northwest of the Duke Energy utility easement within the northbound US 98 right-of-way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 21 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	5	The assessment area is an herbaceous wetland near the Duke Energy utility easement. The assessment area is located within the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and the Duke Energy facility. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout. In addition to surface water, hydrological indicators observed within Wetland 21 on or near the fence posts included elevated lichen lines, hummocks, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	3	2	Nearly all of plant cover is comprised of invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.53	0.47

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 0.05 = **0.003**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 22 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 – Wetland Forested Mixed	PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.23

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

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

Wetland 22 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. Adjacent to the right-of-way, the forested canopy consists of cypress and red maple.

Assessment area description

The forested canopy consists of cypress and red maple.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 22 is located within the northbound US 98 right-of-way approximately 0.2 mile northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 22 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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	6	5	The assessment area is a forested wetland near the Duke Energy utility easement. The assessment area is located at the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and the Duke Energy facility. Nuisance vegetation species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation.Hydrological indicators observed within Wetland 22 included surface water and a high water table. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98. A pipe culvert that runs underneath US 98 connects Wetland 22 to other offsite wetland systems.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	5	The canopy is dominanted by desirable/appropriate species. Nearly all of plant cover withn the understory is comprised of a mix of native and invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.57

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 0.23 = **0.02**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 23 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.11

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

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

Within the right-of-way, Wetland 23 is comprised of freshwater marsh habitat that extends outside of the right-of-way. Adjacent to the right-of-way, the freshwater marsh continues approximately 25 feet north before abutting mesic pine forest with saw palmetto

Assessment area description

Dominant vegetation includes torpedo grass, maidencane, buttonweed, foxtail grass, arrowhead, coinwort, and natal grass.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 23 is located within the northbound US 98 right-of-way approximately 0.3 miles northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 23 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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	6	5	The assessment area is an herbaceous wetland that extends beyond the right-of-way near the Duke Energy utility easement. The assessment area is located at the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and the Duke Energy facility. Nuisance vegetation species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than four inches. In addition to surface water and aquatic vegetation, hydrological indicators observed within Wetland 23 on or near the fence posts included water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	5	4	Nearly all of plant cover is comprised of a mix of native and invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.60	0.53

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 = **0.01**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 24 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.18

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

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

Wetland 24 is comprised of a freshwater marsh that extends into a forested wetland system outside of the right-of-way and is connected to other wetland systems via a cross drain that runs underneath US 98. Adjacent to the right-of-way, the freshwater marsh continues approximately 25 feet north before abutting a forested wetland dominated by red maple and cypress.

Assessment area description

Dominant vegetation within Wetland 24 includes torpedo grass and maidencane with foxtail grass, Virginia chain fern, sesbania, and primrose willow.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 24 is located within the northbound US 98 right-of-way approximately 0.6 miles northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 24 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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	6	5	The assessment area is an herbaceous wetland that extends beyond the right-of-way near the Duke Energy utility easement. The assessment area is located within the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and the Duke Energy facility. Nuisance vegetation species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water, hydrological indicators observed within Wetland 24 on or near the fence posts included water marks and elevated lichen lines. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98. A cross drain that runs underneath US 98 connects Wetland 24 to other offsite wetland systems.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	5	4	Nearly all of plant cover is comprised of a mix of native and invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.60	0.53

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 0.18 = **0.01**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 25

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.20

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

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

Within the right-of-way, Wetland 25 is comprised of a freshwater marsh that extends outside of right-of-way. Adjacent to the wetalnd is upland planted pine.

Assessment area description

Dominant vegetation within Wetland 25 is maidencane.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 25 is located within the northbound US 98 right-of-way approximately 0.7 miles northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 25
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way near the Duke Energy utility easement. The assessment area is located within the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and the Duke Energy facility. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.	6	5
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the soils observed within Wetland 25 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 25 included surface water and a high water table. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.	7	7
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Nearly all plant cover consisted of native maidencane. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	6	5

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.57

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 0.20 = **0.01**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 26 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
631 - Wetland Scrub	PSS1C – Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded	Impact	0.23

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

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

Within the right-of-way, Wetland 26 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a scrub-shrub wetland. Adjacent to the right-of-way, the scrub-shrub wetland consists predominantly of buttonbush

Assessment area description

Dominant vegetation consists of buttonbush with primrose willow.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 26 is located within the northbound US 98 right-of-way approximately 1.0 mile northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 26 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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: 4
The assessment area is a scrub-shrub wetland near the Duke Energy utility easement. The assessment area is located at the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and the Duke Energy facility. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.		
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 7
Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrological indicators observed within Wetland 26 included surface water, water marks on the fence posts, and a high water table. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.		
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 5	with: 4
Plant cover consists of a combination of native, nuisance, and invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.		

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.57	0.50

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 0.23 = **0.02**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 27 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.32

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

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

The assessment area is comprised of freshwater marsh habitat

Assessment area description

Dominant vegetation includes maidencane with torpedo grass, barnyard grass, arrowhead, and buttonweed.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 27 is located within the northbound US 98 right-of-way approximately 0.75 mile southeast of SR 471. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 27 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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	5	4	The assessment area is an herbaceous wetland that near SR 471. The assessment area is located within the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and SR 471. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	5	Plant cover consists primarily of native species with nuisance and invasive, exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.60	0.53

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 0.32 = **0.02**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 28 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.10

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

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

The assessment area is comprised of a maidencane-dominated freshwater marsh that extends outside of the right-of-way.

Assessment area description

Additional vegetation present includes primrose willow and red maple saplings along the right-of-way fence.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 28 is located within the northbound US 98 right-of-way approximately 0.6 mile southeast of SR 471. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 28 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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	5	4	The assessment area is an herbaceous wetland near SR 471. The assessment area is located at the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and SR 471. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	5	Plant cover consists primarily of maidencane with minimal presence of invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.60	0.53

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 0.10 = **0.01**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 29

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.27

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

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

The assessment area is comprised of freshwater marsh habitat that extend to a forested wetland system.

Assessment area description

Dominant vegetation includes pickerelweed, maidencane and alligatorweed. Additional vegetation present along the right-of-way includes primrose willow and saltbush.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 29 is located within the northbound US 98 right-of-way approximately 0.4 mile southeast of SR 471. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 29
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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	6	5	The assessment area is an herbaceous wetland near SR 471 that connects to a forested wetland system. The assessment area is located at the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and SR 471. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water, hydrological indicators observed included water marks on the fence posts. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	5	4	Plant cover consists of a mix of native and invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.60	0.53

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 0.27 = **0.02**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 30

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.05

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

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

The assessment area is comprised of freshwater marsh habitat

Assessment area description

Dominant vegetation includes maidencane, arrowhead, buttonweed, coinwort, sand cordgrass, and bahiagrass (Paspalum notatum).

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 30 is located within the northbound US 98 right-of-way approximately 0.3 mile southeast of SR 471. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 30
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland near SR 471. The assessment area is located at the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and SR 471. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.	5	4
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water and aquatic vegetation, hydrological indicators observed included water marks on the fence posts. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.	7	7
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover primarily consists of native with minimal presence of invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	6	5

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.60	0.53

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 0.05 = **0.003**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 31

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 – Freshwater Marsh	PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.47

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

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

Within the right-of-way, Wetland 31 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. A cross drain that runs underneath US 98 connects Wetland 31 to other offsite wetland systems.

Assessment area description

Dominant vegetation includes paragrass and torpedo grass with barnyard grass, and primrose willow

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 31 is located within the northbound US 98 right-of-way directly northwest of SR 471. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

Frogs were observed during field reviews.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 31
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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	5	4	The assessment area is an herbaceous wetland adjacent to the right-of-way that connects to a forested wetland system adjacent to SR 471. The assessment area is located at the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and SR 471. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	4	3	Plant cover within the right-of-way is nearly all comprised of invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.53	0.47

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

For impact assessment areas
FL = delta x acres =
0.07 x 0.47 = **0.03**

Delta = [with-current]
-0.07

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

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 33 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 – Wetland Forested Mixed	PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.33

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

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

Within the right-of-way, Wetland 33 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland system. A cross drain that runs underneath US 98 connects this wetland to other wetland systems.

