Beckett Bridge

Project Development & Environment (PD&E) Study

from **Chesapeake Drive** *to* **Forest Avenue**

Tarpon Springs, Pinellas County, FL

Pinellas County Project ID: PID 2161 • ETDM #: 13040

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Biological Assessment Technical Memorandum

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1.0 INTRODUCTION

Pinellas County, in coordination with the Florida Department of Transportation (FDOT) District Seven and the Federal Highway Administration (FHWA), is conducting a Project Development and Environment (PD&E) Study to evaluate alternatives to remove, rehabilitate or replace the existing Beckett Bridge (Bridge no. 154000) in Tarpon Springs, Pinellas County, Florida.

The existing bridge was originally constructed in 1924 as a timber structure with a steel movable span. The fixed timber approach spans were replaced with concrete approach spans in 1956. The existing bridge is 358'-6" long, consisting of 10 spans. The bridge has been determined to be eligible for listing in the National Register of Historic Places. Eligibility is based on the bridge's contribution to early development of the area and because it is one of a few known, pre-1965, highway single-leaf rolling-lift bascule bridges remaining in Florida.

Major repairs, which included construction of crutch bents, repair of machinery, replacement of the electrical system and construction of a new control house, were performed in 1996. Additional repairs to the bridge machinery were needed in 1997 and 2011. Major rehabilitation or replacement of the bridge is needed to keep the bridge open and operating efficiently.

The project limits extend along Riverside Drive from Chesapeake Drive across Whitcomb Bayou to Forest Avenue, a distance of approximately 0.3 mile (see **Figure 1** - Project Location). The existing two-lane bridge connects areas west and north of the Bayou to downtown Tarpon Springs. The bridge is also located on a popular route for access to Fred Howard Park, a Pinellas County park located approximately 3.1 miles west on the Gulf of Mexico. Riverside Drive/North Spring Boulevard is an extension of Tarpon Avenue, which is a designated evacuation route. Beckett Bridge provides access to major north/south arterials including Alternate US 19 and US 19 for coastal residents during hurricane evacuation. The bridge also provides access for emergency vehicles, including police, ambulance and fire.

Beckett Bridge is owned and operated by Pinellas County. A bridge tender is only present when required to open the drawbridge for a vessel, there are no full-time bridge tenders. US Coast Guard drawbridge opening regulation (33CFR117.341) states that "The draw of the Beckett Bridge, mile 0.5, at Tarpon Springs, Florida shall open on signal if at least two hours' notice is given." Whitcomb Bayou connects to the Gulf of Mexico via the Anclote River to the north.

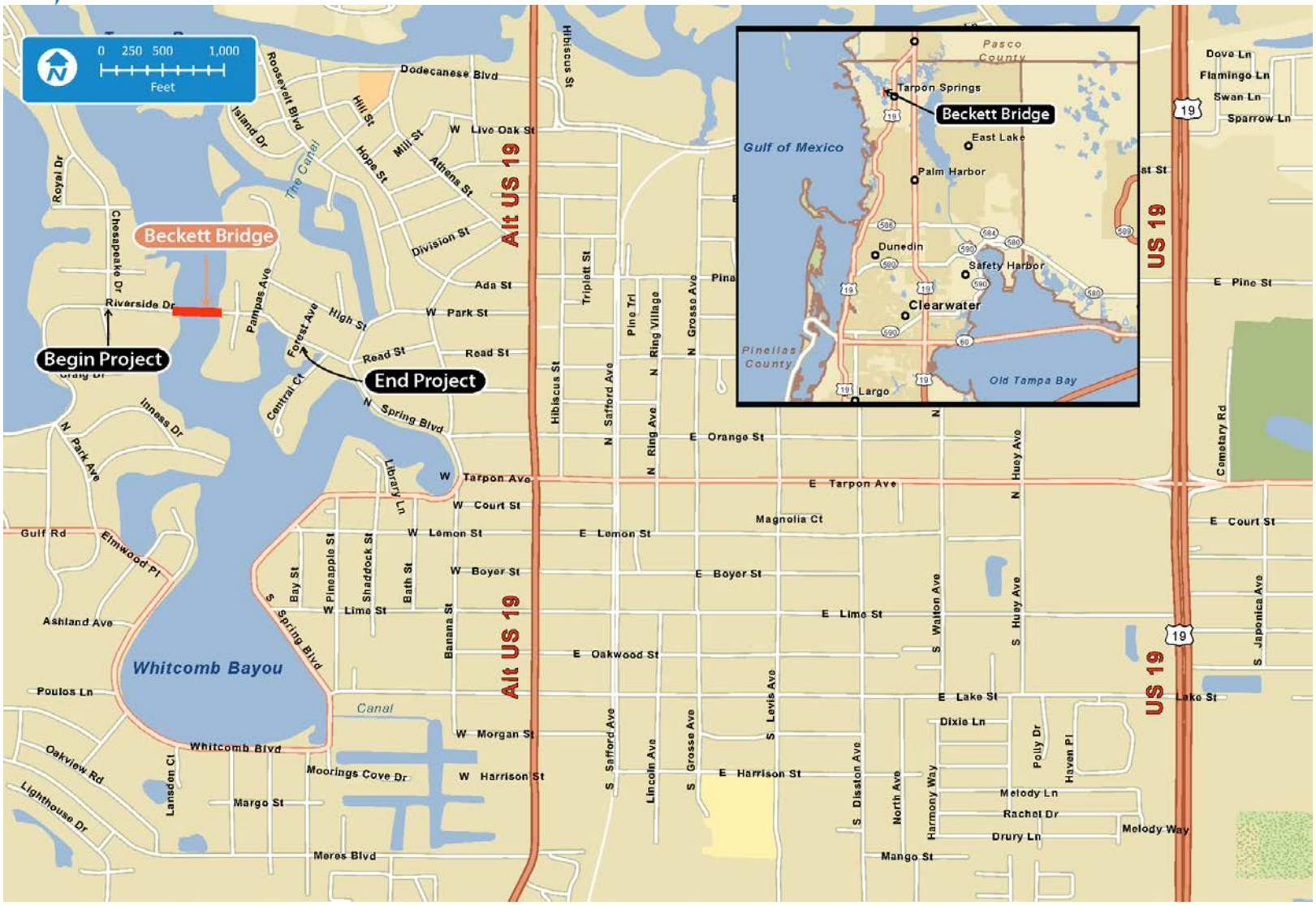

Figure 1 – Project Location

1.1 Project Need

The bridge is considered functionally obsolete. This designation is based primarily on the substandard clear roadway width of only 20 feet and substandard roadway safety features. The existing typical section consists of one, 10-foot wide travel lane in each direction and 2-foot 2-inch-wide sidewalks separated by a curb on both sides of the bridge (see **Figure 2** – Existing Bridge Typical Section).

Minimum required lane and shoulder widths prescribed by the American Association of State Highway and Transportation Officials (AASHTO) are not met. The sidewalks on the bridge are narrow and do not meet current accessibility requirements established by the Americans with Disabilities Act (ADA). The bridge railings do not meet current standards for pedestrian safety or geometric and crash testing safety standards for vehicles. Approach guardrail and transitions and end treatments also do not meet current safety standards.

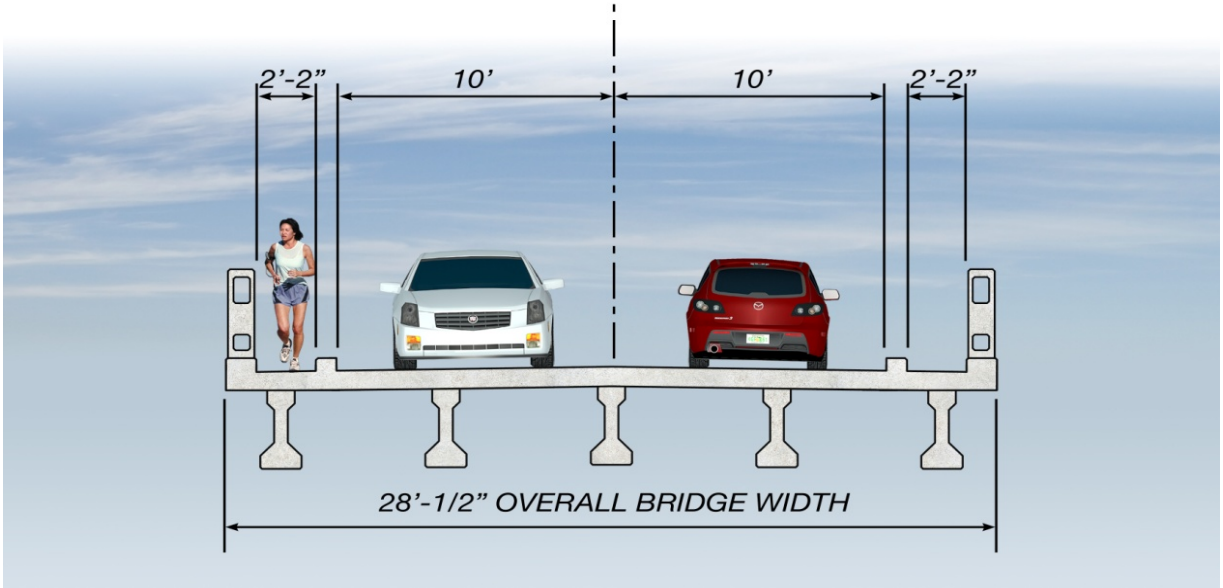

Figure 2 – Existing Bridge Typical Section

According to recent (11/30/11) FDOT inspection reports, the existing bridge has an overall Structure Inventory and Appraisal Sufficiency Rating of 44.9 out of 100. (Sufficiency ratings are a method of evaluating highway bridges by calculating a numeric value between 0 and 100, indicative of bridge sufficiency to remain in service). Although the bridge is not considered Structurally Deficient, the bridge has a

substandard load carrying capacity requiring weight restrictions. The bridge is currently posted for legal loads limited to 2-ton Single Unit Trucks and 15-ton Combination Trucks.

The existing vertical clearance at the fenders is six feet. The tip of the bascule leaf overhangs the fender with the leaf fully raised and does not provide unlimited vertical clearance between the fenders. The existing horizontal clearance between the fenders is 25 feet.

1.1.1 ETDM Evaluation

The FDOT's Efficient Transportation Decision Making (ETDM) process provides agencies and the public access to project planning information, as well as potentially affected environmental resources through use of the internet via the Environmental Screening Tool (EST). The tool facilitates interaction among transportation planners, regulatory agencies and affected communities to provide input on projects prior to the PD&E phase. Review of the proposed transportation improvement by agency representatives provides the Department with early input concerning potential impacts to the environment and community. Key features of the ETDM process include:

- Early agency and community involvement;
- Early identification of avoidance and mitigation strategies;
- Access to comprehensive data in standardized formats;
- Reviews and studies focused on key issues;
- Maximized use of technology for coordination, project scoping and communication.

This project was evaluated through the FDOT's ETDM process and was assigned ETDM project number 13040. Agency comments and a more detailed "Purpose and Need Statement" are available in the ETDM Programming Summary Report, published on June 1, 2011. The issues discussed in the Report will also be addressed in the Preliminary Engineering Report which will be published separately for this project.

2.0 ALTERNATIVES CONSIDERED

The following alternatives are under consideration:

- No-Build - Maintain Existing Bridge
- No-Build - Remove Existing Bridge (includes alternate routing of traffic)
- Rehabilitation of the Existing Bridge

- Replace with a new Movable Bridge
- Replace with a new Fixed Bridge

The "No-Build" alternative includes only routine maintenance to keep the bridge open to traffic until safety issues would require it to be closed. Evaluation of future improvements would occur at a later date. The "No Build with Removal of the Existing Bridge" would result in routine maintenance in the near future with the intent to demolish the bridge when it is no longer safe for traffic, with no plans to replace it with a new one. The concept plans for this alternative are included in **Appendix A**. All bridge replacement alternatives considered will be constructed in approximately the same location as the existing bridge to minimize impacts. Descriptions of the rehabilitation and build alternatives are provided in this section.

2.1 Rehabilitation Alternative

The existing bridge service life can be extended with extensive repairs, implementation of measures that slow the rate of concrete and structural steel deterioration, and replacement of electrical and mechanical systems. However, even after major rehabilitation, it is anticipated that the bridge will require significant ongoing maintenance and periodic additional major repairs with corresponding disruptions to traffic. Furthermore, it will not be practical to extend the life of the bridge indefinitely.

Rehabilitation to the maximum extent would involve replacement of the bascule leaf, the operating system (electrical and mechanical), and construction of crutch bents at each approach bent. These improvements could extend the service life of the bridge 25 to 30 years. Coordination with the USCG indicates that a rehabilitation alternative which substantially modifies the superstructure or substructure is typically not permitted by the USCG unless current navigational guidelines are met. However, it is anticipated that this alternative would be permitted by the USCG since existing guide clearances do not exist. Replacement of the fender system would require a USCG permit. The proposed Rehabilitation Alternative would include the following work and would extend the service life of the bridge a maximum of 25-30 years:

- Replace the sand-cement riprap at the abutments.
- Replace substandard approach guardrails.
- Remove all existing pile jackets and install new cathodic protection jackets on all concrete bent piles as well as steel bascule pier helper piles.
- Repair pile bent cap, bascule pier and bascule rest pier deteriorated concrete and provide cathodic protection in the form of zinc spray metalizing.
- Install crutch bents at Bents 2, 3, 4, 5, 8, 9, 10.
- Replace the Bascule Pier and Rest Pier.

- Replace substandard concrete bridge railings with new traffic railings meeting crash testing requirements of NCHRP 350 (i.e. FDOT Standard Index 422 – 42" Vertical Face Traffic Railing).
- Hydro-blast the deteriorated concrete deck surface and install a new concrete overlay.
- Clean and replace the expansion joints.
- Repair deck underside, beam and diaphragm deteriorated concrete and provide cathodic protection in the form of zinc spray metalizing.
- Rehabilitate the control house including roof, windows and door.
- Replace the bascule leaf including counterweight.
- Replace the open steel and concrete filled grid deck.
- Replace the bascule span main drive machinery as well as the span locks and live load shoes.
- Replace the bascule span electrical system.
- Replace the bascule span traffic gates.
- Replace the bascule span barrier gate.
- Replace the fender system.

2.2 Build Alternatives

All bridge replacement alternatives considered will be constructed in approximately the same location (on the same alignment) as the existing bridge to minimize impacts. One movable bridge alternative and two fixed bridge alternatives have been developed. Concept plans and profile exhibits for all build alternatives are included in Appendix A. Alternate corridors for bridge location will not be evaluated due to the extent of development in the vicinity of the existing bridge. Capacity improvements will not be considered.