Assessment area description

Dominant vegetation within the understory includes alligatorweed and torpedo grass with primrose willow, bahiagrass, smartweed, and maidencane. The forested wetland canopy consists of cypress and red maple. The majority of Wetland 33 appeared to be disturbed by truck and equipment rutting throughout the right-of-way.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 33 is located within the southbound US 98 right-of-way approximately 260 feet southeast of CR 54. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife utilization observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 33 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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	5	4	The assessment area is a forested wetland system adjacent to CR 54. The assessment area is located at the southbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and CR 54. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the soils observed within Wetland 33 consisted of a dark surface with muck present. Hydrological indicators observed included surface water and a high water table. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	5	4	Plant cover within the understory is comprised of primarily invasive, exotic species with presence of native species in the canopy. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.57	0.50

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

For impact assessment areas
FL = delta x acres =
0.07 x 0.33 = **0.02**

Delta = [with-current]
-0.07

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

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 34 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
621 - Cypress	PFO2C – Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.05

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

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

Within the US 98 southbound right-of-way, the assessment area is comprised of a freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. The wetland outside the right-of-way is dominated by cypress.

Assessment area description

Dominant vegetation includes cypress, torpedo grass, maidencane.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.1 mile southeast of Old Dade City Road. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 34 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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	5	4	The assessment area is a forested wetland located at the southbound US 98 right-of-way. Adjacent land uses consists of the residential facilities that are bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential facilities. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout with water levels greater than six inches and cypress knees. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	5	4	Plant cover within the canopy is appropriate; however, invasive/exotic species are present within the understory. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.57	0.50

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

For impact assessment areas
FL = delta x acres =
0.07 x 0.05 = **0.003**

Delta = [with-current]
-0.07

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

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 35 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
617 – Mixed Wetland Hardwoods	PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded	Impact	0.07

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

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

Within the US 98 southbound right-of-way, the assessment area is comprised of a freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. The wetland outside the right-of-way consists of red maple and Chinese tallow.

Assessment area description

Dominant vegetation within consists of red maple and Chinese tallow.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.4 mile southeast of Old Dade City Road. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 35 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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	5	4	The assessment area is a forested wetland located at the southbound US 98 right-of-way. Adjacent land uses consists of the residential facilities that are bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential facilities. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout with water levels greater than six inches. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	5	4	Plant cover is a mix of both native and exotic/invasive species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.57	0.50

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 0.07 = **0.005**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 36 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
617 - Mixed Wetland Hardwoods	PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded	Impact	0.07

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

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

The assessment area is comprised of a forested wetland.

Assessment area description

The forested wetland consisted of red maple, water oak, and Chinese tallow.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.5 mile southeast of Old Dade City Road. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 36 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested wetland. The assessment area is located at the southbound US 98 right-of-way. Adjacent land uses consists of the residential facilities that are bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential faclities. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	5	4
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout with water levels greater than six inches, liverworts, and algal mats. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	7
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover consists of a mix of both native and invasive/exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	5	4

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.57	0.50

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

For impact assessment areas
FL = delta x acres =
0.07 x 0.07 = **0.005**

Delta = [with-current]
-0.07

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

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 37 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 – Wetland Forested Mixed	PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.16

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

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

The assessment area is comprised of a forested wetland within an improved pasture.

Assessment area description

The forested wetland consisted of red maple, water oak, cypress, and wax myrtle.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.4 mile northwest of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 37 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested wetland. The assessment area is located at the southbound US 98 right-of-way. Adjacent land uses consists of the residential facilities that are bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential faclities. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	5	4
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout with water levels greater than six inches. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	7
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover is comprised of mostly desirable/appropriate species with some invasive species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	6	5

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.60	0.53

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 0.16 = **0.01**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 38 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
: 630 – Wetland Forested Mixed	PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.24

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

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

The assessment area is comprised of a forested wetland within an improved pasture. A cross drain that runs underneath US 98 connects Wetland 38 to other offsite wetland systems.

Assessment area description

The forested wetland adjacent to the right-of-way consists of red maple, water oak, and cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.1 mile northwest of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

Evidence of wildlife observed were small fish and tadpoles.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 38 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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	5	4	The assessment area is a forested wetland. The assessment area is located at the southbound US 98 right-of-way. Adjacent land uses consists of the residential facilities that are bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area showed high water table, dark surfaces, liverworts, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	5	4	Plant cover within the canopy is comprised of desirable/appropriate species. Invasive/exotic species are present within the understory. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.57	0.50

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 0.24 = **0.02**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 39 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.23

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

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

The assessment area is comprised of a freshwater marsh habitat that extends outside of the right-of-way.

Assessment area description

Dominant vegetation within this wetland consists of foxtail, sesban, beakrush, primrose willow, and blue maidencane.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.4 mile southeast of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 39 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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	5	4	The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located at the southbound US 98 right-of-way. Adjacent land uses consists of improved pasture that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area showed dark surfaces and muck. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	4	3	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.53	0.47

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 0.23 = **0.02**

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 40

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.11

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

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

The assessment area is comprised of a freshwater marsh habitat that extends outside of the right-of-way approximately 25 feet before abutting a forested wetland dominated by red maple and cypress.

Assessment area description

Dominant vegetation within this wetland consists of West Indian marshgrass, alligatorweed, torpedo grass, maidencane, and soft rush.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.5 mile southeast of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

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

Evidence of wildlife observed within the wetland included frogs.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 40
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located at the southbound US 98 right-of-way. Adjacent land uses consists of improved pasture that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	6	5
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout, displayed elevated lichen lines, and high water marks on fence posts. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	7
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover is comprised of both desirable and invasive, exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	5	4

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.60	0.53

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =
0.07 x 0.11 = **0.01**

Delta = [with-current]
-0.07

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 41 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.07

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is comprised of a freshwater marsh habitat that extends outside of the right-of-way approximately 25 feet abutting a forested wetland. The forested wetland consists of red maple and cypress.

Assessment area description

Dominant vegetation within this wetland consists of torpedo grass with red maple saplings, arrowhead, maidencane, alligatorweed, and soft rush.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.6 mile southeast of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 41 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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	6	5	The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of improved pasture that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, improved pasture, and forested wetland. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout, displayed elevated lichen lines, and high water marks on fence posts. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	4	3	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.57	0.50

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 0.07 = **0.005**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 42 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 – Wetland Forested Mixed	PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.43

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is comprised of a forested wetland adjacen t to a primrose willow-dominated freshwater marsh.

Assessment area description

The forested wetland consists of red maple and cypress. Dominant vegetation within the understory consists of primrose willow with cattail, and pickerelweed

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.8 mile southeast of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 42 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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	6	5	The assessment area is a forested wetland located at the southbound US 98 right-of-way. Adjacent land uses consists of improved pasture that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, improved pasture, and forested wetland. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area displayed elevated lichen lines, surface water, dark surfaces, and high water marks on fence posts. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	4	3	The canopy consists of appropriate species. Nearly all of plant cover within the understory is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.57	0.50

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =
0.07 x 0.43 = **0.03**

Delta = [with-current]
-0.07

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 43

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
621 - Cypress	PFO2C - Palustrine, Forested, Needle-Leaved Deciduous, Cypress	Impact	0.22

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is comprised of a forested wetland.

Assessment area description

Dominant vegetation within this wetland consists of cypress. The understory includes torpedo grass, pickerelweed, soft rush.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.9 mile southeast of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 43
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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	5	4	The assessment area is a forested wetland located at the southbound US 98 right-of-way. Adjacent land uses consists of improved pasture that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	5	4	The canopy is comprised of appropriate species. Majority of plant cover within the understory is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.57	0.50

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 0.22 = **0.01**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 44 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.48

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is comprised of a freshwater marsh habitat that extends outside of the right-of-way. The freshwater marsh continues beyond 25 feet south before abutting a forested wetland dominated by red maple and cypress.

Assessment area description

Dominant vegetation within this wetland consists of alligatorweed, torpedo grass, primrose willow, maidencane, buttonwood, arrowhead, and water hyssop.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.9 mile northwest of the Duke Energy utility easement. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 44 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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	6	5	The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located at the southbound US 98 right-of-way. Adjacent land uses consists of undeveloped land with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	4	3	Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.57	0.50

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =
0.07 x 0.48 = **0.03**

Delta = [with-current]
-0.07

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 45 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 – Wetland Forested Mixed	PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.24

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is comprised of a forested wetland. The forested wetland consists of red maple, cypress, dahoon holly, buttonbush, and soft rush.

Assessment area description

The forested wetland consists of red maple, cypress, dahoon holly, buttonbush, and soft rush.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.2 mile northwest of the Duke Energy utility easement. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 45 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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	6	5	The assessment area is a forested wetland located within the southbound US 98 right-of-way. Adjacent land uses consists of undeveloped land with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and undeveloped land. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	5	4	Majority of plant cover is comprised of desirable/appropriate species with invasive/exotic species present at the right-of-way. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.60	0.53

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 0.24 = **0.02**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 46 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.25

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area comprised of a forested wetland. A pipe culvert is constructed within a ditch that connects to this wetland.

Assessment area description

The forested wetland consists of red maple, cypress, and buttonbush.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.1 mile northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 46 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	5	4	The assessment area is a forested wetland system and is located at the southbound US 98 right-of-way. Adjacent land uses includes residential development. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, residential development, and the Duke Energy utility easement. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	Majority of plant cover is comprised of desirable/appropriate species with few invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a pipe culvert and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.63	0.57

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 0.25 = **0.02**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 47 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.15

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area comprised of cattail-dominated freshwater marsh habitat that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 47 to other offsite wetland systems.

Assessment area description

Dominant vegetation within this wetland consists of cattail. Other vegetation present includes Carolina willow, pickerelweed, primrose willow, and torpedo grass.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way at the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 47 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaceous wetland that extends beyond the right-of-way and is located at the southbound US 98 right-of-way. Adjacent land uses includes residential development and the Duke Energy utility easement. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, residential development, and the Duke Energy utility easement. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	5	4
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	7
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of the plant cover and presence is comprised of invasive exotic plant species with minimal desirable species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a cross drain and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	4	3

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.53	0.47

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 0.15 = **0.01**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

DRAFT

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 48

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
617 - Mixed Wetland Hardwoods	PFO1C - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded	Impact	0.43

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system that extends outside of the right-of-way. A pipe culvert runs underneath the adjacent driveway connecting this wetland to adjacent wetlands.

Assessment area description

Dominant vegetation within the canopy of Wetland 48 includes water oak, swamp bay, laural oak, and red maple. The understory and groundcover predominantly consist of wax myrtle, Virginia chain fern, and maiden fern.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way directly southeast of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 48
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested wetland that connects to offsite wetlands via a pipe culvert. The assessment area is located at the southbound US 98 right-of-way. Adjacacent land use includes the Duke Energy utility easement; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.	6	5
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included surface water, mosses, elevated lichen lines, hummocks, water marks, and adventitious rooting. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	7
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is by appropriate and desirable plant species. Minimal invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but installation of pipe culvert and routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.	7	6

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.60

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =
0.07 x 0.43 = **0.03**

Delta = [with-current]
-0.07

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 49 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved, Deciduous, Seasonally Flooded	Impact	0.30

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 49 to other offsite wetland systems.

Assessment area description

Dominant vegetation within the canopy of Wetland 49 includes cypress, Chinese tallow, and red maple. The understory and groundcover predominantly consist of Carolina willow, primrose willow, soft rush, and maidencane.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.4 mile northwest of Lakeland Acres Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 49 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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: 4	The assessment area is a forested wetland that connects to offsite wetlands via a cross drain. The assessment area is located at the southbound US 98 right-of-way. Adjacacent land use includes residential development; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential development.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 7	Water level indicators and soil moisture appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included surface water, elevated lichen lines, and cypress knees. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 7	with: 6	Majority of plant cover is by appropriate and desirable plant species. Minimal invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but installation of a cross drain and routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.63	0.57

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =
0.07 x 0.30 = **0.02**

Delta = [with-current]
-0.07

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 50 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
617 - Mixed Wetland Hardwoods	PFO1C - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded	Impact	0.13

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system that extends outside of the right-of-way.

Assessment area description

Dominant vegetation within the canopy of Wetland 50 includes red maple and water oak. The understory and groundcover predominantly consist of primrose willow, whitetop sedge, creeping oxeye, Virginia chain fern, wax myrtle, and bahia grass.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.5 mile northwest of Lakeland Acres Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 50 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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: 6	with: 5	The assessment area is a forested wetland and is located at the southbound US 98 right-of-way. Adjacacent land use includes the residential and commercial development; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included surface water, water-stained leaves and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 6	with: 5	The plant cover within the canopy consists of appropriate and desirable plant species. The groundcover/understory consists of invasive/exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres: 0.63	with: 0.57

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 0.13 = **0.01**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 51 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
617 - Mixed Wetland Hardwoods	PFO1C - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded	Impact	0.32

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system that extends outside of the right-of-way.

Assessment area description

Dominant vegetation within the canopy of Wetland 51 includes red maple and water oak. The understory and groundcover predominantly consist of primrose willow, Virginia chain fern, and elderberry.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.2 mile northwest of Lakeland Acres Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 51 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	4	The assessment area is a forested wetland and is located at the southbound US 98 right-of-way. Adjacacent land use includes the residential and commercial development; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, residential/commercial development, Lakeland Acres Road, and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included surface water, water-stained leaves, hummocks, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	5	The plant cover within the canopy consists of appropriate and desirable plant species. The groundcover/understory consists of invasive/exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.60	0.53

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 0.32 = **0.02**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 52 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.33

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 52 to other offsite wetland systems.

Assessment area description

Dominant vegetation within the canopy of Wetland 52 includes cypress, red maple, and water oak. The understory and groundcover predominantly consist of primrose willow and Virginia chain fern.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.1 mile southeast of Keen Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 52 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	4	The assessment area is a forested wetland and is located at the southbound US 98 right-of-way. A cross drain that runs underneath US 98 connects this area to other offsite wetland systems. Adjacent land use includes Keen Road, an RV lot, and improved pasture; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, the RV lot, Keen Road, and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included surface water and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	5	The plant cover within the canopy consists of appropriate and desirable plant species. The groundcover/understory consists of invasive/exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but the installation of a cross drain and routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.60	0.53

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 0.33 = **0.02**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 53 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.12

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is comprised of primrose willow-dominated freshwater marsh habitat that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 53 to other offsite wetland systems.

Assessment area description

Dominant vegetation within this wetland consists of primrose willow.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.5 mile southeast of the Keen Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 53 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	4	The assessment area is an herbaceous wetland that extends beyond the right-of-way and is located at the southbound US 98 right-of-way. Adjacent land uses include improved pasture. Minimal wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout. Additional hydrologic indicators included water-stained leaves and water marks on the right-of-way fence. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	3	2	Nearly all of the plant cover is comprised of invasive/exotic plant species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a cross drain and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.50	0.43

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 0.12 = **0.01**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 54 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.36

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 54 to other offsite wetland systems.

Assessment area description

Dominant vegetation within the canopy of Wetland 54 includes cypress, red maple, and water oak. The understory and groundcover predominantly consist of primrose willow.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.4 mile northwest of Perkle Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 54 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	4	The assessment area is a forested wetland and is located at the southbound US 98 right-of-way. A cross drain that runs underneath US 98 connects this area to other offsite wetland systems. Adjacent land use includes residential development and improved pasture; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, residential development/improved pasture, and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included surface water, water marks, elevated lichen lines, moss, and adventitious rooting. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	5	The plant cover within the canopy consists of appropriate and desirable plant species. The groundcover/understory consists of mostly invasive/exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but the installation of a cross drain and routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.60	0.53

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 0.36 = **0.02**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 55 (Secondary Impact)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.33

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system that extends outside of the right-of-way.

Assessment area description

Dominant vegetation within the canopy of Wetland 55 includes cypress, red maple, and water oak. The understory and groundcover predominantly consist of Virginia chain fern, netted chain fern, maiden fern, pickerelweed, and cattail.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way adjacent to the east side of Old Soldier Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 55 (Secondary Impact)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	4	The assessment area is a forested wetland and is located at the southbound US 98 right-of-way. Adjacent land use includes residential development, improved pasture, and Old Soldier Road; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, residential development/improved pasture, Old Soldier Road, and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	The plant cover within the canopy and understory consists of appropriate and desirable plant species with minimal invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but the routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.57

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 0.33 = **0.02**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 56 (Secondary Impact)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.62

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 56 to other offsite wetland systems.

Assessment area description

Dominant vegetation within the canopy of Wetland 56 includes cypress, red maple, and water oak. The understory and groundcover predominantly consist of Virginia chain fern and primrose willow.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way less than 0.1 mile southeast of Perkle Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 56 (Secondary Impact)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	4	The assessment area is a forested wetland and is located at the southbound US 98 right-of-way. A cross drain that runs underneath US 98 connects Wetland 56 to other offsite wetland systems. Adjacent land use includes residential development, improved pasture, and aquacultural farm; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, residential development/improved pasture, aquaculture, and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	5	The plant cover within the canopy consists of appropriate and desirable plant species; however, the understory consists of invasive/exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but the installation of a cross drain and the routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.60	0.53

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 0.62 = **0.04**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 57 (Secondary Impact)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.25

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system that extends outside of the right-of-way.

Assessment area description

Dominant vegetation within the canopy of Wetland 57 includes cypress and red maple. The understory and groundcover predominantly consist of primrose willow.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.2 mile northwest of Earnest Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 57 (Secondary Impact)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	6	5	The assessment area is a forested wetland and is located at the southbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	5	The plant cover within the canopy consists of appropriate and desirable plant species; however, the understory consists predominantly of invasive/exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but the routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.57

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 0.25 = **0.02**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 58 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.39

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system that extends outside of the right-of-way.