2.2.1 Movable Bridge Alternative

The proposed movable span will provide 7.8 feet of vertical clearance at the fenders (in the closed position) and 25 feet of horizontal clearance between fenders for vessels traveling on the waterway. Unlimited vertical clearance will be provided in the open position. The maximum proposed grade is five percent, which meets ADA requirements. The total length of the proposed movable span bridge is 360 feet. The movable span is proposed to be a single leaf bascule span, a less common type of movable span in Florida but more economical for spanning Whitcomb Bayou.

Roadway reconstruction is limited to the bridge approaches. The bridge and roadway will return to existing grade at Pampas Avenue on the east side and east of Chesapeake Drive on the west side. Resurfacing (only) is proposed between Forest and Pampas Avenues.

The proposed roadway profile would be approximately two feet higher than the existing roadway at the west end of the bridge (Begin Bridge Station 135+95 as shown on concept plans), and approximately four feet higher at east end of the bridge ("End Bridge" Station 139+55). The proposed improvements can be constructed within the existing right-of-way; purchase of additional right-of-way is not required.

The proposed bridge typical section for the Movable Bridge Alternative has a total out-to-out width of 47 feet 1 inch as shown in **Figure 3**. The typical section includes two, 11-foot wide travel lanes with 5.5-foot shoulders that can function as undesignated bicycle lanes. Sidewalks, 5.5 feet wide, are proposed on both sides of the bridge.

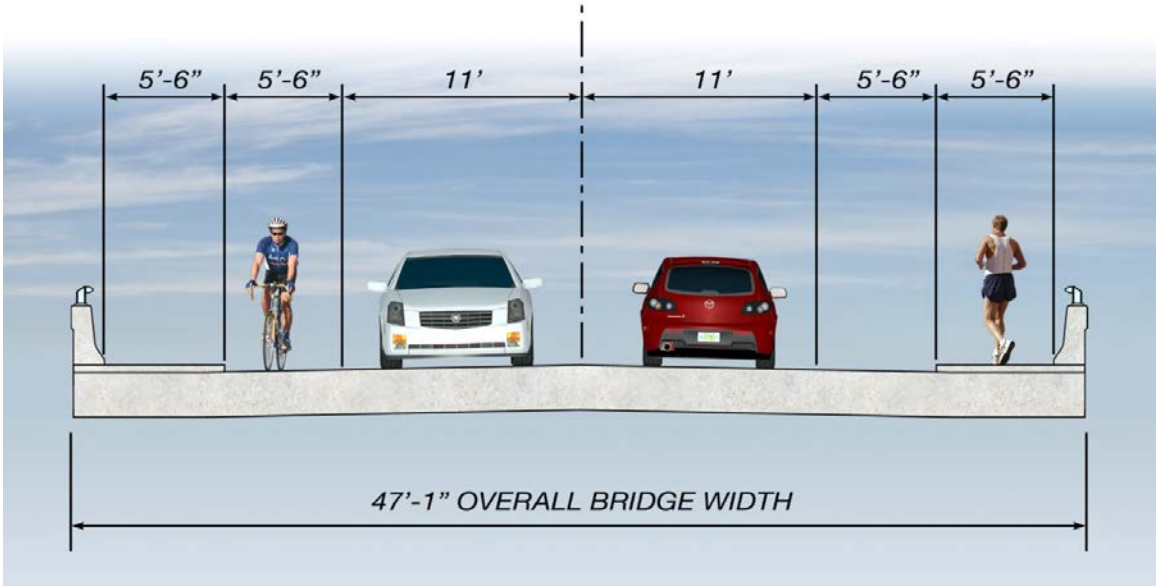

Figure 3 – Proposed Movable Bridge Typical Section

The proposed roadway section for the Movable Bridge Alternative west of the bridge consists of two 10-foot wide through lanes, one in each direction, and four-foot wide outside shoulders that can function as undesignated bicycle lanes. Because of the limited right-of-way, six-foot wide sidewalks are proposed only on the north side of the roadway. No sidewalks are proposed on the south side of the roadway, adjacent to the Bayshore Mobile Home Park. '

East of the bridge, the roadway section consists of two 11-foot wide through lanes, one in each direction, and four-foot wide outside shoulders that will function as undesignated bicycle lanes. Six-foot wide sidewalks are proposed on both sides of the roadway.

Figures 4 and 5 illustrate the proposed roadway sections for the west and east sides of the bridge, respectively.

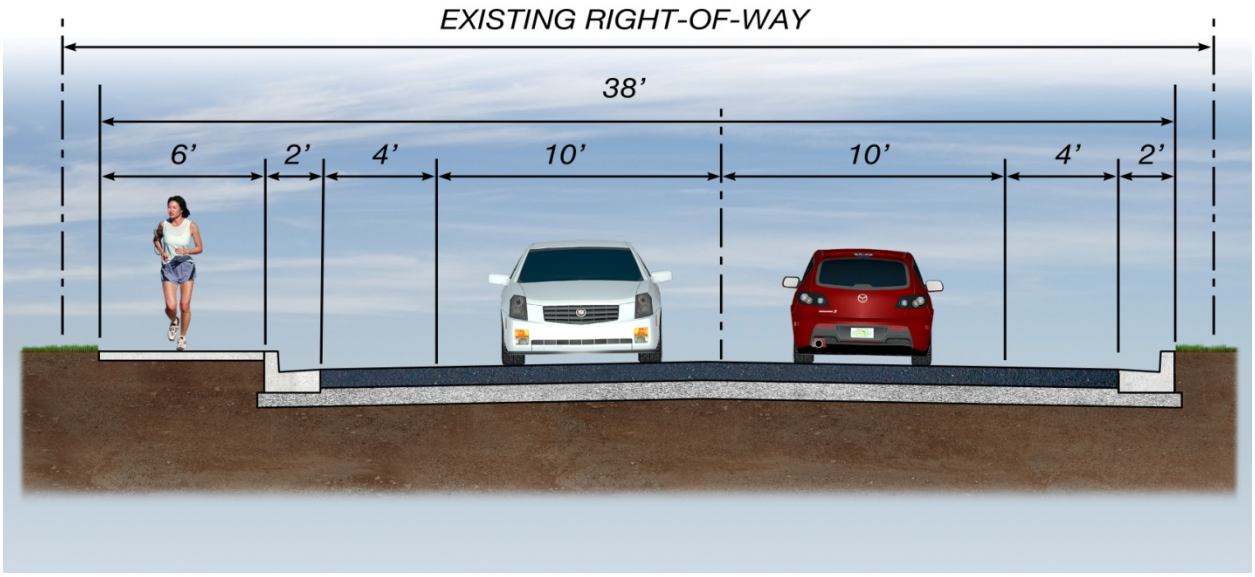

Figure 4 – Proposed Roadway Section West of Proposed Movable Bridge

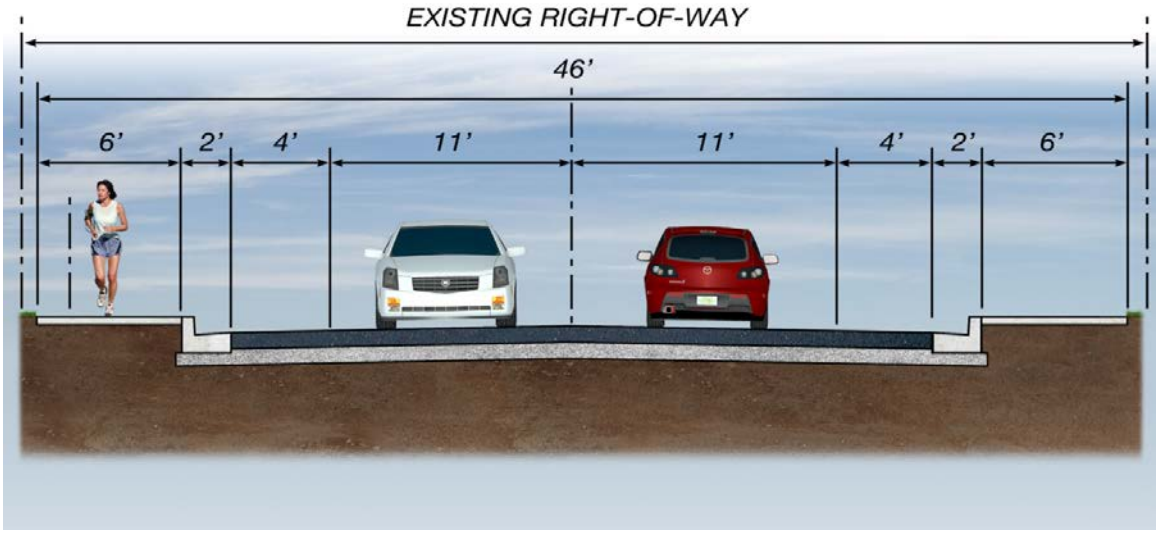

Figure 5 – Proposed Roadway Section East of Proposed Movable Bridge

2.2.2 Fixed Bridge Alternatives

Two options, A and B, for a fixed bridge alternative were developed. Both options provide approximately 28 feet of vertical clearance at the fenders over Whitcomb Bayou and 25 feet of horizontal clearance between fenders for vessels traveling on the waterway. The proposed maximum grade is 5%. The total length of the proposed fixed span bridge is 720 feet.

The proposed bridge typical section for the fixed bridge alternatives has an out to out width of 40 feet. It consists of two, eleven foot travel lanes, five foot shoulders (which can be used as undesignated bicycle lanes) on both sides and a five foot sidewalk on the north side of the bridge. To minimize impacts to property owners, a sidewalk is not proposed on the south side of the bridge. See **Figure 6**.

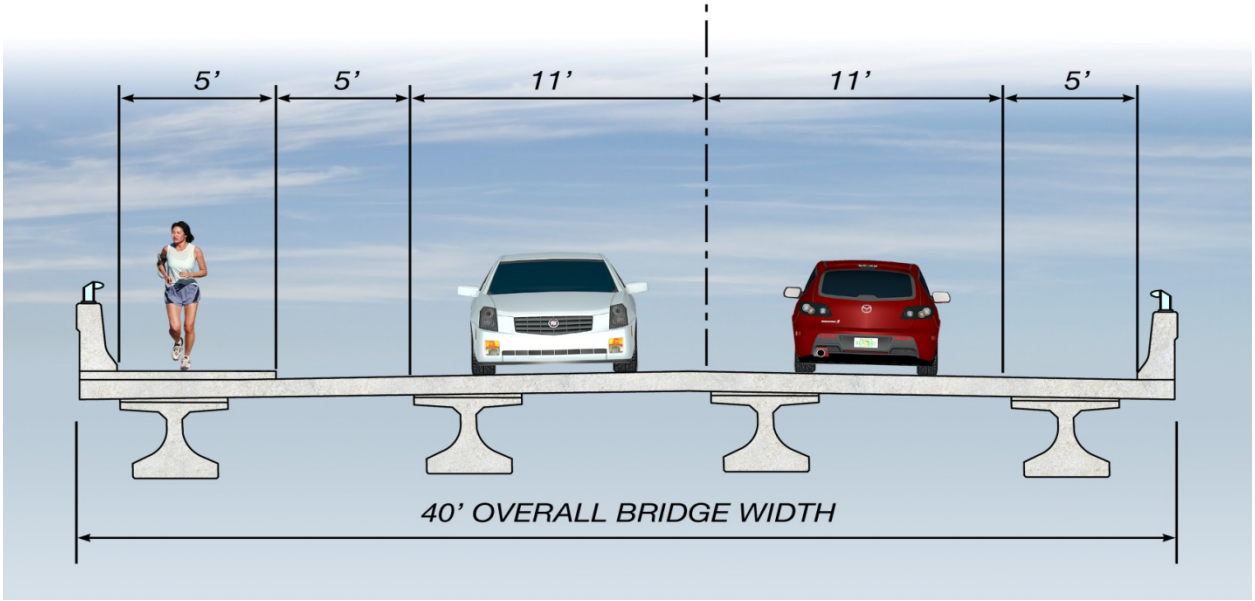

Figure 6 – Proposed Fixed Bridge Typical Section

The proposed roadway section west of the bridge consists of two, ten foot travel lanes, a four foot wide shoulder and six foot sidewalk on the north side of the bridge, and a five foot shoulder on the south side of the bridge. Because of limited right-of-way, a sidewalk is not proposed on the south side of the bridge. The total width of the proposed section is 37 feet which can be constructed in the approximately 40 feet of existing right-of-way.

East of the bridge, the proposed roadway section provides two, 11 foot travel lanes, a four foot wide shoulder and six foot sidewalk on the north side of the bridge, and a five foot shoulder on the south side of the bridge. A sidewalk is not proposed on the south side of the bridge to minimize impacts to adjacent property owners. The total width of the proposed section is 39 feet. **Figures 7 and 8** illustrate the proposed roadway sections for the fixed bridge alternatives.

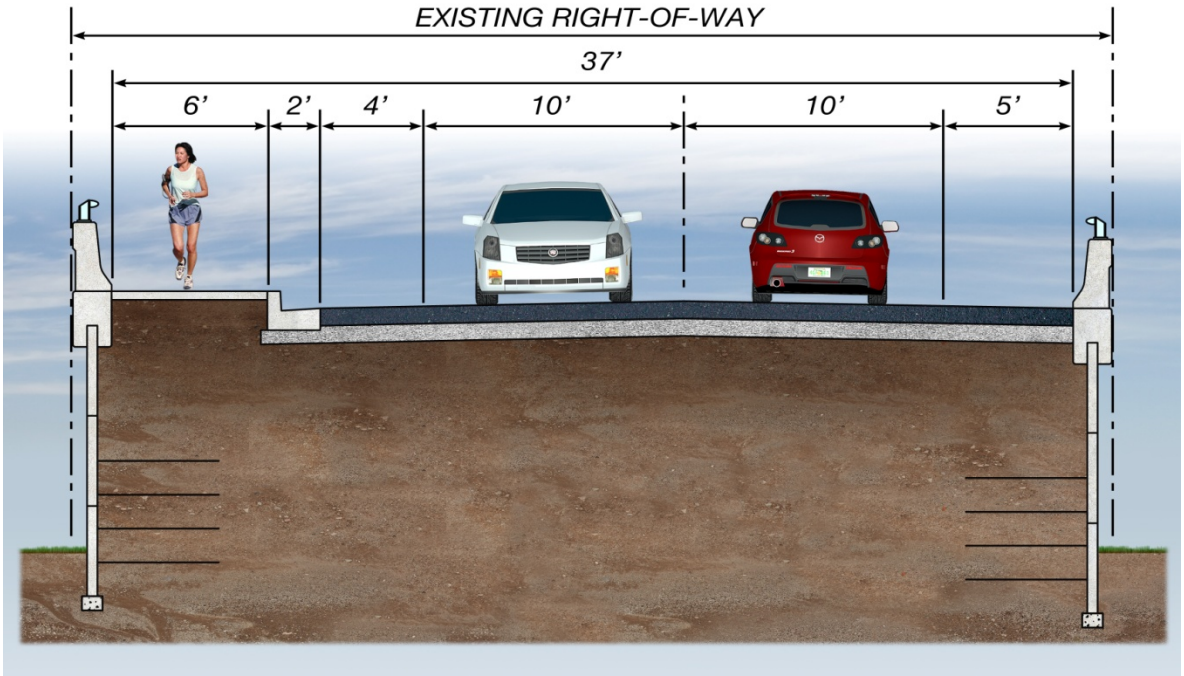

Figure 7 – Proposed Roadway Section West of Proposed Fixed Bridge

Fixed Bridge Alternative – Option A

The roadway profile at the intersection of Chesapeake Drive and Riverside Drive will be only about one foot above existing grade. A proprietary retaining wall system, such as Mechanically Stabilized Earth (MSE), will be required from the Chesapeake Drive to station 134+42, where the bridge begins. The wall will begin just east of Chesapeake Drive on the north side of Riverside Drive and extend approximately 446 feet east. On the south side of the roadway, the wall will begin just west of Chesapeake Drive and extend approximately 420 feet east. The wall will begin just west of Chesapeake Drive and extend approximately 420 feet east. The height of the wall will increase to approximately 19 feet above existing ground, just west of the entrance driveway to the Bayshore Mobile Home Park (MHP). East of the proposed bridge, an MSE wall will extend approximately 340 feet on the north side and about 400 feet on the south side. The wall

will end just west of Forest Avenue where the approach roadway will return to the existing grade.

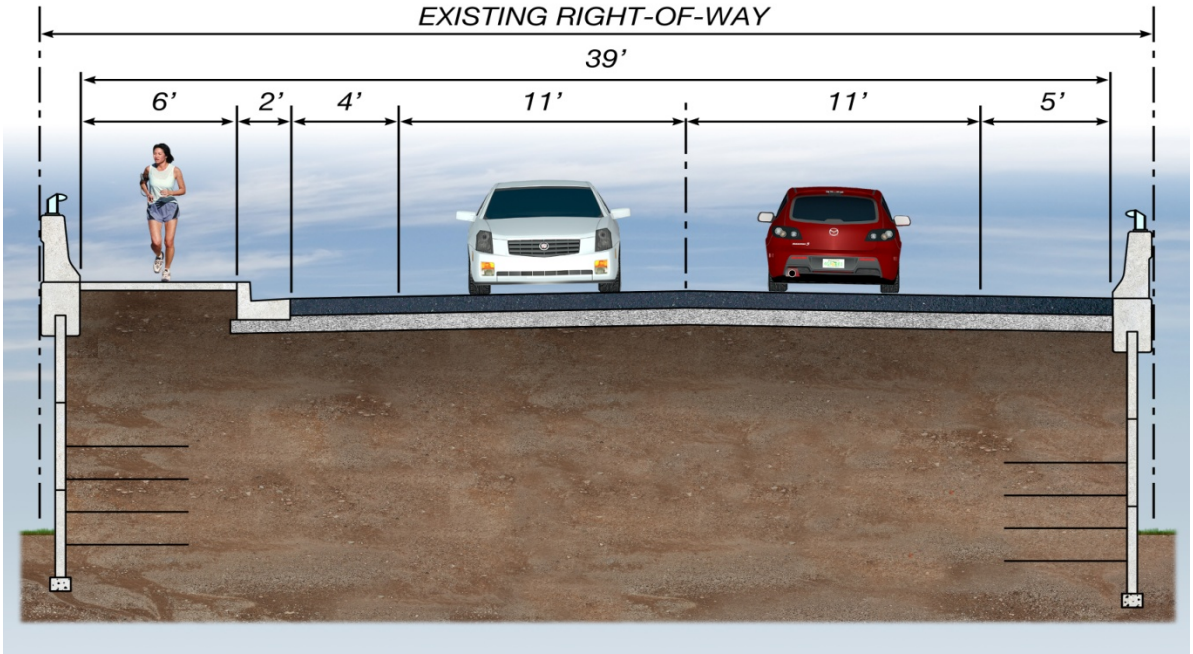

Figure 8 – Proposed Roadway Section East of Proposed Fixed Bridge

The proposed retaining wall will block access to Riverside Drive for five single family residences west of the bridge, on the north side of the roadway. A new access road for the Bayshore MHP will be constructed north of Riverside Drive. The access road will connect with Chesapeake Drive and extend east through the parcels immediately adjacent to the north side of the roadway. The access road will then turn south and extend under the proposed bridge to connect to the Bayshore Mobile Home Park driveway. The minimum vertical clearance at the Mobile Home driveway will be 14'6". The five single family residences impacted are expected to require relocation.

On the east side of the bridge, the proposed bridge will eliminate the access to Riverside Drive from Venetian Court and Pampas Avenue. A connector road will be constructed from Pampas Avenue through the vacant lot adjacent to the Tarpon Springs Yacht Club, extend under the proposed bridge, and tie into Venetian Court. A minimum vertical clearance of 14'6" is provided at Venetian Court.

Direct access to Riverside Drive for the single family residence on the corner of Pampas Avenue and Riverside Drive will be eliminated by the proposed retaining wall. Access

from this location and from Venetian Court to Riverside Drive can be accomplished by traveling north on Pampas Avenue, turning east on High Street and south on Forest Avenue. The single family residence driveway located at approximately Station 145+20 will be modified (raised) to provide direct access to Riverside Drive. Vehicular access will be blocked to docks located south of Riverside Drive in this area.

Fixed Bridge Alternative – Option B

The proposed fixed bridge (Option B) will provide approximately 28 feet of vertical clearance at the fenders over Whitcomb Bayou and 25 feet of horizontal clearance between fenders for vessels traveling on the waterway. The proposed maximum grade is five percent. The total length of the proposed fixed span bridge is 720 feet.

The roadway is raised about two feet above existing grade at Chesapeake Drive. A retaining wall will extend approximately 429 feet east, and vary in height from 1- 22 feet. The height of the wall will be approximately 22 feet at the entrance driveway to the Bayshore Mobile Home Park. East of the proposed bridge, the retaining wall will extend approximately 320 feet to west of Forest Avenue where the approach roadway will return to the existing grade. The wall will be approximately 14 feet high at Pampas Avenue, eliminating the intersection with Riverside Drive.

The proposed retaining wall will block access to Riverside Drive for five single family residences west of the bridge, immediately north of the roadway. An access road will be constructed through the impacted parcels to provide access to Chesapeake Drive for the two waterfront parcels in this area. It is anticipated that three relocations on the north side of the road will be required. The driveway entrance to Bayshore Mobile Home Park will be eliminated. Construction of a new entrance and exit at Chesapeake Drive will impact approximately seven mobile home lots on the west end of the development.

As in Alternative A above, the proposed fixed bridge will eliminate the access to Riverside Drive from Venetian Court and Pampas Avenue. A connector road will be constructed from Pampas Avenue through the vacant lot adjacent to the Tarpon Springs Yacht Club, and extend under the proposed bridge with a minimum vertical clearance of 14’6”. Although the proposed connector for this option minimizes impacts to the Tarpon Springs Yacht Club property, the connector will extend through the vacant residential lot just east of the Venetian Court intersection south of Riverside Drive and connect to Venetian Court.

Direct access to Riverside Drive for the single family residence on the corner of Pampas Avenue and Riverside Drive will be eliminated by the proposed retaining wall. Access from this location and Venetian Court to Riverside Drive can be accomplished by traveling

north on Pampas Avenue, turning east on High Street and south on Forest Avenue. The single family residence driveway at approximately station 145+20 will be modified (raised) to provide direct access to Riverside Drive. Vehicular access will be blocked to docks located south of Riverside Drive in this area.

3.0 METHODOLOGY

The project study area was evaluated for potential occurrences of federal and state-listed plant and animal species in accordance with Section 7 of the Endangered Species Act of 1973, as amended, and Chapters 5B-40 and 68A-27 of the Florida Administrative Code (FAC). The project study area includes the project limits extending along Riverside Drive from Chesapeake Drive across Whitcomb Bayou to Forest Avenue with a 500-foot buffer (1000-foot corridor).

The evaluation included coordination with the U.S. Fish and Wildlife Service (FWS), the National Marine Fisheries Service (NMFS), and the Florida Fish and Wildlife Conservation Commission (FWC) through the FDOT's Efficient Transportation Decision Making (ETDM) process. Verbal correspondence with FWC via a phone conversation was also conducted during this evaluation regarding potential impacts to the Florida manatee. Additionally, information was obtained from the Florida Natural Areas Inventory (FNAI). A copy of correspondence with these entities is located in **Appendix A**. The evaluation also included literature searches and field reviews to identify the potential occurrence of listed species and any designated critical habitat located within the project study area.

The reviews and database searches included the following:

- True color aerials of the project study area, (1 inch = 400 feet) 2010;
- Southwest Florida Water Management District (SWFWMD), 2009 Land Use;
- Florida Natural Areas Inventory (FNAI) maps and database;
- U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS), *Soil Survey of Pinellas County, Florida*, 2006;
- U.S. Geological Survey (USGS), Topographic Quadrangle Maps, 7.5 minute series, Tarpon Springs, FL 1973 (Photo-revised 1987);

- U.S. Fish and Wildlife Service (FWS), National Wetlands Inventory, Wetlands Online Mapper: (http://www.fws.gov/wetlands/Data/Mapper.html) (Updated October 2011);

- Florida Fish and Wildlife Conservation Commission (FWC), Eagle Nest Locator website: (https://public.myfwc.com/FWRI/EagleNests/nestlocator.aspx);

- U.S. Army Corps of Engineers (USACE), Jacksonville Regulatory Division, Program Sourcebook, Endangered Species – Manatees: (http://www.saj.usace.army.mil/Divisions/Regulatory/AdditionalManateeInfo.htm);

- U.S. Fish and Wildlife Service (FWS), North Florida Ecological Services Office, Wood Stork Database: (http://www.fws.gov/northflorida/WoodStorks/wood-storks.htm) (Updated November 2010);

- Florida Department of Environmental Protection (FDEP), Map Direct Gateway: (http://ca.dep.state.fl.us/mapdirect/gateway.jsp);

- Florida Department of Transportation (FDOT), *Florida Land Use, Cover and Forms Classification System*, 3rd edition, 1999; and

- U.S. Fish and Wildlife Service (FWS), *Classification of Wetlands and Deepwater Habitats of the United States*, (Cowardin, *et. al*. 1979).

Prior to field reviews, the approximate boundaries of upland and wetland communities within the project study area were mapped on true color aerial photographs. On February 7, 2012, environmental scientists familiar with Florida natural communities conducted a field review of the project study area in order to verify upland and wetland community boundaries. On June 4, 2012, environmental scientists familiar with seagrass beds conducted a field review within Whitcomb Bayou within the project study area in order to verify the presence/non-presence of seagrass beds. During the field review, each community type identified within the project area was visually inspected to document community boundaries, dominant vegetation, and the potential occurrence of listed species.

All vegetative cover/land use types within the project study area were classified using the *Florida Land Use, Cover and Forms Classification System* (FLUCFCS) (FDOT 1999). In addition to FLUCFCS, wetland communities were also classified using the FWS *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, *et.*

al. 1979). Wetland boundaries within the project area were approximated using Chapter 62-340, FAC, – Delineation of the Landward Extent of Wetlands and Surface Waters and the criteria found within the U.S. Army Corps of Engineers (USACE) 2008 *Interim Regional Supplement to the USACE Wetlands Delineation Manual: Atlantic and Gulf Coastal Plain Region* (ERDC/EL TR-08-30).

4.0 RESULTS

The project study area currently consists of a mixture of transportation, residential, recreational, governmental, and open water habitat/land use types. The majority of existing habitat/land use within the project study area is Bays and Estuaries (FLUCFCS Code 540). The detailed boundaries and FLUCFCS codes of vegetative cover/land use types within the project study area are shown the Land Use/Vegetative Cover Type Map located in **Appendix B**. The type and acreage of each vegetative cover/land use within the project study area is summarized in **Table 1**.

4.1 Existing Land Uses

Six upland and three wetland/surface water land use classifications are located within the project study area. A brief description of each upland and wetland land use or habitat type found within the project study area is provided below.

4.1.1 Uplands

Residential, Medium Density
FLUCFCS: 120
Residential, medium density areas consist of residential housing with two to five dwelling units per acre. Within the project study area, this category includes residential houses with some empty lots throughout the project study area located on each side of the bayou. Residential, medium density areas comprise 20.37 acres of the total project study area.

Residential, High Density
FLUCFCS: 130
Residential, high density areas consist of residential housing with six units per acre or more and/or multiple dwelling housing units such as apartments or condominiums. Within the project study area, this category includes residential houses and an RV/mobile home park (Bayshore Park) located south of the bridge and west of the bayou. Residential, high density areas comprise 3.86 acres of the total project study area.

Table 1: Land Use Acres within the Project Study Area

Habitat Type	FLUCFCS Code	FWS Classification	Acres within Project Study Area
Uplands			
Residential, Medium Density	120	NA	20.37
Residential, High Density	130	NA	3.86
Commercial and services	140	NA	0.14
Industrial	150	NA	0.87
Marinas and Fish Camps	184	NA	1.89
Roads and Highways	814	NA	1.34
Wetlands/Surface Waters			
Bays and Estuaries	540	E2UB3	10.38
Mangrove Swamps	612	E2SS3	0.12
Oyster Bars	654	E2RF2	0.17
Subtotal for Uplands			**28.48**
Subtotal for Wetlands/Surface Waters			**10.67**
Total			**39.15**

Commercial and Services

FLUCFCS: 140

Commercial areas are predominantly associated with the distribution of products and services and include all secondary structures associated with an enterprise in addition to the main building including sheds, warehouses, offices, driveways, and parking lots. Within the project area, this land use type consists of a portion of the Tarpon Bayou Center, an assisted living facility, located on the west side of Chesapeake Drive approximately 0.05 mile north of Riverside Drive. Commercial and services comprise 0.14 acre of the total project study area.