Assessment area description

Dominant vegetation within the canopy of Wetland 58 includes cypress and red maple. The understory and groundcover predominantly consist of Virginia chain fern and primrose willow.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way across from Earnest Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 58 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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	6	5	The assessment area is a forested wetland and is located at the southbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). In addition to surface water, hydrologic indicators observed included water-stained leaves, moss, and elevated lichen lines. Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	5	The plant cover within the canopy consists of appropriate and desirable plant species; however, the understory consists predominantly of invasive/exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but the routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.57

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 0.39 = **0.03**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 59 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.37

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system that extends outside of the right-of-way. A pipe culvert that runs underneath US 98 connects Wetland 59 to other offsite wetland systems.

Assessment area description

Dominant vegetation within the canopy of Wetland 59 includes cypress and red maple. The understory and groundcover predominantly consist of Virginia chain fern, buttonbush, wild taro, bulrush, swamp fern, lizard's tail, and primrose willow.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 0.1 mile southeast of Earnest Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 59 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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	5	4	The assessment area is a forested wetland and is located at the southbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and commercial property.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland was inundated throughout. In addition to surface water, hydrologic indicators observed included water marks and elevated lichen lines. Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	5	The plant cover within the canopy consists of appropriate and desirable plant species; however, the understory consists predominantly of invasive/exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but the routine maintenance within the right-of-way and installation of the culvert may affect natural recruitment or regeneraltion in the plant community.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.60	0.53

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =
0.07 x 0.37 = **0.02**

Delta = [with-current]
-0.07

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

DRAFT

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 60 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.54

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is comprised of a forested wetland outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 60 to other offsite wetland systems

Assessment area description

The forested wetland community consists of cypress, red maple, primrose willow, and Viirginia chain fern.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 adjacent to the east side of Rockridge Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 60 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested wetland that extends beyond the right-of-way into the Duke Energy utility easement. The assessment area is located at the southbound US 98 right-of-way. Adjacent land uses consists of undeveloped land that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and commercial property. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.	5	4
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	7
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	The canopy consists of appropriate species. The understory is comprised of invasive/exotic species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a cross drain and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	5	4

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.57	0.50

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 0.54 = **0.04**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 61 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.51

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is comprised of a a forested wetland.

Assessment area description

Dominant species red maple, cypress, and primrose willow.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 approximately 0.2 mile southeast of Rockridge Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 61 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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	5	4	The assessment area is a forested wetland that extends beyond the right-of-way. The assessment area is located at the southbound US 98 right-of-way. Adjacent land uses consists of forested wetland isolated by commecial property that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and commercial property. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, surface water was observed throughout the wetland and soils observed indicated a dark surface with muck present. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	5	4	The canopy consists of appropriate species. Majority of plant cover within the understory is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a cross drain and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.57	0.50

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 0.51 = **0.03**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 62 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
621 - Cypress	PFO2C – Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.54

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is comprised of a forested wetland that extends outside of the right-of-way.

Assessment area description

Dominant vegetation within Wetland 62 consists of cypress, primrose willow, Mexican primrose, pickerelweed, Carolina willow, buttonbush, and smartweed.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 62 is located within the southbound US 98 right-of-way directly west of Big Cypress Boulevard. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilization observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 62 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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	5	4	The assessment area is an forested cypress dominated wetland that extends beyond the right-of-way. The assessment area is located at the southbound US 98 right-of-way directly west of Big Cypress Blvd. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential development. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than 12 inches. In addition to surface water, hydrologic indicators observed included moss, water marks, and buttressing. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	Plant cover within the right-of-way is a mix of native and invasive, exotic species. Cypress trees dominate the tree canopy with native and invasive species present in the understory. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.57

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =
0.07 x 0.54 = **0.04**

Delta = [with-current]
-0.07

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

DRAFT

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 63 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved, Deciduous, Seasonally Flooded	Impact	0.15

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is comprised of a forested wetland system that extends outside of the right-of-way.

Assessment area description

Dominant vegetation within the canopy of Wetland 63 includes cypress, swamp bay, and red maple. The understory and groundcover predominantly consist of Virginia chain fern, swamp fern, and buttonbush.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 63 is located within the southbound US 98 right-of-way approximately 0.3 mile southeast of Big Cypress Boulevard. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 63 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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: 4
The assessment area is a forested wetland that extends outside the right-of-way. The assessment area is located at the southbound US 98 right-of-way. Adjacacent land use includes residential development; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential development.		
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 7
Water level indicators and soil moisture appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.		
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 7	with: 6
Plant cover is solely covered by appropriate and desirable plant species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but installation of a cross drain and routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.		

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.57

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 0.15 = **0.01**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

DRAFT

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 64 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
631 - Wetland Scrub	PSS1C - Palustine, Scrub-shrub, Broad-leaved Deciduous, Seasonally Flooded	Impact	0.20

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Withlacoochee River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is comprised of a scrub-shrub wetland that extends outside of the right-of-way into a forested wetland. A cross drain that runs underneath US 98 connects Wetland 64 to other offsite wetland systems.

Assessment area description

Dominant vegetation within Wetland 64 includes red maple, Carolina willow, primrose willow, and smartweed. The forested wetland adjacent to the right-of-way consists of red maple and cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 64 is located within the southbound US 98 right-of-way approximately 0.3 mile northwest of West Socrum Loop Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 64 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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	5	4	The assessment area is a scrub shrub weltand that extends outside of the right-of-way into a forested wetland system. The assessment area is located at the southbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, residential development, and US 98. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	5	Majority of plant cover is by appropriate and desirable plant species with invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.60	0.53

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 0.20 = **0.01**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 65 (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.42

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Withlacoochee River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area consists of a forested wetland. A cross drain that runs underneath US 98 connects Wetland 65 to other offsite wetland systems.

Assessment area description

The forested wetland consists of red maple, sweet bay, primrose willow, cattail, Virginia chain fern,wild taro, and buttonbush.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Wetland 65 is located within the southbound US 98 right-of-way directly west of West Socrum Loop Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilization observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 65 (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested wetland that extends beyond the right-of-way. The assessment area is located at the southbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and W Socrum Loop Road. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.	5	4
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. Hydrological indicators observed included surface water and a high water table. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.	7	7
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	The canopy consists of appropriate species. Plant cover within the understory is comprised of primarily invasive, exotic species with minimal presence of native species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.	5	4

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.57	0.50

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 0.42 = **0.03**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

APPENDIX I.3

UMAM Worksheets – Preliminary Pond Sites Direct Impacts

DRAFT

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 66 (FPC 4B)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.17

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a disturbed herbaceous wetland surrounded by residential development.

Assessment area description

The dominant vegetation consists of primrose willow and bahia grass.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 66 (FPC 4B)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is an herbaecous wetland system that is surrounded by residential development. The assessment area is located near northbound US 98 right-of-way. Minimal wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of Pioneer Drive, residential development, private fencing,and US 98.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared somewhat less than appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent development and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98.	5	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover consists ofl invasive/exotic species with few desirable species. The surrounding development and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices consists of routine maintenance of the residential properites and roadways.	4	0

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.47	0.00

Delta = [with-current]
-0.47

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

If mitigation
Time lag (t-factor) =
Risk factor =

For impact assessment areas
FL = delta x acres =
0.47 x 0.17 = **0.08**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4A Easement)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.23

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested wetland system surrounded by residential development to the north and west.

Assessment area description

The dominant vegetation within the canopy of this wetland consists of red maple, water oak, and bald cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98..	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4A Easement)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	0	The assessment area is a forested wetland system that is surrounded by residential development to the north and west. The assessment area is located near the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of Pioneer Drive, residential development, private fencing, right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	0	Majority of the plant cover within canopy is desirable plant species with invasive, exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a pipe culvert within the wetland and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.00

Delta = [with-current]
-0.67

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 =
0.67 x 0.23 = **0.15**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4A)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.83

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested wetland system surrounded by residential development to the north and west.

Assessment area description

The dominant vegetation within the canopy of this wetland consists of red maple, water oak, and bald cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4A)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	0	The assessment area is a forested wetland system that is surrounded by residential development to the north and west. The assessment area is located near the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of Pioneer Drive, residential development, private fencing, right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	0	Majority of the plant cover within canopy is desirable plant species with invasive, exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a pipe culvert within the wetland and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.00

Delta = [with-current]
-0.67

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 =
0.67 x 0.83 = **0.55**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4B Easement)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.38

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested wetland system surrounded by residential development to the north and west.

Assessment area description

The dominant vegetation within the canopy of this wetland consists of red maple, water oak, and bald cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4B Easement)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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: 6	with: 0
The assessment area is a forested wetland system that is surrounded by residential development to the north and west. The assessment area is located near the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of Pioneer Drive, residential development, private fencing, right-of-way fencing and US 98.		
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 0
Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.		
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 7	with: 0
Majority of the plant cover within canopy is desirable plant species with invasive, exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a pipe culvert within the wetland and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.		

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.00

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =
0.67 x 0.38 = **0.25**

Delta = [with-current]
-0.67

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4B)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.50

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested wetland system surrounded by residential development to the north and west.

Assessment area description

The dominant vegetation within the canopy of this wetland consists of red maple, water oak, and bald cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4B)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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: 6	with: 0	The assessment area is a forested wetland system that is surrounded by residential development to the north and west. The assessment area is located near the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of Pioneer Drive, residential development, private fencing, right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 7	with: 0	Majority of the plant cover within canopy is desirable plant species with invasive, exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a pipe culvert within the wetland and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres: 0.67	with: 0.00

Delta = [with-current]
-0.67

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 =
0.67 x 0.50 = **0.33**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4C Easement)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.23

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested wetland system surrounded by residential development to the north and west.

Assessment area description

The dominant vegetation within the canopy of this wetland consists of red maple, water oak, and bald cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4C Easement)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	0	The assessment area is a forested wetland system that is surrounded by residential development to the north and west. The assessment area is located near the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of Pioneer Drive, residential development, private fencing, right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	0	Majority of the plant cover within canopy is desirable plant species with invasive, exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a pipe culvert within the wetland and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.00

Delta = [with-current]
-0.67

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 =
0.67 x 0.23 = **0.15**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4C)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	1.30

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested wetland system surrounded by residential development to the north and west.

Assessment area description

The dominant vegetation within the canopy of this wetland consists of red maple, water oak, and bald cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4C)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	0	The assessment area is a forested wetland system that is surrounded by residential development to the north and west. The assessment area is located near the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of Pioneer Drive, residential development, private fencing, right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	0	Majority of the plant cover within canopy is desirable plant species with invasive, exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a pipe culvert within the wetland and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.00

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =
0.67 x 1.30 = **0.87**

Delta = [with-current]
-0.67

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 68 (FPC 5B)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.28

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Withlacoochee River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested wetland system that is surrounded by Gator Creek Campground.

Assessment area description

Dominant vegetation within the canopy consists of bald cypress, red maple, water oak, and laurel oak.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located less than 0.1 mile southeast of the entrance to Gator Creek Campground near the northbound US 98 right-of-way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Evidence of wildlife observed includes crayfish burrows.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 68 (FPC 5B)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested wetland system that is located adjacent to the northbound US 98 right-of-way and a RV park/campground. Some wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the campground facilities, fencing, and a large open water SMF pond.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover within the canopy is appropriate and desirable plant species. The surrounding development and its associated stormwater management facilities has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within RV park may affect natural recruitment or regeneraltion in the plant community.	7	0

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.00

Delta = [with-current]
-0.63

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 =
0.63 x 0.28 = **0.18**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 68 (FPC 5C)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.03

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Withlacoochee River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested wetland system that is surrounded by Gator Creek Campground.

Assessment area description

Dominant vegetation within the canopy consists of bald cypress, red maple, water oak, and laurel oak.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located less than 0.1 mile southeast of the entrance to Gator Creek Campground near the northbound US 98 right-of-way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Evidence of wildlife observed includes crayfish burrows.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 68 (FPC 5C)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested wetland system that is located adjacent to the northbound US 98 right-of-way and a RV park/campground. Some wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the campground facilities, fencing, and a large open water SMF pond.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover within the canopy is appropriate and desirable plant species. The surrounding development and its associated stormwater management facilities has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within RV park may affect natural recruitment or regeneraltion in the plant community.	7	0

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.00

Delta = [with-current]
-0.63

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 =
0.63 x 0.03 = **0.02**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 69 (Pond 2D-1)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.13

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a small portion of a forested system that extends outside of the pond site. Adjacent land use include residential development and a large SMF pond associated with the Gator Creek Campground.

Assessment area description

Dominant vegetation includes cypress, water oak, and red maple.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located less than 0.1 mile southeast of the entrance to Gator Creek Campground near the northbound US 98 right-of-way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 69 (Pond 2D-1)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	6	0	The assessment area is a forested wetland system that is located adjacent to the northbound US 98 right-of-way and a RV park/campground. Some wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the campground facilities, fencing, and a large open water SMF pond.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	0	Plant cover within the canopy is appropriate and desirable plant species. The surrounding development and its associated stormwater management facilities has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within RV park may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.00

Delta = [with-current]
-0.67

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 =
0.67 x 0.13 = **0.09**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 68 (FPC 5C)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
621 - Cypress	PFO2C - Palustine, Forested, Needle-leaved Deciduous, Seasonally Flooded	Impact	0.04

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Withlacoochee River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested wetland system that is surrounded by residential development and located on north side of Rockridge Rd.

Assessment area description

Dominant vegetation within the canopy consists of bald cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located approximately 0.2 mile northeast of US 98 adjacent to the north side of Rockridge Rd. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Evidence of wildlife observed includes crayfish burrows.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 68 (FPC 5C)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested wetland system that is located adjacent to the north side of Rockridge Rd and residential development. Some wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the residential development, US 98, and Rockridge Rd.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover within the canopy is appropriate and desirable plant species. The surrounding development and its associated stormwater management facilities has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within adjacent land uses may affect natural recruitment or regeneraltion in the plant community.	7	0

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.00

Delta = [with-current]
-0.63

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 =
0.63 x 0.04 = **0.03**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 71 (Pond 2C-2)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.89

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system that extends outside of the pond site. Adjacnet land use include residential development.

Assessment area description

Dominant vegetation includes cypress, water oak, and red maple.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the northbound US 98 right-of-way approximately 0.1 mile southeast of Earnest Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 71 (Pond 2C-2)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	0	The assessment area is a forested wetland located near the northbound US 98 right-of-way. Adjacent land uses consists of residential and pasture. Minimal weltand and upland habitat is available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential/pasture use.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent residences, US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	0	Majority of the plant cover within the canopy is comprised of desirable plant species with invasive, exotic species in the subcanopy/groundcover. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way and installation of pipe culverts and cross drains that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.60	0.00

Delta = [with-current]
-0.60

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 =
0.60 x 0.89 = **0.53**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 72 (FPC 7B)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.01

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a small forested system. A cross drain that runs underneath US 98 connects this wetland to other offsite wetland systems.

Assessment area description

Dominant vegetation within this wetland consists of cypress, red maple, and water oak.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the northbound US 98 right-of-way approximately 0.4 mile northwest of Perkle Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 72 (FPC 7B)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	0	The assessment area is a forested wetland near the northbound US 98 right-of-way. Adjacent land uses consists of improved pasture. MInimal wetland and upland habitats are available outside of the assessment area; wildlife access to and from habitats outside of the assessment area is limited by the presence of US 98, and improved pasture.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	0	Majority of plant cover is comprised of desirable/appropriate species present. Land management practices include routine maintenance within the improved pasture that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.00

Delta = [with-current]
-0.67

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 =
0.67 x 0.01 = **0.01**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 73) (Pond 3D-2

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	1.94

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area consists of a forested wetalnd that is adjacent to the right-of-way of US 98, planted pine, and the Green Swamp WMA.

Assessment area description

Dominant vegetation includes cypress, red maple, and water oak.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the northbound US 98 right-of-way approximately 0.7 miles northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/24/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 73) (Pond 3D-2
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/24/2021

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested wetland that is located adjacent to the northbound US 98 right-of-way, planted pine and Green Swamp WMA. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98.	6	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrological indicators observed within Wetland 25 included surface water and a high water table. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover consists of desirable and appropriate species with minimal invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices appear somewhat appropriate.	7	0

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.00

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =
0.67 x 1.94 = **1.29**

Delta = [with-current]
-0.67

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 74 (Pond 4C-2)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
621 - Cypress	PFO2C - Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.43

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is comprised of a forested wetland system within an improved pasture.

Assessment area description

Dominant vegetation within this wetland consists cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the northbound US 98 right-of-way approximately 0.2 mile southeast of Old Dade City Rd. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Evidence of wildlife observed were small fish and tadpoles.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 74 (Pond 4C-2)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	0	The assessment area is a forested wetland located near the northbound US 98 right-of-way. Adjacent land uses consists of the improved pasture. Minimal wetland and upland habitats are available outside of the assessment area; wildlife access to and from habitats outside of the assessment area is limited by the presence of fencing, US 98, and improved pasture.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic conditions are affected by the improved pasture drainage and adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	0	Majority of plant cover is comprised of desirable/appropriate species . The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the improved pasture that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.00

Delta = [with-current]
-0.63

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 =
0.63 x 0.43 = **0.27**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 75 (FPC 12A)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.17

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system that extends outside of the pond site.