Industrial

FLUCFCS: 150

Industrial areas include those land uses where manufacturing, assembly or processing of materials and products are accomplished. Within the project area, this land use type consists of a portion of the Stamas Yacht Boat Repair and Restoration which is located on the west side of Pampas Avenue approximately 0.10 mile north of North Spring Boulevard. Industrial areas comprise 0.87 acre of the total project area.

Marinas and Fish Camps
FLUCFCS: 184
Marinas and fish camps include associated buildings, parking lots, and landscape. Within the project area, this category includes the Tarpon Springs Yacht Club located on the east end of the project area north of North Spring Boulevard. The marina comprises 1.89 acres of the total project area.

Roads and Highways
FLUCFCS: 814
Roads and highways refer to facilities that are used for the movement of people and goods and encompasses all areas used for right-of-way including pavement, medians, and buffers. Within the project study area, this land use consists of Riverside Drive/North Spring Boulevard between Chesapeake Drive and Forest Avenue. Roads and highways comprise 1.34 acres of the total project study area.

4.1.2 Wetland/Surface Waters

Bays and Estuaries
FLUCFCS: 540
FWS: E2UB3 (Estuarine, Intertidal, Unconsolidated Bottom, Mud)
Bays and estuaries are tidally influenced inlets or large bodies of water that extend from the ocean into the land mass of Florida. Within the project study area, this category includes 10.67 acres of Whitcomb Bayou.

During the field review, a number of wildlife species were observed utilizing Whitcomb Bayou within and adjacent to the project study area such as mullet (*Mugil* spp.) and sheepshead (*Archosargus probatocephalus*). Two osprey (*Pandion haliaetus*) nests were observed on the same utility pole on the east end of Beckett Bridge on the south side of North Spring Boulevard. At the time of the field review, the nest was occupied by a foraging osprey. Gulls (*Larus* spp.), pigeons (*Columba livia*), royal terns (*Sterna maxima*), and a great egret (*Ardea alba*) were observed outside of the project study area during the review.

Mangrove Swamps
FLUCFCS: 612
FWS: E2SS3 (Estuarine, Intertidal, Scrub-Shrub, Broad-Leaved Evergreen)
Mangrove swamps are typically coastal hardwood swamps where red mangrove (*Rhizophora mangle*) and/or black mangroves (*Avicennia germinans*) are pure or predominant. White mangroves (*Laguncularia racemosa*) are also typically found within these swamps. Within the project study area, mangrove stands are dominated by black mangrove, white mangrove, red mangrove, saltweed (*Philoxerus vermicularis*), and

marsh elder (*Iva frutescens*). Mangroves were observed on the west end of Beckett Bridge, north and south of the existing roadway. In addition, mangroves and associated species were observed along Whitcomb Bayou on the south side of North Spring Boulevard. The mangroves in this area are trimmed and maintained. Mangrove swamps comprise 0.12 acre of the total project study area. No evidence of wildlife was observed within the mangrove swamps during the field review.

Oyster Bars
FLUCFCS: 654
FWS: E2RF2 (Estuarine, Intertidal, Reef, Mollusk)
Barnacles (*Balanus* sp.) and oysters (*Crassostrea virginica*) were observed attached to the bridge pilings, seawall face, and pieces of debris on the bottom of the bayou. An accumulation of oysters was observed under the east and west ends of Beckett Bridge. Oyster bars comprise 0.17 acre of the total project study area. No evidence of wildlife was observed within the oyster bars during the field review.

4.2 Listed Species

According to the various sources listed in Section 2.0 of this technical memorandum, ten federal and/or state listed plant species and thirty-four federal and/or state listed animal species occur or have been historically documented in Pinellas County. Listed species with a potential to occur within the project study area were determined based on the habitat requirements of each species, presence of their preferred habitat within the project study area, their geographic range, and documented occurrences of the species within the vicinity of the project study area. Based on this analysis, one state listed plant species and twenty-five federally and/or state listed animal species have a potential to occur within the project study area. **Appendix C** provides a summary table of all the federal and state listed plant and animal species documented in Pinellas County, their federal and/or state status, and their habitat preferences. Each species with a potential to occur within the project study area is described below.

4.2.1 Federally Listed Species

Fauna
Mammals

The **West Indian manatee** (*Trichechus manatus*) is listed as endangered by the FWS. The manatee is an herbivorous marine mammal found statewide in coastal or estuarine waters, rivers, and (occasionally) lakes, but is most common in waters of peninsular Florida. Sheltered coves are important for feeding, resting, and rearing of young. Normally, manatees feed on a variety of submergent, emergent, and floating

vegetation, including sea grass. No manatees were observed during the field review of the project study area. In addition, no sea grass beds or other submergent, emergent, or floating vegetation was observed within Whitcomb Bayou within the limits of the project study area. However, the project study area is located in a FWS Consultation Area for the West Indian manatee. Based on the U.S. Army Corps of Engineers (USACE) 2011 Manatee Key, Whitcomb Bayou is designated as an Important Manatee Area (IMA) where increased densities of manatees occur due to the proximity of warm water discharges, freshwater discharges, natural springs and other habitat features that are attractive to manatees. Within this IMA, dredging is not allowed to occur between November 15 and March 31. A map depicting the IMAs within Pinellas County, including Whitcomb Bayou, is in **Appendix D**.

Pinellas County will commit to use the approved Standard Manatee Construction Conditions for In-Water Work (**Appendix D**) for for all "project related" construction activities that represent in-water work that would occur within Whitcomb Bayou. Blasting is not proposed to remove the existing bridge; however, if construction methods are changed during the design and permitting phase of this project to include blasting, a blasting plan will be submitted to FWS and FWC for review and approval prior to construction. Pinellas County will coordinate with the FWS and the FWC through FHWA and FDOT during the design and permitting phase of this project to determine appropriate, site specific manatee protection measures to be implemented during construction. With these commitments, it has been determined that the project “may affect, but is not likely to adversely affect” the West Indian manatee.

Birds

The **piping plover** (*Charadrius melodus*) is listed as threatened by the FWS. The piping plover utilizes sandy beaches for foraging and nesting, but also feeds on tidal mud and sand flats. According to FNAI, no individuals have been documented within one mile of the project study area. Even though foraging habitat is available within the project study area, no piping plovers were observed during the field review. However, the project study area is located in a FWS Consultation Area for the piping plover. Within the project study area, impacts to wetland habitat utilized by the piping plover may occur as a result of construction activities along the shorelines of Whitcomb Bayou. Wetland impacts resulting from construction of this project will be minimal (a description of existing wetland habitats within the project study area and potential wetland impacts resulting from construction of the project is provided in the Wetlands Evaluation/Essential Fish Habitat Technical Memorandum prepared for this project). Potential impacts to piping plover habitat will be coordinated with the FWS, FWC, and the SWFWMD during the design and permitting phase of this project. Based on this

information, this project "may affect, but is not likely to adversely affect" the piping plover.

The **wood stork** (*Mycteria americana*) is listed as endangered by the FWS. This wading bird species is opportunistic and utilizes various habitats, including forested wetlands, freshwater marshes, swamps, lagoons, ponds, tidal creeks, flooded pastures, and ditches. However, a specialized feeding technique commonly referred to as "groping" limits the wood stork to feeding in shallow water. Based on information provided by the FWS and FNAI, the project study area is located within the 15-mile core foraging area of eight active wood stork rookeries (see Wood Stork Rookery Location Map in **Appendix E**). Less than 0.5 acre of marginal suitable habitat is available within the project study area within the mangroves swamps. Within the project study area, impacts to wetland habitat utilized by the wood stork may occur as a result of construction activities along the shorelines of Whitcomb Bayou. Wetland impacts resulting from construction of this project will be minimal. Potential impacts will be coordinated with the FWS, FWC, and the SWFWMD during the design and permitting phase of this project. Based on this information, it has been determined that this project "is not likely to adversely affect" the wood stork.

Reptiles

The **American alligator** (*Alligator mississippiensis*) is listed as threatened by the FWS and a species of special concern by the FWC. The FWS classifies this species as threatened because of its similar appearance to the threatened American crocodile (*Crocodylus acutus*). The American alligator is an opportunistic feeder and can be found in both freshwater and brackish environments, but their preferred habitat is freshwater lakes, slow moving rivers, and associated wetlands. According to FNAI, no alligators have been documented within one mile of the project study area and none were observed during the field review of the project study area. Within the project study area, minimal impacts to wetland habitat potentially utilized by the American alligator may result from construction activities in the Whitcomb Bayou. Potential impacts will be coordinated with the FWS, FWC, and the SWFWMD during the design and permitting phases of this project. Based on this information, this project "may affect, but is not likely to adversely affect" the American alligator.

The **hawksbill turtle** (*Eretmochelys imbricata*) is listed as endangered by the FWS. This sea turtle inhabits marine coastal and oceanic waters, commonly associated with coral reefs, keys, and mangroves. Nesting occurs on coastal sand beaches, often in vegetation. According to FNAI, no hawksbill turtles have been documented within one mile of the project study area and none were observed during the field reviews. Pinellas County will commit to use the approved Sea Turtle and Smalltooth Sawfish Construction

Conditions (**Appendix F**) for all construction activities within the Whitcomb Bayou. If blasting is proposed to remove the existing bridge, a blasting plan will be submitted to FWS and FWC for review and approval prior to construction. Pinellas County will coordinate with the FWS and the FWC during the design and permitting phase of this project to determine appropriate, site specific sea turtle protection measures to be implemented during construction. With these commitments, it has been determined that the project "may affect, but is not likely to adversely affect" the hawksbill turtle.

The **loggerhead** (*Caretta caretta*) is listed as threatened by the FWS. This sea turtle inhabits marine coastal and oceanic waters and nests on coastal sand beaches, often near the dune line, sufficiently high enough to avoid tidal inundation. Hatchlings use offshore floating sargassum mats and juveniles frequent coastal bays, inlets, and lagoons. According to FNAI, no loggerheads have been documented within one mile of the project study area and none were observed during the field review. Pinellas County will commit to use the approved Sea Turtle and Smalltooth Sawfish Construction Conditions (Appendix F) for all construction activities within the Whitcomb Bayou. If blasting is proposed to remove the existing bridge, a blasting plan will be submitted to FWS and FWC for review and approval prior to construction. Pinellas County will coordinate with the FWS and the FWC during the design and permitting phase of this project to determine appropriate, site specific sea turtle protection measures to be implemented during construction. With these commitments, it has been determined that the project "may affect, but is not likely to adversely affect" the loggerhead.

The **green turtle** (*Chelonia mydas*) is listed as endangered by the FWS. This sea turtle inhabits estuarine and marine coastal and oceanic waters. Nesting occurs on coastal sand beaches, often near the dune line. Large juveniles and adults feed on seagrasses and algae. Hatchlings use offshore floating sargassum mats and juveniles frequent coastal bays, inlets, lagoons, and offshore worm reefs. According to FNAI, no green turtles have been documented within one mile of the project study area and none were observed during the field review. Pinellas County will commit to use the approved Sea Turtle and Smalltooth Sawfish Construction Conditions (Appendix F) for all construction activities within the Whitcomb Bayou. If blasting is proposed to remove the existing bridge, a blasting plan will be submitted to FWS and FWC for review and approval prior to construction. Pinellas County will coordinate with the FWS and the FWC during the design and permitting phase of this project to determine appropriate, site specific sea turtle protection measures to be implemented during construction. With these commitments, it has been determined that the project "may affect, but is not likely to adversely affect" the green turtle.

The **leatherback** (*Dermochelys coriacea*) is listed as endangered by the FWS. This sea turtle inhabits oceanic waters and nests on coastal sand beaches, mostly on Florida's

Atlantic coast. Leatherbacks are rarely seen in coastal waters except as hatchlings dispersing from nesting beaches and as adult females approaching the beach to the nest. According to FNAI, no leatherbacks have been documented within one mile of the project study area and none were observed during the field review. Pinellas County will commit to use the approved Sea Turtle and Smalltooth Sawfish Construction Conditions (Appendix F) for all construction activities within the Whitcomb Bayou. If blasting is proposed to remove the existing bridge, a blasting plan will be submitted to FWS and FWC for review and approval prior to construction. Pinellas County will coordinate with the FWS and the FWC during the design and permitting phase of this project to determine appropriate, site specific sea turtle protection measures to be implemented during construction. With these commitments, it has been determined that the project "may affect, but is not likely to adversely affect" the leatherback sea turtle.

The **Kemp's ridley** (*Lepidochelys kempii*) is listed as endangered by FWS. This sea turtle inhabits marine coastal waters, usually with sand or mud bottoms and nests (rarely in Florida) on sandy beaches. Juveniles frequent bays, inlets, and lagoons. According to FNAI, no Kemp's ridley sea turtles have been documented within one mile of the project study area and none were observed during the field review. Pinellas County will commit to use the approved Sea Turtle and Smalltooth Sawfish Construction Conditions (Appendix F) for all construction activities within the Whitcomb Bayou. If blasting is proposed to remove the existing bridge, a blasting plan will be submitted to FWS and FWC for review and approval prior to construction. Pinellas County will coordinate with the FWS and the FWC during the design and permitting phase of this project to determine appropriate, site specific sea turtle protection measures to be implemented during construction. With these commitments, it has been determined that the project "may affect, but is not likely to adversely affect" the Kemp's ridley sea turtle.

The **eastern indigo snake** (*Drymarchon corais couperi*) is listed as threatened by the FWS. The eastern indigo snake can be found in a variety of habitats including swamps, wet prairies, xeric pinelands, and scrub areas. The eastern indigo snake commonly utilizes gopher tortoise burrows for shelter to escape hot or cold ambient temperatures within its range. According to FNAI, no eastern indigo snakes have been documented within one mile of the project study area and none were observed during the field review. Herbaceous habitats potentially used by this species are available within the project study area within the vegetated areas of the right-of-way and may be impacted by construction of the project. The FWS's Standard Protection Measures for the Eastern Indigo Snake (**Appendix G**) will be used during construction of this project. Based on this information and with the use of the measures, it has been determined that the project "is not likely to adversely affect" the eastern indigo snake.

Fish

The **Gulf sturgeon** (*Acipenser oxyrinchus desotoi*) is listed as threatened by the FWS. The Gulf sturgeon is typically found in the Gulf of Mexico and associated near-shore marine, estuarine, and riverine habitat. According to FNAI, no individuals have been documented within one mile of the project study area and no individuals were observed during the field review of the project study area. Within the project study area, minimal impacts to wetland habitat potentially utilized by the Gulf sturgeon may result from construction activities in the Whitcomb Bayou. Potential impacts will be coordinated with the FWS, FWC, and the SWFWMD during the design and permitting phases of this project. Based on this information, this project "may affect, but is not likely to adversely affect" the Gulf sturgeon.