Assessment area description

Dominant vegetation includes cypress, water oak, and red maple.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the southbound US 98 right-of-way approximately 0.1 mile southeast of Old Dade City Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 75 (FPC 12A)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested wetland located near the southbound US 98 right-of-way. Adjacacent land use includes residential development; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of residential development and US 98.	5	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent residences, US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is by appropriate and desirable plant species. Minimal invasive/exotic species present. Land management practices are generally appropriate.	7	0

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.00

Delta = [with-current]
-0.63

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 =
0.63 x 0.17 = **0.11**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 76 (FPC 11A)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
621 - Cypress	PFO2C - Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.02

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is comprised of a portion of a forested wetland system. A cross drain that runs underneath US 98 connects this area to other offsite wetland systems. Adjacent land use included improved pasture.

Assessment area description

Dominant vegetation within this wetland consists cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the southbound US 98 right-of-way approximately 0.1 mile northwest of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Evidence of wildlife observed were small fish and tadpoles.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 76 (FPC 11A)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	0	The assessment area is a forested wetland located near the southbound US 98 right-of-way. Adjacent land uses consists of the residential facilities that are bounded with fencing and improved pasture. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic conditions are affected by the improved pasture drainage and adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	0	Majority of plant cover is comprised of desirable/appropriate species . The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the improved pasture that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.00

Delta = [with-current]
-0.63

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 =
0.63 x 0.02 = **0.01**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 77 (Pond 4D-1)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
643 - Wet Prairie	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	3.35

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is comprised of a wet prairie within an improved pasture.

Assessment area description

Dominant vegetation within this wetland consists bahia grass, smartweed, yellow-eyed grass, and maidencane.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the southbound US 98 right-of-way approximately 0.3 mile southeast of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 77 (Pond 4D-1)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	0	The assessment area is an herbaceous wetland located near the southbound US 98 right-of-way. Adjacent land uses consists of the improved pasture. Some wetland and upland habitats are available outside of the assessment area; wildlife access to and from habitats outside of the assessment area is limited by the presence of fencing, US 98, and improved pasture.
.500(6)(b)Water Environment (n/a for uplands)	5	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the improved pasture drainage and adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	0	Majority of plant cover is comprised of desirable/appropriate species . The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the improved pasture and cow grazing that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.53	0.00

Delta = [with-current]
-0.53

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 =
0.53 x 3.35 = **1.79**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 78 (FPC 9A)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	1.18

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system that extends outside of the pond site.

Assessment area description

Dominant vegetation includes cypress, water oak, swamp bay, laural oak, and red maple.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the southbound US 98 right-of-way directly southeast of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 78 (FPC 9A)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	6	0	The assessment area is a forested wetland that connects to offsite wetlands. The assessment area is located near the southbound US 98 right-of-way. Adjacacent land use includes the Duke Energy utility easement; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	0	Majority of plant cover is by appropriate and desirable plant species. Minimal invasive/exotic species present. Land management practices are generally appropriate.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.00

Delta = [with-current]
-0.67

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 =
0.67 x 1.18 = **0.79**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 79 (Pond 3D-1)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.22

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is an isolated herbaceous system within an improved pasture.

Assessment area description

Dominant vegetation includes bahia grass and soft rush.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the southbound US 98 right-of-way on the east side of Keen Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 79 (Pond 3D-1)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	0	The assessment area is an isolated, herbaceous wetland located near the southbound US 98 right-of-way. Adjacent land use includes Keen Road, an RV lot, and improved pasture;limited wetland and upland habitats are available outside of the assessment area; wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, the RV lot, Keen Road, improved pasture, and US 98.
.500(6)(b)Water Environment (n/a for uplands)	6	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and Keen Rd, and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98 and Keen Rd.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	0	The plant cover within the canopy consists of appropriate and desirable plant species. Land management practices are generally appropriate, but the routine maintenace within the pasture and cow grazing may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.57	0.00

Delta = [with-current]
-0.57

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

If mitigation
Time lag (t-factor) =
Risk factor =

For impact assessment areas
FL = delta x acres =
0.57 x 0.22 = **0.12**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 80 (FPC 8A)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.06

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is an herbaceous system that extends into a forested wetland system. Adjacent land use consists of improved pasture, an RV lot, and US 98.

Assessment area description

Dominant vegetation includes Virginia chain fern, soft rush.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the southbound US 98 right-of-way approximately 0.1 mile southeast of Keen Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 80 (FPC 8A)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	0	The assessment area is an herbaceous wetland located near the southbound US 98 right-of-way. Adjacent land use includes Keen Road, an RV lot, and improved pasture;limited wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, the RV lot, Keen Road, and US 98.
.500(6)(b)Water Environment (n/a for uplands)	6	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	0	The plant cover within the canopy consists of appropriate and desirable plant species. The groundcover/understory consists of invasive/exotic species. Land management practices are generally appropriate, but the routine maintenace within the pasture and cow grazing may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.57	0.00

Delta = [with-current]
-0.57

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

If mitigation
Time lag (t-factor) =
Risk factor =

For impact assessment areas
FL = delta x acres =
0.57 x 0.06 = **0.03**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 81 (FPC 6C)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
621 - Cypress	PFO2C - Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.11

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system surounded by improved pasture and residential development.

Assessment area description

Dominant vegetation within the canopy includes cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the southbound US 98 right-of-way north of Old Soldier Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 81 (FPC 6C)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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: 6	with: 0	The assessment area is a forested wetland and is located near the southbound US 98 right-of-way. Adjacent land use includes residential development, improved pasture, and Old Soldier Road; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of rresidential development/improved pasture, Old Soldier Road, and US 98.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 7	with: 0	The plant cover within the canopy and understory consists of appropriate and desirable plant species with minimal invasive/exotic species present. Land management practices are generally appropriate, but the routine maintenance within adjacent land uses may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.00

Delta = [with-current]
-0.67

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 =
0.67 x 0.11 = **0.07**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 82 (FPC 6C)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
621 - Cypress	PFO2C - Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.13

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system surounded by improved pasture and residential development.

Assessment area description

Dominant vegetation within the canopy includes cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the southbound US 98 right-of-way north of Old Soldier Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 82 (FPC 6C)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested wetland and is located near the southbound US 98 right-of-way. Adjacent land use includes residential development, improved pasture, and Old Soldier Road; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of rresidential development/improved pasture, Old Soldier Road, and US 98.	6	0
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	The plant cover within the canopy and understory consists of appropriate and desirable plant species with minimal invasive/exotic species present. Land management practices are generally appropriate, but the routine maintenance within adjacent land uses may affect natural recruitment or regeneraltion in the plant community.	7	0

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.00

Delta = [with-current]
-0.67

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 =
0.67 x 0.13 = **0.09**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 83 (FPC 6A)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.39

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system.

Assessment area description

Dominant vegetation within the canopy includes cypress and red maple.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the southbound US 98 right-of-way across from Earnest Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 83 (FPC 6A)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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	6	0	The assessment area is a forested wetland and is located near the southbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	0	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). In addition to surface water, hydrologic indicators observed included water-stained leaves, moss, and elevated lichen lines. Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	0	The plant cover within the canopy consists of appropriate and desirable plant species. Land management practices are generally appropriate.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.00

Delta = [with-current]
-0.67

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 =
0.67 x 0.39 = **0.26**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

APPENDIX I.4

UMAM Worksheets – Preliminary Pond Sites Secondary Impacts

DRAFT

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		FPC 13A (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 – Wetland Forested Mixed	PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.12

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is comprised of a forested wetland system. A cross drain that runs underneath US 98 connects this wetland to other wetland systems.

Assessment area description

The forested wetland canopy consists of cypress and red maple.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the southbound US 98 right-of-way approximately 260 feet southeast of CR 54. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilization observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
S. Szatyari	9/24/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		FPC 13A (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	S. Szatyari	9/24/2021

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	5	4	The assessment area is a forested wetland system adjacent to CR 54. The assessment area is located at the southbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and CR 54. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, the soils observed within Wetland 33 consisted of a dark surface with muck present. Hydrological indicators observed included surface water and a high water table. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	5	Plant cover within the understory is comprised of invasive, exotic species with presence of native species in the canopy. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.60	0.53

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 0.12 = **0.01**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Pond 1A (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.09

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Withlacoochee River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested wetland that extends offsite and is adjacent to the Gator Creek Reserve.

Assessment area description

Dominant vegetation within the assessment area consists of red maple and cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located within the northbound US 98 right-of-way approximately 0.1 mile southeast of the entrance to Gator Creek Preserve. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Pond 1A (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested weltand adjacent to the Gator Creek Preserve. The assessment area is located at the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.	6	5
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included elevated lichen lines, water-stained leaves, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.	7	7
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is by appropriate and desirable plant species. Minimal invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within the right-of-way may affect natural recruitment or regeneraltion in the plant community.	7	6

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.60

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 0.09 = **0.006**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 66 (FPC 4B) (Secondary Impacts

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
641 - Freshwater Marsh	PEM1C - Palustrine, Emergent, Persistent, Seasonally Flooded	Impact	0.15

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a disturbed herbaceous wetland surrounded by residential development.

Assessment area description

The dominant vegetation consists of primrose willow and bahia grass.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 66 (FPC 4B) (Secondary Impacts
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	5	4	The assessment area is an herbaecous wetland system that is surrounded by residential development. The assessment area is located near northbound US 98 right-of-way. Minimal wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of Pioneer Drive, residential development, private fencing,and US 98.
.500(6)(b)Water Environment (n/a for uplands)	5	5	Water level indicators and soil moisture appeared somewhat less than appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent development and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	4	3	Majority of plant cover consists ofl invasive/exotic species with few desirable species. The surrounding development and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices consists of routine maintenance of the residential properites and roadways.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.47	0.40

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 0.15 = **0.01**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4A Easement) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.38

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested wetland system surrounded by residential development to the north and west.

Assessment area description

The dominant vegetation within the canopy of this wetland consists of red maple, water oak, and bald cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98..	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4A Easement) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	5	The assessment area is a forested wetland system that is surrounded by residential development to the north and west. The assessment area is located near the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of Pioneer Drive, residential development, private fencing, right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	Majority of the plant cover within canopy is desirable plant species with invasive, exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a pipe culvert within the wetland and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.60

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =
0.07 x 0.38 = **0.03**

Delta = [with-current]
-0.07

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4A) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.48

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested wetland system surrounded by residential development to the north and west.

Assessment area description

The dominant vegetation within the canopy of this wetland consists of red maple, water oak, and bald cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4A) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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: 6	with: 5
The assessment area is a forested wetland system that is surrounded by residential development to the north and west. The assessment area is located near the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of Pioneer Drive, residential development, private fencing, right-of-way fencing and US 98.		
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 7
Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.		
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 7	with: 6
Majority of the plant cover within canopy is desirable plant species with invasive, exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a pipe culvert within the wetland and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.		

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.60

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =
0.07 x 0.48 = **0.03**

Delta = [with-current]
-0.07

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4B Easement) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.62

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested wetland system surrounded by residential development to the north and west.

Assessment area description

The dominant vegetation within the canopy of this wetland consists of red maple, water oak, and bald cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4B Easement) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	5	The assessment area is a forested wetland system that is surrounded by residential development to the north and west. The assessment area is located near the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of Pioneer Drive, residential development, private fencing, right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	Majority of the plant cover within canopy is desirable plant species with invasive, exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a pipe culvert within the wetland and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.60

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 0.62 = **0.04**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4B) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.29

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested wetland system surrounded by residential development to the north and west.

Assessment area description

The dominant vegetation within the canopy of this wetland consists of red maple, water oak, and bald cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4B) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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: 6	with: 5	The assessment area is a forested wetland system that is surrounded by residential development to the north and west. The assessment area is located near the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of Pioneer Drive, residential development, private fencing, right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 7	with: 6	Majority of the plant cover within canopy is desirable plant species with invasive, exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a pipe culvert within the wetland and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres: 0.67	with: 0.60

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 0.29 = **0.02**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4C Easement) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.38

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested wetland system surrounded by residential development to the north and west.

Assessment area description

The dominant vegetation within the canopy of this wetland consists of red maple, water oak, and bald cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4C Easement) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	5	The assessment area is a forested wetland system that is surrounded by residential development to the north and west. The assessment area is located near the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of Pioneer Drive, residential development, private fencing, right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	Majority of the plant cover within canopy is desirable plant species with invasive, exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a pipe culvert within the wetland and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.60

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 0.38 = **0.03**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4C) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.55

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested wetland system surrounded by residential development to the north and west.

Assessment area description

The dominant vegetation within the canopy of this wetland consists of red maple, water oak, and bald cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4C) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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: 6	with: 5	The assessment area is a forested wetland system that is surrounded by residential development to the north and west. The assessment area is located near the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of Pioneer Drive, residential development, private fencing, right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 7	with: 6	Majority of the plant cover within canopy is desirable plant species with invasive, exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the installation of a pipe culvert within the wetland and routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres: 0.67	with: 0.60

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 0.55 = **0.04**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 68 (FPC 5B) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.50

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Withlacoochee River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested wetland system that is surrounded by Gator Creek Campground.

Assessment area description

Dominant vegetation within the canopy consists of bald cypress, red maple, water oak, and laurel oak.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located less than 0.1 mile southeast of the entrance to Gator Creek Campground near the northbound US 98 right-of-way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Evidence of wildlife observed includes crayfish burrows.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 68 (FPC 5B) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	5	4	The assessment area is a forested wetland system that is located adjacent to the northbound US 98 right-of-way and a RV park/campground. Some wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the campground facilities, fencing, and a large open water SMF pond.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	Plant cover within the canopy is appropriate and desirable plant species. The surrounding development and its associated stormwater management facilities has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within RV park may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.57

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 0.50 = **0.03**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 68 (FPC 5C) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.24

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Withlacoochee River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested wetland system that is surrounded by Gator Creek Campground.

Assessment area description

Dominant vegetation within the canopy consists of bald cypress, red maple, water oak, and laurel oak.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located less than 0.1 mile southeast of the entrance to Gator Creek Campground near the northbound US 98 right-of-way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Evidence of wildlife observed includes crayfish burrows.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 68 (FPC 5C) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	5	4	The assessment area is a forested wetland system that is located adjacent to the northbound US 98 right-of-way and a RV park/campground. Some wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the campground facilities, fencing, and a large open water SMF pond.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	Plant cover within the canopy is appropriate and desirable plant species. The surrounding development and its associated stormwater management facilities has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within RV park may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.57

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 0.24 = **0.02**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 69 (Pond 2D-1) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.17

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a small portion of a forested system that extends outside of the pond site. Adjacent land use include residential development and a large SMF pond associated with the Gator Creek Campground.

Assessment area description

Dominant vegetation includes cypress, water oak, and red maple.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located less than 0.1 mile southeast of the entrance to Gator Creek Campground near the northbound US 98 right-of-way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 69 (Pond 2D-1) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	6	5	The assessment area is a forested wetland system that is located adjacent to the northbound US 98 right-of-way and a RV park/campground. Some wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the campground facilities, fencing, and a large open water SMF pond.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	Plant cover within the canopy is appropriate and desirable plant species. The surrounding development and its associated stormwater management facilities has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within RV park may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.60

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 0.17 = **0.01**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 68 (FPC 5C) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
621 - Cypress	PFO2C - Palustine, Forested, Needle-leaved Deciduous, Seasonally Flooded	Impact	0.18

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Withlacoochee River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested wetland system that is surrounded by residential development and located on north side of Rockridge Rd.

Assessment area description

Dominant vegetation within the canopy consists of bald cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located approximately 0.2 mile northeast of US 98 adjacent to the north side of Rockridge Rd. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Evidence of wildlife observed includes crayfish burrows.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 68 (FPC 5C) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	5	4	The assessment area is a forested wetland system that is located adjacent to the north side of Rockridge Rd and residential development. Some wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the residential development, US 98, and Rockridge Rd.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	Plant cover within the canopy is appropriate and desirable plant species. The surrounding development and its associated stormwater management facilities has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance within adjacent land uses may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.57

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 0.18 = **0.01**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 71 (Pond 2C-2) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.10

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system that extends outside of the pond site. Adjacnet land use include residential development.

Assessment area description

Dominant vegetation includes cypress, water oak, and red maple.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the northbound US 98 right-of-way approximately 0.1 mile southeast of Earnest Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 71 (Pond 2C-2) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	4	The assessment area is a forested wetland located near the northbound US 98 right-of-way. Adjacent land uses consists of residential and pasture. Minimal weltand and upland habitat is available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential/pasture use.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent residences, US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	6	5	Majority of the plant cover within the canopy is comprised of desirable plant species with invasive, exotic species in the subcanopy/groundcover. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way and installation of pipe culverts and cross drains that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.60	0.53

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 0.10 = **0.01**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 72 (FPC 7B) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.07

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a small forested system. A cross drain that runs underneath US 98 connects this wetland to other offsite wetland systems.