Flora

According to FNAI and FWS, one federally listed plant species (Florida golden aster) occurs or has been historically documented in Pinellas County; however, no habitat is available in the project study area for this species. Therefore, it was determined that the proposed project will have "no effect" on any federally listed plant species.

4.2.2 State Listed Species

Fauna

Birds

Wading birds including the **limpkin** (*Aramus guarauna*), **little blue heron** (*Egretta caerula*), **snowy egret** (*Egretta thula*), **tricolored heron** (*Egretta tricolor*), and **white ibis** (*Eudcimus albus*) have been documented within Pinellas County, but none have been documented within one mile of the project study area. All of these species are listed as a species of special concern by the FWC. While each species is distinct, wading birds are discussed collectively since they occupy similar habitats and generally have similar feeding patterns (i.e., waders). The populations of these species have been impacted by the destruction of wetlands for development and by the drainage of wetlands for flood control and agriculture. None of these listed wading birds were observed within the project study area during the field review and no wading bird rookeries are documented within one mile of the project study area.

The primary concern for the impacts to these wading birds is the loss of habitat (wetlands) for foraging. Minimal impacts to wetlands may occur as a result of construction activities along the shorelines of Whitcomb Bayou. Potential impacts will be coordinated with the FWC and the SWFWMD during the design and permitting phases of this project. Based on this information, this project will "may affect, but is not

likely to adversely affect" limpkin, little blue heron, snowy egret, tricolored heron, or white ibis.

The **snowy plover** (*Charadrius alexandrinus*) is listed as threatened by the FWC. The snowy plover utilizes dry, sandy beaches for foraging and nesting, but also feeds on tidal mud and sand flats along inlets and creeks. Even though foraging habitat is available within the project study area, no snowy plovers were observed during the field review and none have been documented within one mile of the project study area. Within the project study area, impacts to wetland habitat utilized by the snowy plover may occur as a result of construction activities along the shorelines of Whitcomb Bayou. Potential impacts to snowy plover habitat will be coordinated with the FWC and the SWFWMD during the design and permitting phases of this project. Based on this information, this project "may affect, but is not likely to adversely affect" the snowy plover.

The **reddish egret** (*Egretta rufescens*) is listed as a species of special concern by the FWC. This wading bird species is almost exclusively found along the coast foraging in shallow saltwater habitats and marine tidal flats with sparse vegetation. FNAI reports indicate that the reddish egret has been documented in Pinellas County and habitat is present within the project study area. However, no individuals were observed during the field review and none have been documented within one mile of the project study area. As with other wading bird species, the primary concern for impacts is the loss of habitat (wetlands) for foraging. Wetland impacts resulting from construction of this project will be minimal. Potential impacts will be coordinated with the FWC and the SWFWMD during the design and permitting phases of this project. Based on this information, this project "may affect, but is not likely to adversely affect" the reddish egret.

The **southeastern American kestrel** (*Falco sparverius paulus*) is listed as threatened by the FWC. This species typically nests in tree cavities that were excavated by woodpeckers. Kestrels prefer open habitats for foraging, such as pine savannas, pine flatwoods, farmlands, suburban golf courses and residential areas which provide enough cover to support small terrestrial prey animals. Some suitable foraging habitat is available within the project study area, but nesting habitat is minimal due to the lack of large, dead nesting trees and snags with cavities. Based on information from FNAI, the southeastern American kestrel has been documented within Pinellas County, but no individuals have been documented within one mile of the project study area. No kestrels were observed during the field review. Therefore, it has been determined that the project will have "no effect" on the southeastern American kestrel.

The **Florida sandhill crane** (*Grus canadensis pratensis*) is listed as threatened by the FWC. The sandhill crane is associated with shallow fresh water areas, pasture and open

woods habitats. Habitats such as wet and dry prairies, marshes, and marshy lake margins are optimum for the sandhill crane. According to FNAI, no sandhill cranes have been documented within one mile of the project study area and none were observed during the field review. Within the project study area, minimal impacts to foraging habitat utilized by the Florida sandhill crane may occur as a result of construction activities along the shorelines of Whitcomb Bayou. Potential impacts will be coordinated with the FWC and the SWFWMD during the design and permitting phases of this project. Therefore, it has been determined that the project will have "no effect" on the Florida sandhill crane.

The **American oystercatcher** (*Haematopus palliates*) is listed as a species of special concern by the FWC. This shorebird requires large areas of beach, sandbar, mud flat, and shellfish beds for foraging. Sparsely vegetated, sandy areas are generally used for nesting, but they will also use beach wrack and marsh grass. According to FNAI reports, the project study area is within the geographic range of the American oystercatcher and suitable habitat is present. However, no individuals have been documented by FNAI within one mile of the project study area and no individuals were observed during the field review. Within the project study area, impacts to wetland habitat utilized by the American oystercatcher may occur as a result of construction activities along the shorelines of Whitcomb Bayou. Wetland impacts resulting from construction of this project will be minimal. Potential impacts will be coordinated with the FWC and the SWFWMD during the design and permitting phases of this project. Based on this information, this project "may affect, but is not likely to adversely affect" the American oystercatcher.

The **brown pelican** (*Pelecanus occidentalis*) is listed as a species of special concern by the FWC. The brown pelican's preferred foraging habitat is primarily coastal estuarine waters and can be frequently found resting on near-shore sandbars. This species tends to nest in trees on small coastal islands, but some ground nesting has been documented. Based on information from FNAI, the brown pelican has been documented within one mile of the project study area; however, none were observed during the field review of the project study area. Within the project study area, impacts to foraging habitat utilized by the brown pelican may occur as a result of construction activities in the Whitcomb Bayou. Wetland impacts resulting from construction of this project will be minimal. Potential impacts will be coordinated with the FWC and the SWFWMD during the design and permitting phases of this project. Therefore, it has been determined that this project "may affect, but is not likely to adversely affect" the brown pelican.

The **roseate spoonbill** (*Platalea niger*) is listed as a species of special concern by the FWC. This species is typically found foraging along tidal mudflats and coastal beaches

and roosting in mangrove swamps. However, roseate spoonbills are occasionally found in forested freshwater swamps and herbaceous freshwater marshes. Based on information from FNAI, the roseate spoonbill has not been documented within one mile of the project study area and none were observed during the field review. Impacts to foraging and roosting habitat utilized by the roseate spoonbill may occur as a result of construction activities along the shorelines of Whitcomb Bayou. Wetland impacts resulting from construction of this project will be minimal. Potential impacts will be coordinated with the FWC and the SWFWMD during the design and permitting phases of this project. Therefore, it has been determined that this project "may affect, but is not likely to adversely affect" the roseate spoonbill.

The **black skimmer** (*Rynchops niger*) is listed as a species of special concern by the FWC. This species typically forages in coastal and inland waters, including beaches, bays, estuaries, tidal creeks, large lakes, phosphate pits, and flooded agricultural fields. Nests are primarily found on sandy beaches, small coastal islands, and dredge spoil islands. According to FNAI, the black skimmer has been documented in Pinellas County, but not within one mile of the project study area. No individuals were observed during the field review of the project study area. Within the project study area, impacts to wetland habitat utilized by the black skimmer may occur as a result of construction activities within Whitcomb Bayou. Wetland impacts resulting from construction of this project will be minimal. Potential impacts will be coordinated with the FWC and the SWFWMD during the design and permitting phases of this project. Based on this information, this project "may affect, but is not likely to adversely affect" the black skimmer.

The **least tern** (*Sterna antillarum*) is listed as threatened by the FWC. The preferred nesting habitat for this species is sparsely vegetated coastal beaches above the high tide line. The least tern forages in near-shore open water habitats by diving into the water after prey items. Based on information received from FNAI, the least tern has been documented within Pinellas County, but not within one mile of the project study area and no individuals were observed during the field review. Within the project study area, impacts to wetland habitat utilized by the least tern may occur as a result of construction activities within Whitcomb Bayou. However, the proposed project is not anticipated to permanently impact or cause a net loss of open water foraging habitat. Wetland impacts resulting from construction of this project will be minimal. Potential impacts will be coordinated with the FWC and the SWFWMD during the design and permitting phases of this project. Therefore, it has been determined that this project "may affect, but is not likely to adversely affect" the least tern.

Flora

A review of state-listed plants that have been documented within Pinellas County and their potential habitats was performed prior to the field visit.

One state-listed plant species with habitat available within the project study area is described below.

The **golden leather fern** (*Acrostichum aureum*) is listed as threatened by the Florida Department of Agriculture and Consumer Services (FDA). This species is a member of the fern (*Pteridaceae*) family and is typically found in tropical hardwood hammocks, as well as fresh and brackish water marshes. While limited suitable habitat for this species is available within the project study area, no leather ferns were observed during the field review. In addition, FNAI does not have any recorded documentations of this species within one mile of the project study area. Therefore, it has been determined that the project will have "no effect" on the golden leather fern.

4.2.3 Non-Listed Protected Species

Although the **bald eagle** (*Haliaeetus leucephalus*) is no longer state-or federally-listed, it is still federally-protected by the Bald and Golden Eagle Protection Act in accordance with 16 United States Code (U.S.C.) 668 and the Migratory Bird Treaty Act in accordance with 16 U.S.C. 703. It is also state-protected by Chapter 68A-16.002, F.A.C., and the FWC Bald Eagle Management Plan (2008). The bald eagle typically uses riparian habitat associated with coastal areas, lake shorelines, and river banks for foraging. The nests are generally located near bodies of water that provide a dependable food source. According to FWC's online bald eagle nest locator, there are no active bald eagle nests documented within one mile of the project study area. No bald eagles or nests were observed within the project study area during the field review. If a nest is later identified within the 660-foot construction buffer zone of the project area, Pinellas County will coordinate with FWC to secure all necessary approvals regarding this species prior to constructing the project. Therefore, it has been determined that this project will have "no effect" on the bald eagle.

During the field reviews, two **osprey** nests were observed on the east side of Beckett Bridge on the south side of North Spring Boulevard (see **Appendix H** for the Osprey Nest Location Map). Both nests were supported by the same utility pole and may be used by the same osprey. An osprey was present within one nest at the time of the February 2012 field inspection and empty oyster shells and fish remains were visible on the ground directly below the nest.

The osprey is state-listed as a species of special concern in Monroe County only. However, it is still federally-protected by the U.S. Migratory Bird Treaty Act (16 U.S.C. 703-712) and state protected by Chapter 68A of the Florida Administrative Code (F.A.C.). Authorization is required from the FWC to take any osprey nest while federal permits are only required for the taking of "active" nests. "Inactive" nests may normally be

taken and may be determined as inactive by the absence of any egg or dependent (i.e., flightless) young in the nest. While nesting typically occurs in December and may extend into late February, the nest may remain active throughout the summer months. Requests from the FWC for removal of active nests are only issued if the nest presents a safety hazard for the birds or humans. Active nest removal permits are issued with less frequency on a case-by-case basis.

Photos of the nest and osprey observed during the February 2012 field review are provided in **Appendix H**. During the design and permitting phases of this project, Pinellas County will coordinate with FWC to remove the osprey nest when it is inactive to avoid disturbing the osprey or any fledglings. Based on this commitment, it has been determined that this project "may affect, but is not likely to adversely affect" the osprey.

4.3 Critical Habitat and Consultation Areas

The project study area was also evaluated for the potential occurrence of Critical Habitat as defined by 17 CFR 35.1532, but no designated Critical Habitat was identified within the project study area.

The project study area is located within a designated FWS consultation area and IMA for the West Indian manatee. Pinellas County will commit to use the most recent edition of the FWS and FWC approved Standard Manatee Construction Conditions for In-Water Work during all construction activities within Whitcomb Bayou. Pinellas County will also commit to coordinate with the FWS and the FWC during the design and permitting phases of this project to determine if any additional, site-specific manatee protection measures need to be implemented during construction.

The project study area is located within a designated FWS consultation area for the piping plover. Potential impacts to piping plover habitat will be coordinated with the FWS, FWC, and the SWFWMD during the design and permitting phases of this project.

The project study area is located within a designated FWS consultation area for the Florida scrub jay (*Aphelocoma coeruluscens*). Based on a review of available sources referenced in Section 2.0 of this technical memorandum and field reviews, no scrub jay habitat is available within the project study area and no populations have been reported or observed. Therefore, no further scrub jay consultation with FWS should be required for this project.

5.0 COMMITMENTS

Based on the field and literature reviews outlined in this letter, federal and/or state-listed species have the potential to occur within the project study area. In order to avoid adverse impacts to these species, Pinellas County will commit to the following items:

1) Implement the FWS standard protection measures for the Eastern indigo snake during all construction phases of the project;

2) Implement the FWS and FWC approved standard manatee construction conditions during all in-water construction phases of the project;

3) Coordinate with FWS and FWC during the design and permitting phase of the project for additional site specific manatee protection measures to be implemented during construction;
4) Submit a blasting plan (if blasting occurs), which includes the use of qualified observers and an aerial survey, to FWS and FWC for review and approval prior to construction if blasting is proposed to remove the existing bridge;

5) Coordinate wetland impacts with the appropriate resource agencies and propose mitigation to offset any adverse impacts to listed species habitat if determined to be warranted; and

6) Coordinate the removal of the observed osprey nest(s) with FWC during the design and permitting phase of the project.

6.0 SUMMARY

In summary, a number of federal and/or state-listed plant and animal species were identified as having the potential to occur within the project study area. **Table 2** provides the project impact determination for each of the federal and state-listed species, respectively. Based on the findings and commitments presented in this technical memorandum, it has been determined that the proposed project is not likely to adversely affect any federal or state-listed species, nor will it affect any federal-designated critical habitat.