Assessment area description

Dominant vegetation within this wetland consists of cypress, red maple, and water oak.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the northbound US 98 right-of-way approximately 0.4 mile northwest of Perkle Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	6/28/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 72 (FPC 7B) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	6/28/2021

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	6	5	The assessment area is a forested wetland near the northbound US 98 right-of-way. Adjacent land uses consists of improved pasture. MInimal wetland and upland habitats are available outside of the assessment area; wildlife access to and from habitats outside of the assessment area is limited by the presence of US 98, and improved pasture.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	Majority of plant cover is comprised of desirable/appropriate species present. Land management practices include routine maintenance within the improved pasture that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.60

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 0.07 = **0.005**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 73) (Pond 3D-2) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded	Impact	0.55

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area consists of a forested wetalnd that is adjacent to the right-of-way of US 98, planted pine, and the Green Swamp WMA.

Assessment area description

Dominant vegetation includes cypress, red maple, and water oak.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the northbound US 98 right-of-way approximately 0.7 miles northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/24/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 73) (Pond 3D-2) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/24/2021

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is a forested wetland that is located adjacent to the northbound US 98 right-of-way, planted pine and Green Swamp WMA. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98.	6	5
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrological indicators observed within Wetland 25 included surface water and a high water table. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.	7	7
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover consists of desirable and appropriate species with minimal invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices appear somewhat appropriate.	7	6

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.67	0.60

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =
0.07 x 0.55 = **0.04**

Delta = [with-current]
-0.07

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 74 (Pond 4C-2) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
621 - Cypress	PFO2C - Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.26

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is comprised of a forested wetland system within an improved pasture.

Assessment area description

Dominant vegetation within this wetland consists cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the northbound US 98 right-of-way approximately 0.2 mile southeast of Old Dade City Rd. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Evidence of wildlife observed were small fish and tadpoles.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 74 (Pond 4C-2) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	4	The assessment area is a forested wetland located near the northbound US 98 right-of-way. Adjacent land uses consists of the improved pasture. Minimal wetland and upland habitats are available outside of the assessment area; wildlife access to and from habitats outside of the assessment area is limited by the presence of fencing, US 98, and improved pasture.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic conditions are affected by the improved pasture drainage and adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	Majority of plant cover is comprised of desirable/appropriate species . The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the improved pasture that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.57

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 0.26 = **0.02**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 75 (FPC 12A) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.14

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system that extends outside of the pond site.

Assessment area description

Dominant vegetation includes cypress, water oak, and red maple.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the southbound US 98 right-of-way approximately 0.1 mile southeast of Old Dade City Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 75 (FPC 12A) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	4	The assessment area is a forested wetland located near the southbound US 98 right-of-way. Adjacacent land use includes residential development; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of residential development and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent residences, US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	Majority of plant cover is by appropriate and desirable plant species. Minimal invasive/exotic species present. Land management practices are generally appropriate.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.57

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 0.14 = **0.01**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 76 (FPC 11A) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
621 - Cypress	PFO2C - Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.13

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is comprised of a portion of a forested wetland system. A cross drain that runs underneath US 98 connects this area to other offsite wetland systems. Adjacent land use included improved pasture.

Assessment area description

Dominant vegetation within this wetland consists cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the southbound US 98 right-of-way approximately 0.1 mile northwest of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Evidence of wildlife observed were small fish and tadpoles.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 76 (FPC 11A) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	4	The assessment area is a forested wetland located near the southbound US 98 right-of-way. Adjacent land uses consists of the residential facilities that are bounded with fencing and improved pasture. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic conditions are affected by the improved pasture drainage and adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	Majority of plant cover is comprised of desirable/appropriate species . The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the improved pasture that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0.57

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 0.13 = **0.01**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 77 (Pond 4D-1) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.60

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is comprised of a forested wetland system bounded by an improved pasture.

Assessment area description

Dominant vegetation within this wetland consists of red maple and cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the southbound US 98 right-of-way approximately 0.3 mile southeast of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation	None

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)
Amphibians, wading birds, turtles, small mammals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 77 (Pond 4D-1) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	4	The assessment area is a forested wetland located near the southbound US 98 right-of-way. Adjacent land uses consists of the improved pasture. Some wetland and upland habitats are available outside of the assessment area; wildlife access to and from habitats outside of the assessment area is limited by the presence of fencing, US 98, and improved pasture.
.500(6)(b)Water Environment (n/a for uplands)	6	6	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the improved pasture drainage and adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	Majority of plant cover is comprised of desirable/appropriate species . The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the improved pasture and cow grazing that may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.60	0.53

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 0.60 = **0.04**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 78 (FPC 9A) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.50

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system that extends outside of the pond site.

Assessment area description

Dominant vegetation includes cypress, water oak, swamp bay, laural oak, and red maple.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the southbound US 98 right-of-way directly southeast of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 78 (FPC 9A) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	6	5	The assessment area is a forested wetland that connects to offsite wetlands. The assessment area is located near the southbound US 98 right-of-way. Adjacacent land use includes the Duke Energy utility easement; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	Majority of plant cover is by appropriate and desirable plant species. Minimal invasive/exotic species present. Land management practices are generally appropriate.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.60

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 0.50 = **0.03**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 80 (FPC 8A) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.11

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested wetland system. Adjacent land use consists of improved pasture, an RV lot, and US 98.

Assessment area description

Dominant vegetation includes red maple and cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the southbound US 98 right-of-way approximately 0.1 mile southeast of Keen Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 80 (FPC 8A) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	5	4	The assessment area is a forested wetland located near the southbound US 98 right-of-way. Adjacent land use includes Keen Road, an RV lot, and improved pasture;limited wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, the RV lot, Keen Road, and US 98.
.500(6)(b)Water Environment (n/a for uplands)	6	6	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	The plant cover within the canopy consists of appropriate and desirable plant species. The groundcover/understory consists of invasive/exotic species. Land management practices are generally appropriate, but the routine maintenace within the pasture and cow grazing may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.60	0.53

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 = **0.01**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 81 (FPC 6C) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
621 - Cypress	PFO2C - Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.13

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system surounded by improved pasture and residential development.

Assessment area description

Dominant vegetation within the canopy includes cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the southbound US 98 right-of-way north of Old Soldier Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 81 (FPC 6C) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	6	5	The assessment area is a forested wetland and is located near the southbound US 98 right-of-way. Adjacent land use includes residential development, improved pasture, and Old Soldier Road; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of rresidential development/improved pasture, Old Soldier Road, and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	The plant cover within the canopy and understory consists of appropriate and desirable plant species with minimal invasive/exotic species present. Land management practices are generally appropriate, but the routine maintenance within adjacent land uses may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.60

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 0.13 = **0.01**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 82 (FPC 6C) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
621 - Cypress	PFO2C - Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.09

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system surounded by improved pasture and residential development.

Assessment area description

Dominant vegetation within the canopy includes cypress.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the southbound US 98 right-of-way north of Old Soldier Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
T. Norman	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 82 (FPC 6C) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	T. Norman	9/21/2021

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	6	5	The assessment area is a forested wetland and is located near the southbound US 98 right-of-way. Adjacent land use includes residential development, improved pasture, and Old Soldier Road; Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of rresidential development/improved pasture, Old Soldier Road, and US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	The plant cover within the canopy and understory consists of appropriate and desirable plant species with minimal invasive/exotic species present. Land management practices are generally appropriate, but the routine maintenance within adjacent land uses may affect natural recruitment or regeneraltion in the plant community.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.67	0.60

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =
0.07 x 0.09 = **0.01**

Delta = [with-current]
-0.07

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 83 (FPC 6A) (Secondary Impacts)

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	PFO1/2C - Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded	Impact	0.17

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Hillsborough River	III	None

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The assessment area is a forested system.

Assessment area description

Dominant vegetation within the canopy includes cypress and red maple.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
The assessment area is located near the southbound US 98 right-of-way across from Earnest Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.	Not unique

Functions	Mitigation for previous permit/other historic use
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.	None

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)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small mammals	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No evidence of wildlife utilitzation observed.

Additional relevant factors:

None.

Assessment conducted by:	Assessment date(s):
A. Blakely	9/21/2021

DRAFT

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)		Wetland 83 (FPC 6A) (Secondary Impacts)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	A. Blakely	9/21/2021

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	6	5	The assessment area is a forested wetland and is located near the southbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of US 98.
.500(6)(b)Water Environment (n/a for uplands)	7	7	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). In addition to surface water, hydrologic indicators observed included water-stained leaves, moss, and elevated lichen lines. Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	7	6	The plant cover within the canopy consists of appropriate and desirable plant species. Land management practices are generally appropriate.

DRAFT

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.67	0.60

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 0.17 = **0.01**

For mitigation assessment areas
RFG = delta/(t-factor x risk) =