Table 2: Potential Listed Species Impacts

Project Impact Determination	Federally-Listed Species
May affect, but is not likely to adversely affect	West Indian manatee (*Manatus trichechus*) Piping plover (*Charadrius melodus*) American alligator (*Alligator mississippiensis*) Loggerhead (*Caretta caretta*) Green turtle (*Chelonia mydas*) Leatherback (*Dermochelys coriacea*) Hawksbill turtle (*Eretmochelys imbricata*) Kemp's ridley (*Lepidochelys kempii*)
May affect, but is not likely to adversely affect	Gulf sturgeon (*Acipenser oxyrinchus desotoi*)
Not likely to adversely affect	Wood stork (*Mycteria americana*) Eastern indigo snake (*Drymarchon corais couperi*)
Project Impact Determination	**State-Listed Species**
May affect, but is not likely to adversely affect	Limpkin (*Aramus guarauna*) Snowy plover (*Charadrius alexandrinus*) Little blue heron (*Egretta caerula*) Reddish egret (*Egretta rufescens*) Snowy egret (*Egretta thula*) Tricolored heron (*Egretta tricolor*) White ibis (*Eudcimus albus*) American oystercatcher (*Haematopus palliates*) Brown pelican (*Pelecanus occidentalis*) Roseate spoonbill (*Platalea ajaja*) Black skimmer (*Rynchops níger*) Least tern (*Sterna antillarum*)
No effect	**Plants** Golden leather fern (*Acrostichum aureum*) **Animals** Southeastern American kestrel (*Falco sparverius paulus*) Florida sandhill crane (*Grus canadensis pratenesis*)

APPENDIX A

Agency Correspondence

URS

RECORD OF CONVERSATION

DATE:	April 3, 2012	**JOB NUMBER:**	12010458.00001
RECORDED BY:	Tia Norman	**JOB NAME:**	Beckett Bridge PD&E Study
TALKED WITH:	Anne Richards	**OF:**	Florida Fish and Wildlife Conservation Commission
INCOMING CALL ___	**OUTGOING CALL _X_**	**MEETING ___**	**PHONE NUMBER:**
ROUTE TO:	**Project File**		

MAIN SUBJECT OF CONVERSATION: Avoidance and Minimization Measures for the Florida Manatee

On April 2, 2012, Tia Norman, URS Environmental Scientist, called Mary Duncan with the Florida Fish and Wildlife Conservation Commission (FWC) to discuss potential impacts to manatees that may occur within the Beckett Bridge PD&E Study project area and avoidance and minimization measures to be implemented as part of the project. Ms. Richards did not have data readily available regarding the manatee numbers within the project study area but did state that Whitcomb Bayou is an Important Manatee Area (IMA) where increased densities of manatees occur due to the proximity of warm water discharges, freshwater discharges, natural springs and other habitat features that are attractive to manatees. Ms. Norman spoke with Anne Richards (FWC). Ms. Richards stated that the following conditions should be mentioned:

- Implementation of the FWS and FWC-approved Standard Manatee Construction Conditions for In-Water Work;
- If blasting is proposed to remove the existing bridge, a blasting plan will be submitted to FWS and FWC for review and approval prior to construction;
- Check USACE website for seasonal restrictions on dredging and in-water work within Whitcomb Bayou; and
- Provide further coordination with FWS and FWC during the design and permitting phase of the project.

FLORIDA
Natural Areas
INVENTORY

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February 15, 2012

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

Dear Ms. Norman,

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

Project:	Beckett Bridge PD&E
Date Received:	2/13/2012
Location:	Township 27S, Range 15E, Sections 11 and 12 Pinellas County

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.

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.

Also attached are a map and table of wood stork occurrences in the vicinity of the project site. Two documented wood stork occurrences fall within a 15 mile radius of the project site.

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.

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.

Florida Resources
and Environmental
Analysis Center

Institute of Science
and Public Affairs

The Florida State University

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

The FNAI Biodiversity Matrix Geodatabase compiles Documented, Likely, and Potential species and natural communities for each square mile Matrix Unit statewide.
The Inventory always recommends that professionals familiar with Florida's flora and fauna conduct a site-specific survey to determine the current presence or absence of rare, threatened, or endangered species.

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

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

Information provided by this database may not be published without prior written notification to the Florida Natural Areas Inventory, and the Inventory must be credited as an information source in these publications. FNAI data may not be resold for profit.

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

Sincerely,

Michael O'Brien

Michael O'Brien
GIS / Data Services

Encl

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FLORIDA Natural Areas INVENTORY

Beckett Bridge PD&E

Site boundaries are approximate.

Pinellas 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

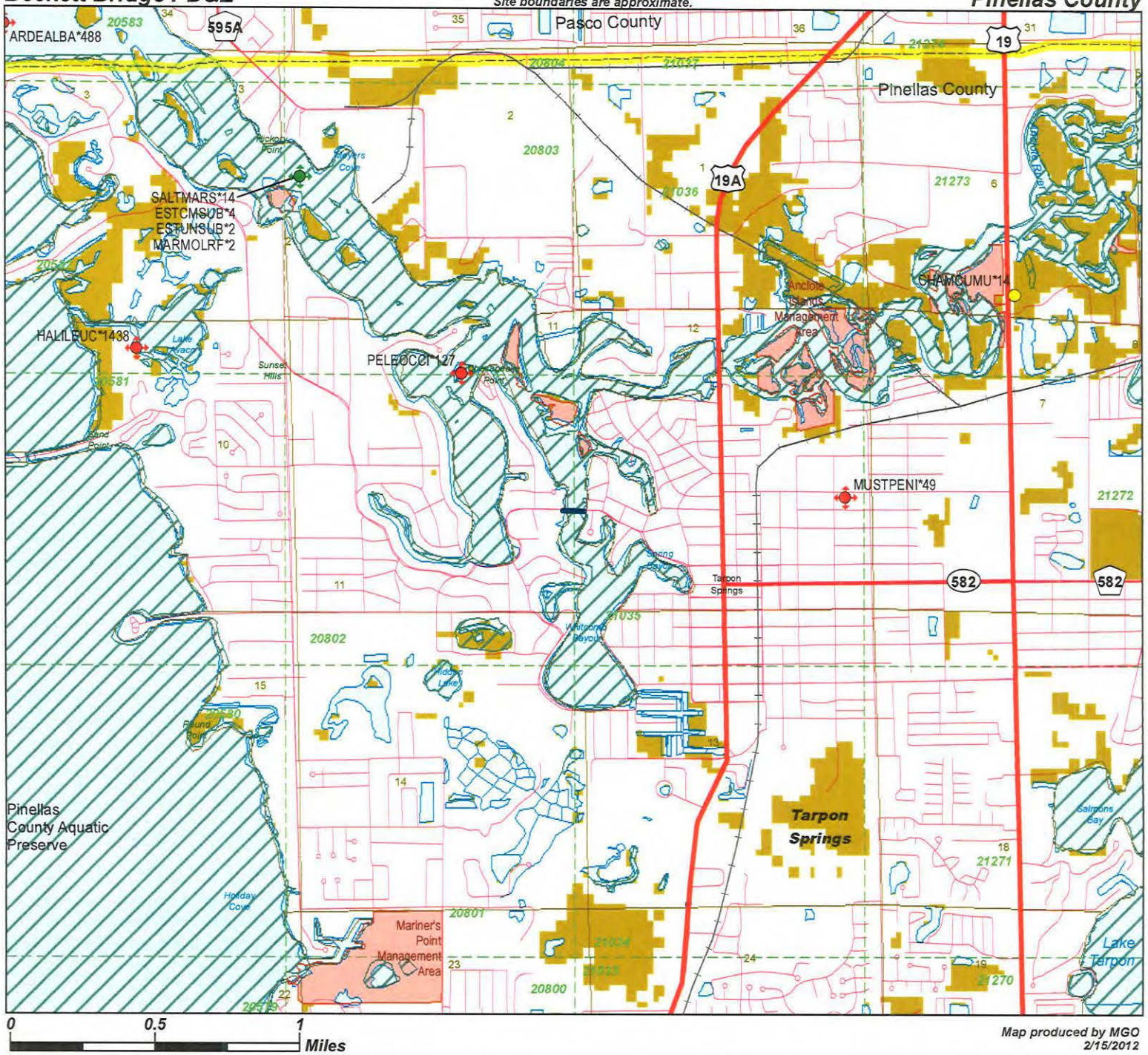
Conservation Lands

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

Land Acquisition Projects

- Florida Forever Board of Trustees Projects
- FNAI Rare Species Habitat
- FNAI Biodiversity Matrix Square Mile Units
- County Boundary
- Interstate
- Turnpike
- Major Highway
- Local Road
- Railroad [Inactive railroads shown in Gray]
- Water

NOTE
Map should not be interpreted without accompanying documents.



0 0.5 1 Miles

Map produced by MGO
2/15/2012

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FLORIDA Natural Areas INVENTORY

Florida Natural Areas Inventory

DOCUMENTED ELEMENT OCCURRENCES ON OR NEAR
Beckett Bridge

Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
ARDEALBA*488	*Ardea alba*	Great Egret	G5	S4	N	N	1988-06-14	Mangrove island, mangroves freeze-killed.	1988/06/14: B.A. Millsap, GFC; PA-R-02 Total = F (includes GREG, DCCO).
CHAMCUMU*14	*Chamaesyce cumulicola*	Sand-dune Spurge	G2	S2	N	LE	1964-06-05	SANDY AREA (DRY BUT SUBJECT TO FLOODING) BETWEEN CANALS OFF ANCLOTE RIVER AT S END OF BRIDGE CARRYING U.S. 19	PROSTRATE, FREQ IN SANDY AREA.
ESTCMSUB*4	Estuarine composite substrate		G3	S3	N	N	1972	ATTACHED TO SCATTERED SHELLS THROUGHOUT SANDY BOTTOM.	1972: LITTORAL, ALGAL ON UNCONSOLIDATED SANDY SEDIMENT, LOW ENERGY SHORELINE.: BOODLEOPSIS PUSILLAX, VAUCHERIA THRUETII; NEAR OR UNDER MANGROVES; SUBLITTORAL ZONE; ALGAL/SEAGRASS: CAULERPA ASHMEADII, C. MEXICANA, C. PROLIFERA, C. SERTULARIOIDES, PENIC
ESTUNSUB*2	Estuarine unconsolidated substrate		G5	S5	N	N	1972	1972: WAVE ACTION LOW/MODERATE, ALGAE STABILIZE SEDIMENT BY CEMENTING OR ADHESIVE ACTION (U72BAI01FLUS).	1972:LITTORAL ZONE; SANDY WITH GREAT VARIETY OF SAND-DWELLING ALGAE: PC; AGMENELLUM-THEMALE, SPIRULINA SUBSALSA, SCHIZOTHRIX CALCICOLA, S. MEXICANA, OSCILLATORIA SUBMENBRANACEA; CLADOPHORA; LITTORAL ZONE; MUDDY SAND; SED. SIZE SMALL AND OFTEN COATED WITH
HALILEUC*1438	*Haliaeetus leucocephalus*	Bald Eagle	G5	S3	N	N	2003	2005-07-12: Source does not provide a description.	Nest status: Active, 2003, 2002, 2001, 2000, 1999;(U03FWC01FLUS)
MARMOLRF*2	Marine mollusk reef		G3	S3	N	N	1972-PRE	WITH ENTOPHYSALIS DEUSTA, SCHIZOTHRIX CALCICOLA, MASTIGOCOLEUS TESTARUM (LATTER FOUND ONLY WITIN LIMESTONE).	LITTORAL ZONE; OYSTER BARS; NOT EXTENSIVE; NUMEROUS SPP. OF BLUEGREEN, BROWN, RED, AND GREEN ALGAE.
MUSTPENI*49	*Mustela frenata peninsulae*	Florida Long-tailed Weasel	G5T3	S3	N	N	1895-11-11	No general description given	1895-11-11: W. S. Dickinson - Skin, skull. Mammae visible. Collection of S.N. Rhoads, No. 2379. See O. Bangs, Proc. Biol. Soc. Washington 10:1-24, 1896 (pg. 13).
PELEOCCI*127	*Pelecanus occidentalis*	Brown Pelican	G4	S3	N	SSC	1988-06-14	Mangrove island - mangroves freeze-killed.	1988/06/14: B.A. Millsap, GFC. PI-R-09 "Total" = B (includes GBHE, BRPE, DCCO).

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Florida Natural Areas Inventory

DOCUMENTED ELEMENT OCCURRENCES ON OR NEAR
Beckett Bridge

Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
SALTMARS*14	Salt marsh		G5	S4	N	N	1972	ASSOC. ALGAE: CALOTHRIX CRUSTACEA AND ENTOPHYSALIS CONFERTA (HIGHEST); RHIZOCLONIUM KERNERI, BOSTRICHIA RADICANS, POLYSIPHONIA SUBTILLISSIMA, ANACYSTIS AERUGINOSA (BELOW).	2010: Prior to the 2010 natural community reclassification effort this EO had been known as Estuarine tidal marsh EO number 14 (see U10FNA01FLUS for updated community descriptions). LITTORAL ZONE; SHALLOW MARGINAL AREAS OF BAYOU WITH SPARTINA ALTERNIFLOR

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FLORIDA Natural Areas INVENTORY

15 Mile Buffer of Beckett Bridge

Site boundaries are approximate.

Mycteria americana

Element Occurrences

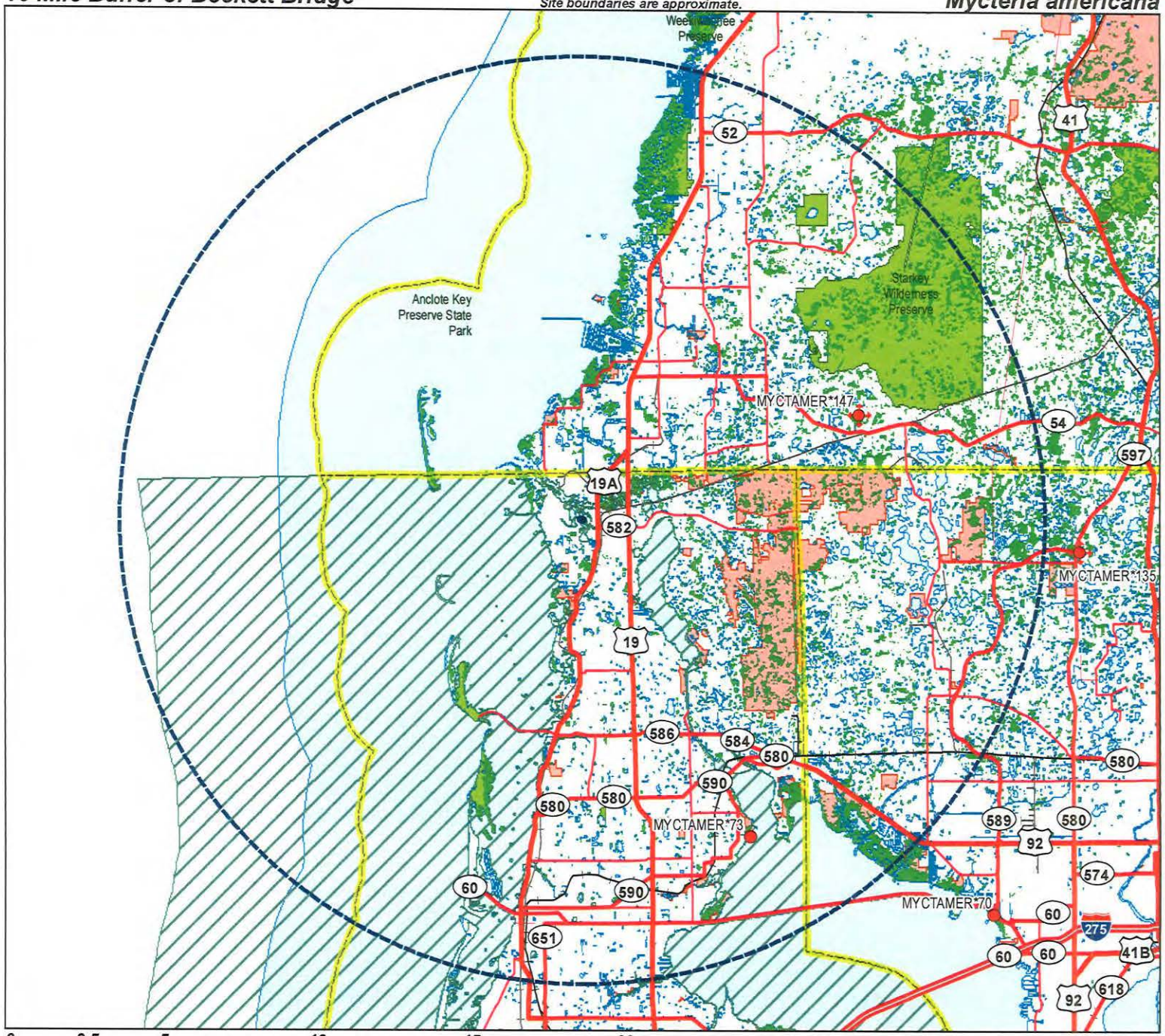
- Wood Stork Occurence (Rookery and/or Foraging)
- Point Indicates General Vicinity of Element

- Wood Stork, *Mycteria americana*, Potential Habitat (Core Foraging Areas)

Conservation Lands

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

- County Boundary
- Interstate
- Turnpike
- Major Highway
- Water



N

0 2.5 5 10 15 20 Miles

NOTE
Map should not be interpreted without accompanying documents.

Map produced by MGO
Map Date: 15 Feb 2012

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FLORIDA Natural Areas INVENTORY

Florida Natural Areas Inventory

DOCUMENTED WOOD STORK OCCURRENCES NEAR BECKETT BRIDGE, PINELLAS COUNTY

Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
MYCTAMER*135	*Mycteria americana*	Wood Stork	G4	S2	LE	FE	1988-06-07	Cypress swamp	1988/06/07: K.J. McGowan, GFC. HI-R-05 One stork incubating. Several old nests. "Total" = A.
MYCTAMER*147	*Mycteria americana*	Wood Stork	G4	S2	LE	FE	1989-04-24	No general description given	1989/04/24: D.E. Runde, GFC. habitat=cypress pond in pasture; copter flight; GREG large young, WOST low "Total" = B (includes GREG, GRHE, WOST).
MYCTAMER*70	*Mycteria americana*	Wood Stork	G4	S2	LE	FE	1990	RESTORED TIDAL MARSH	4 INDIVIDUALS FEEDING.
MYCTAMER*73	*Mycteria americana*	Wood Stork	G4	S2	LE	FE	1990-10-03	3 MILES (APPROX.) OF TIDAL FLATS.	6-10 YOUNG AND ADULT BIRDS OBSERVED FEEDING 3 OCT. 1990. 30-40 SEEN IN OCT. 1989, SEE ATTACHED MAP.

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FLORIDA Natural Areas INVENTORY

Florida Natural Areas Inventory

Biodiversity Matrix Report

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Matrix Unit ID: 20802					
Likely					
Mycteria americana	Wood Stork	G4	S2	LE	FE
Pelecanus occidentalis	Brown Pelican	G4	S3	N	SSC
Scrub		G2	S2	N	N
Trichechus manatus	Manatee	G2	S2	LE	FE
Potential					
Acipenser oxyrinchus desotoi	Gulf Sturgeon	G3T2	S2	LT	FT
Ammodramus maritimus peninsulae	Scott's Seaside Sparrow	G4T3Q	S3	N	SSC
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	SSC
Calopogon multiflorus	Many-flowered Grass-pink	G2G3	S2S3	N	LE
Caretta caretta	Loggerhead	G3	S3	LT	FT
Centrosema arenicola	Sand Butterfly Pea	G2Q	S2	N	LE
Chelonia mydas	Green Turtle	G3	S2	LE	FE
Cistothorus palustris marianae	Marian's Marsh Wren	G5T3	S3	N	SSC
Dendroica discolor paludicola	Florida Prairie Warbler	G5T3	S3	N	N
Dermochelys coriacea	Leatherback	G2	S2	LE	FE
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	FT
Eretmochelys imbricata	Hawksbill	G3	S1	LE	FE
Estuarine composite substrate		G3	S3	N	N
Estuarine unconsolidated substrate		G5	S5	N	N
Eumops floridanus	Florida bonneted bat	G1	S1	C	ST
Forestiera godfreyi	Godfrey's Swampprivet	G2	S2	N	LE
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	ST
Grus canadensis pratensis	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Heterodon simus	Southern Hognose Snake	G2	S2	N	N
Lechea cernua	Nodding Pinweed	G3	S3	N	LT
Marine mollusk reef		G3	S3	N	N
Matelea floridana	Florida Spiny-pod	G2	S2	N	LE
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3	S3	N	N
Nemastylis floridana	Celestial Lily	G2	S2	N	LE
Nolina atopocarpa	Florida Beargrass	G3	S3	N	LT
Panicum abscissum	Cutthroat Grass	G3	S3	N	LE
Picoides borealis	Red-cockaded Woodpecker	G3	S2	LE	FE
Podomys floridanus	Florida Mouse	G3	S3	N	SSC
Pteroglossaspis ecristata	Giant Orchid	G2G3	S2	N	LT
Rallus longirostris scottii	Florida Clapper Rail	G5T3?	S3?	N	N
Rana capito	Gopher Frog	G3	S3	N	SSC
Salt marsh		G5	S4	N	N
Sciurus niger shermani	Sherman's Fox Squirrel	G5T3	S3	N	SSC
Matrix Unit ID: 21035					
Likely					
Grus canadensis pratensis	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mycteria americana	Wood Stork	G4	S2	LE	FE
Pelecanus occidentalis	Brown Pelican	G4	S3	N	SSC
Trichechus manatus	Manatee	G2	S2	LE	FE

Definitions: *Documented - Rare species and natural communities documented on or near this site.*
Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.
Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.
Potential - This site lies within the known or predicted range of the species listed.

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FLORIDA Natural Areas INVENTORY

Florida Natural Areas Inventory

Biodiversity Matrix Report

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Potential					
Acipenser oxyrinchus desotoi	Gulf Sturgeon	G3T2	S2	LT	FT
Ammodramus maritimus peninsulae	Scott's Seaside Sparrow	G4T3Q	S3	N	SSC
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	SSC
Caretta caretta	Loggerhead	G3	S3	LT	FT
Centrosema arenicola	Sand Butterfly Pea	G2Q	S2	N	LE
Chelonia mydas	Green Turtle	G3	S2	LE	FE
Cistothorus palustris marianae	Marian's Marsh Wren	G5T3	S3	N	SSC
Dendroica discolor paludicola	Florida Prairie Warbler	G5T3	S3	N	N
Dermochelys coriacea	Leatherback	G2	S2	LE	FE
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	FT
Eretmochelys imbricata	Hawksbill	G3	S1	LE	FE
Eumops floridanus	Florida bonneted bat	G1	S1	C	ST
Forestiera godfreyi	Godfrey's Swampprivet	G2	S2	N	LE
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	ST
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3	S3	N	N
Nemastylis floridana	Celestial Lily	G2	S2	N	LE
Nolina atopocarpa	Florida Beargrass	G3	S3	N	LT
Picoides borealis	Red-cockaded Woodpecker	G3	S2	LE	FE
Podomys floridanus	Florida Mouse	G3	S3	N	SSC
Pteroglossaspis ecristata	Giant Orchid	G2G3	S2	N	LT
Rallus longirostris scottii	Florida Clapper Rail	G5T3?	S3?	N	N
Rana capito	Gopher Frog	G3	S3	N	SSC
Sciurus niger shermani	Sherman's Fox Squirrel	G5T3	S3	N	SSC
Ursus americanus floridanus	Florida Black Bear	G5T2	S2	N	ST*

Definitions: *Documented - Rare species and natural communities documented on or near this site.*
Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.
Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.
Potential - This site lies within the known or predicted range of the species listed.

Elements and Element Occurrences

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

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

Element Ranking and Legal Status

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

FNAI GLOBAL ELEMENT RANK

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

FNAI STATE ELEMENT RANK

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

FEDERAL LEGAL STATUS

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

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

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

STATE LEGAL STATUS

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

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

FE = Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service
FT = Listed as Threatened Species at the Federal level by the U. S. Fish and Wildlife Service
F(XN) = Federal listed as an experimental population in Florida
FT(S/A) = Federal Threatened due to similarity of appearance
ST = State population listed as Threatened by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future. (ST* for Ursus americanus floridanus (Florida black bear) indicates that this status does not apply in Baker and Columbia counties and in the Apalachicola National Forest. ST* for Neovison vison pop.1 (Southern mink, South Florida population) indicates that this status applies to the Everglades population only.)
SSC = Listed as Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. (SSC* indicates that a species has SSC status only in selected portions of its range in Florida. SSC* for Pandion haliaetus (Osprey) indicates that this status applies in Monroe county only.)
N = Not currently listed, nor currently being considered for listing.

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

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

Element Occurrence Ranking

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

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

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

FNAI also uses the following EO ranks:

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

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

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

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

Agency Comments - Project Effects

#13040 Beckett Bridge over Whitcomb Bayou (Riverside Drive)			
District	District 7	**Phase**	Programming Screen
County	Pinellas	**From**	Chesapeake Drive
Planning Organization	FDOT District 7	**To**	Forest Avenue
Plan ID		**Financial Management No.**	42438512801
LAP Agency	Pinellas County (Already PD&E LAP Certified)	**Agency Completing NEPA Document**	Local Agency (with FDOT oversight)
Federal Involvement	Potential Future Federal Funding Federal Permit Federal Action Federal Funding		
Contact Information	Name: Theresa Farmer Phone: (813) 975-6445 E-mail: theresa.farmer@dot.state.fl.us		
Snapshot Data From: Current Project Data			

Alternative #1 -

Project Effects Overview

Issue	Degree of Effect	Organization	Date Reviewed
Natural			
Air Quality	2 Minimal	US Environmental Protection Agency	12/23/2010
Coastal and Marine	4 Substantial	Southwest Florida Water Management District	12/20/2010
Coastal and Marine	3 Moderate	National Marine Fisheries Service	11/22/2010
Contaminated Sites	0 None	FL Department of Environmental Protection	12/23/2010
Contaminated Sites	3 Moderate	Southwest Florida Water Management District	12/20/2010
Contaminated Sites	0 None	US Environmental Protection Agency	12/08/2010
Farmlands	0 None	Natural Resources Conservation Service	11/23/2010
Floodplains	3 Moderate	US Environmental Protection Agency	12/23/2010
Floodplains	3 Moderate	Southwest Florida Water Management District	12/20/2010
Infrastructure	0 None	Southwest Florida Water Management District	12/20/2010
Navigation	3 Moderate	US Coast Guard	12/20/2010
Navigation	N/A N/A / No Involvement	US Army Corps of Engineers	12/16/2010
Special Designations	4 Substantial	US Environmental Protection Agency	12/23/2010
Special Designations	4 Substantial	Southwest Florida Water Management District	12/20/2010
Water Quality and Quantity	3 Moderate	FL Department of Environmental Protection	12/23/2010
Water Quality and Quantity	4 Substantial	Southwest Florida Water Management District	12/20/2010
Wetlands	3 Moderate	FL Department of Environmental Protection	12/23/2010
Wetlands	3 Moderate	US Environmental Protection Agency	12/23/2010
Wetlands	4 Substantial	Southwest Florida Water Management District	12/20/2010
Wetlands	3 Moderate	US Fish and Wildlife Service	12/20/2010
Wetlands	2 Minimal	US Army Corps of Engineers	12/16/2010
Wetlands	3 Moderate	National Marine Fisheries Service	11/22/2010
Wildlife and Habitat	2 Minimal	Southwest Florida Water Management District	12/20/2010
Wildlife and Habitat	3 Moderate	US Fish and Wildlife Service	12/20/2010
Wildlife and Habitat	2 Minimal	FL Fish and Wildlife Conservation Commission	12/17/2010
Cultural			
Historic and Archaeological Sites	3 Moderate	Federal Highway Administration	03/16/2011
Historic and Archaeological Sites	3 Moderate	FL Department of State	01/28/2011
Historic and Archaeological Sites	N/A N/A / No Involvement	Southwest Florida Water Management District	12/20/2010
Historic and Archaeological Sites	2 Minimal	Miccosukee Tribe of Indians of Florida	12/08/2010
Recreation Areas	0 None	FL Department of Environmental Protection	12/23/2010
Recreation Areas	0 None	US Environmental Protection Agency	12/21/2010
Recreation Areas	0 None	Southwest Florida Water Management District	12/20/2010
Section 4(f) Potential	3 Moderate	Federal Highway Administration	12/23/2010
Community			
Aesthetics	No reviews recorded.		
Economic	No reviews recorded.		
Land Use	2 Minimal	FL Department of Community Affairs	04/21/2011

Mobility	1 Enhanced	FL Department of Community Affairs	04/21/2011
Relocation	2 Minimal	Federal Highway Administration	12/23/2010
Social	2 Minimal	FL Department of Community Affairs	04/21/2011
Social	2 Minimal	Federal Highway Administration	12/23/2010
Secondary and Cumulative			
Secondary and Cumulative Effects	4 Substantial	Southwest Florida Water Management District	12/20/2010

ETAT Reviews: Natural Issues

ETAT Reviews: Air Quality Issue: 1 found

2 *Minimal* assigned 12/23/2010 by Madolyn Dominy, US Environmental Protection Agency

Coordination Document: No Selection
Dispute Information:N/A
Identified Resources and Level of Importance: Resources: Air Quality

Level of Importance: Air quality is of a high level of importance in urban areas and areas with anticipated growth in population, employment, and development.
Comments on Effects to Resources: EPA does not anticipate any negative air quality impacts relating specifically to the project. EPA is assigning a minimal degree of effect to the air quality issue for this project. As population growth and vehicle volumes increase, there is the potential to have air quality conformity and non-attainment issues in the future. FDOT should be aware of this and take appropriate measures to ensure compliance with all applicable air quality standards and regulations.
Coordinator Feedback: None

The following organization(s) were expected to but did not submit a review of the Air Quality issue for this alternative: Federal Highway Administration

ETAT Reviews: Coastal and Marine Issue: 2 found

4 *Substantial* assigned 12/20/2010 by C. Lynn Miller, Southwest Florida Water Management District

Coordination Document: Permit Required
Dispute Information:N/A
Identified Resources and Level of Importance: The project is entirely within the Springs Coast Ecosystem Management Area (EMA). The project occupies watersheds that are included in the Pinellas County Aquatic Preserve. Whitcomb Bayou and Minetta Bayou are embayments of the lower Anclote River and are included in the Anclote River Bayou Complex watershed (WBID 1440A). This watershed contributes flows to the tidal segment of the Anclote River (WBID 1440) which discharges to the Gulf of Mexico (WBID 8045C) at the Pasco-Pinellas County Line just north of St Joseph's Sound (WBID 8045D). Whitcomb Bayou, Minetta Bayou, the Anclote River and St Joseph's Sound are designated as Outstanding Florida Waters. One of the islands included in Pinellas County's Anclote Islands Management Area is located 953 feet north of the project; two other islands are located within 1,500 feet of the project to the north. Some watersheds in which the project is located are included on the FDEP Verified List of Impaired Waters. Beds of seagrass are present in Minetta Bayou and Whitcomb Bayou. These seagrass beds are particularly vulnerable to sedimentation.
Comments on Effects to Resources: Due to the expected increase in impervious area and the direct runoff from the new impervious area, the project has the potential to generate increased rates and volume of stormwater runoff and increased sedimentation that may degrade water quality and damage seagrass beds within Minetta and Whitcomb Bayous, and waters downstream. The seagrass beds also may be harmed or eliminated as a result of sediment or chemical constituents contained in stormwater runoff or released during construction.
Additional Comments (optional): Depending on the FDOT's approach to design, and the final construction means and methods, this project may qualify under F.A.C. 40D-400.443, "General Permit to the Florida Department of Transportation, Counties and Municipalities for Minor Bridge Alteration, Replacement, Maintenance and Operation" (bridge and abutment replacement) and F.A.C. 40D-4.051(13), "Minor Roadway Safety Projects" (roadway improvements on either side of the bridge). The District strongly recommends a pre-application meeting with the surface water regulatory staff in the Tampa Service Office happen very early in the design process (before beginning design, if possible).

The following comments are offered in the event that the FDOT elects to pursue an Environmental Resource Permit General Permit for Construction for the project.

The SWFWMD has assigned a Degree of Effect based on their opinion of the potential of this project to result in increased coordination or effort associated with the SWFWMD's regulatory interests and obligations.

This project will discharge to the Anclote River Bayou Complex (WBID 1479) which is impaired for dissolved oxygen and nutrients, and the SWFWMD will require a demonstration of net improvement regarding nutrients in discharges to the Bayous.

To minimize pollution potential, it would be useful to collect and treat discharges from the project facilities to a higher standard than the minimum required by rule before discharging to sensitive estuarine areas. Collecting and treat runoff from the bridge and approaches would assist considerably in reducing the sediment load of runoff ultimately reaching the waters in Bayous spanned by the bridge. Choosing construction means and methods to minimize fugitive construction materials and pollutant discharges would be useful to minimize temporary and permanent impacts.
Coordinator Feedback: None

3 *Moderate* assigned 11/22/2010 by David A. Rydene, National Marine Fisheries Service

Coordination Document: PD&E Support Document As Per PD&E Manual
Dispute Information:N/A
Identified Resources and Level of Importance: Whitcomb and Minetta Bayous, the mouth of the Anclote River, and the Gulf of Mexico, which contain estuarine and marine habitats such as seagrass, mangrove, and salt marsh used by federally-managed fish species and their prey.

Comments on Effects to Resources: NOAA's National Marine Fisheries Service (NMFS) has reviewed the information contained in the Environmental Screening Tool for ETDM Project # 13040. The Florida Department of Transportation District 7 proposes rehabilitating or replacing the existing Beckett Bridge (Riverside Drive) spanning Whitcomb Bayou in Pinellas County, Florida. The project would also include roadway improvements on Riverside Drive from Chesapeake Drive to Forest Avenue. The bridge replacement alternative would retain the bridge as a two-lane facility.

NMFS staff conducted a site inspection of the project area on November 19, 2010, to assess potential concerns related to living marine resources within Whitcomb and Minetta Bayous, the mouth of the Anclote River, and the Gulf of Mexico. The lands adjacent to the proposed project are principally residential properties, a yacht club, and estuarine habitats. It appears that the project could directly impact NMFS trust resources (i.e. mangroves). Mangroves occur immediately adjacent to the bridge on the northwest, southwest, and southeast shorelines. Certain estuarine habitats within the project area are designated as essential fish habitat (EFH) as identified in the 2005 generic amendment of the Fishery Management Plans for the Gulf of Mexico. The generic amendment was prepared by the Gulf of Mexico Fishery Management Council as required by the 1996 amendment to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). Mangroves have been identified as EFH for postlarval/juvenile, subadult and adult red drum and gray snapper, and juvenile goliath grouper by the Gulf of Mexico Fishery Management Council under provisions of the Magnuson-Stevens Act.

Federal agencies which permit, fund, or undertake activities which may adversely impact EFH are required to consult with NMFS and, as a part of the consultation process, an EFH Assessment must be prepared to accompany the consultation request. Regulations require that EFH Assessments include:

1. a description of the proposed action;

2. an analysis of the effects (including cumulative effects) of the proposed action on EFH, the managed fish species, and major prey species;

3. the Federal agency's views regarding the effects of the action on EFH; and

4. proposed mitigation, if applicable.

Provisions of the EFH regulations [50 CFR 600.920(c)] allow consultation responsibility to be formally delegated from federal to state agencies, including FDOT. Whether EFH consultation is undertaken by the federal agency (e.g. Federal Highway Administration) or FDOT, it should be initiated as soon as specific project design and construction impact information are available. EFH consultation can be initiated independent of other project review tasks or can be incorporated in environmental planning documents. Upon review of the EFH Assessment, NMFS will determine if it is necessary to provide EFH Conservation Recommendations for the project.

NMFS also recommends that stormwater treatment systems be upgraded to prevent degraded water from entering estuarine habitats within the system. In addition, best management practices should be employed during road construction to prevent siltation of estuarine habitats.
Coordinator Feedback: None

The following organization(s) were expected to but did not submit a review of the Coastal and Marine issue for this alternative: Federal Highway Administration

ETAT Reviews: Contaminated Sites Issue: 3 found

0 *None* assigned 12/23/2010 by Lauren P. Milligan, FL Department of Environmental Protection

Coordination Document: No Selection
Dispute Information:N/A
Identified Resources and Level of Importance: None found.
Comments on Effects to Resources: None found.
Coordinator Feedback: None

3 *Moderate* assigned 12/20/2010 by C. Lynn Miller, Southwest Florida Water Management District

Coordination Document: Permit Required
Dispute Information:N/A
Identified Resources and Level of Importance: There are three septic tanks within the 100 to 500-foot buffers. The Stamas Yacht facility is located within 420 feet of the east terminus of the project, and there is some potential that contaminated soils or groundwater plumes may exist within 100-200 feet of the project. No other sources of potential contamination are reported or were observed on the day of the field visit (16 November 2010).

Information from DRASTIC analyses indicates that both the surficial aquifer and the Floridan Aquifer within the 100-foot to 500-foot buffers have a high potential for contamination. The surficial aquifer is used for landscape irrigation and it contributes flows to canals, ditches and bayous in the area. Surface water bodies in the project area discharge to sensitive estuarine waters in the Anclote River estuary. The surrounding area consists of Karst geologic conditions.

In view of the past land uses in the project area, there may be other, as yet unknown, contaminated sites.
Comments on Effects to Resources: The construction of the project and associated facilities in areas where there are sources of contamination may mobilize the contamination and cause or contribute to pollution of the surficial aquifer and surface waters. Such pollution may contribute to the entry of pollutants contained in surficial aquifer waters to canals, ditches and streams in the area, and may contribute to the degradation of sensitive estuarine waters in the Anclote River and St Joseph's Sound.
Additional Comments (optional): Depending on the FDOT's approach to design, and the final construction means and methods, this project may qualify under F.A.C. 40D-400.443, "General Permit to the Florida Department of Transportation, Counties and Municipalities for Minor Bridge Alteration, Replacement, Maintenance and Operation" (bridge and abutment replacement) and F.A.C. 40D-4.051(13), "Minor Roadway Safety Projects" (roadway improvements on either side of the bridge). The District strongly recommends a pre-application meeting with the surface water regulatory staff in the Tampa Service Office happen very early in the design process (before beginning design, if possible).

The following comments are offered in the event that the FDOT elects to pursue an Environmental Resource Permit General Permit for Construction for

the project.

The Degree of Effect is considered "Moderate" as it is possible that: (1) unknown sources of contamination may exist that could be disturbed by construction; (2) the high potential for the pollution of the surficial aquifer and surface water bodies; (3) the potential for the contamination of surface waters and receiving waters that are already designated as Impaired for certain parameters; and (4) the potential for contaminated soils or contamination plumes to exist in the project area from the Stamas Yacht facilities in view of past releases at the site.

Temporary drainage and erosion control through areas of potential contamination may be important considerations, even if there are no proposed stormwater management systems to be located in those areas. It is recommended that FDOT:
1. Conduct a geotechnical evaluation of potential stormwater treatment sites for the presence of contamination and eliminate contaminated areas as possible pond sites or steps must be taken (such as use of impermeable liners) to isolate stormwater from contaminated soil or groundwater;
2. Conduct an Environmental Audit at the appropriate level to identify specific facilities of interest and to develop a plan for their proper removal or abandonment;
3. Coordinate with FDEP and EPA and prepare a Contamination Assessment Report as necessary; and
4. Avoid known sites of contaminated soils. If discovered during the recommended soils investigation, contamination should be remediated properly so as to eliminate the potential for ground water contamination.
Coordinator Feedback: None

0 *None* assigned 12/08/2010 by Madolyn Dominy, US Environmental Protection Agency

Coordination Document: No Selection
Dispute Information:N/A
Identified Resources and Level of Importance: None found.
Comments on Effects to Resources: None found.
Coordinator Feedback: None

The following organization(s) were expected to but did not submit a review of the Contaminated Sites issue for this alternative: Federal Highway Administration

ETAT Reviews: Farmlands Issue: 1 found

0 *None* assigned 11/23/2010 by Rick Allen Robbins, Natural Resources Conservation Service

Coordination Document: No Selection
Dispute Information:N/A
Identified Resources and Level of Importance: The USDA-NRCS considers soil map units with important soil properties for agricultural uses to be Prime Farmland. In addition, the USDA-NRCS considers any soils with important soil properties and have significant acreages that are used in the production of commodity crops (such as, cotton, citrus, row crops, specialty crops, nuts, etc.) to be considered as Farmlands of Unique Importance. Nationally, there has been a reduction in the overall amount of Prime and Unique Farmlands through conversion to non-farm uses. This trend has the possibility of impacting the nation's food supply and exporting capabilities.
Comments on Effects to Resources: Conducting GIS analysis of Prime Farmland (using USDA-NRCS data) and Important (Unique) Farmland Analysis (using existing WMD land use data and 2010 SSURGO data) has resulted in the determination that there are no Prime, Unique, or Locally Important Farmland soils within any buffer width within the Project Area. Therefore, no degree of effect to agricultural resources.
CLC Commitments and Recommendations: Coordinator Feedback: None

The following organization(s) were expected to but did not submit a review of the Farmlands issue for this alternative: Federal Highway Administration

ETAT Reviews: Floodplains Issue: 2 found

3 *Moderate* assigned 12/23/2010 by Madolyn Dominy, US Environmental Protection Agency

Coordination Document: No Selection
Dispute Information:N/A
Identified Resources and Level of Importance: Resources: Floodplains

Level of Importance: Development within the 100-year floodplain is of a high level of importance. Construction of roadways and bridges within the floodplain should not impede, obstruct or divert the flow of water or debris in the floodplain which would alter the discharge capacity or otherwise adversely affect public health, safety and welfare, or cause damage to public or private property in the event of a flood.
Comments on Effects to Resources: A review of GIS analysis data in the EST at the programming screen phase of the project indicates that nearly 100% of the project area is located within the 100-year floodplain, as designated by Zone AE of the flood hazard zone designation. The project includes the evaluation of replacement and rehabilitation alternatives for the Beckett Bridge over Whitcomb and Minetta Bayous. The structure is proposed to remain two lanes, but replacement alternatives will include appropriate road shoulders and sidewalks to meet current design standards. The project will include roadway improvements to Riverside Drive/North Spring Boulevard from Chesapeake Drive to Forest Avenue resulting in a project length of approximately 0.31 mile. The most likely floodplain impacts relating to this proposed project include the bridge approaches and associated roadway improvements.

Comments relating to floodplains include the fact that any development within the 100-year floodplain has the potential for placing citizens and property at risk of flooding and producing changes in floodplain elevations and plan view extent. Development (such as roadways, housing developments, strip malls and other commercial facilities) within floodplains increases the potential for flooding by limiting flood storage capacity and exposing people and property to flood hazards. Development also reduces vegetated buffers that protect water quality and destroys important habitats for fish and wildlife.

The PD&E phase of this project should include an evaluation of floodplain impacts. FDOT should consider alternatives to avoid adverse effects and incompatible development in the floodplains. Efforts should be made to avoid or minimize impacts to floodplain resources and functions. Consultation and coordination with appropriate flood management agencies should occur relating to regulatory requirements, avoidance, minimization and/or mitigation strategies.
Coordinator Feedback: None

3 *Moderate* assigned 12/20/2010 by C. Lynn Miller, Southwest Florida Water Management District

Coordination Document: Permit Required
Dispute Information:N/A
Identified Resources and Level of Importance: The entire project site occupies lands designated as Special Flood Hazard Areas, Zone AE and FEMA FIRM Zone AE. Those segments of the project that are built at grade may alter drainage patterns; fill floodplain areas, Special Flood Hazard Areas, or historic basin storage areas. Potential flooding impacts are located along the entire project length.
Comments on Effects to Resources: It is possible that a large portion of the floodplain may be affected by the project. The project has the potential to result in adverse impacts on local flood-prone areas.
Additional Comments (optional): Depending on the FDOT's approach to design, and the final construction means and methods, this project may qualify under F.A.C. 40D-400.443, "General Permit to the Florida Department of Transportation, Counties and Municipalities for Minor Bridge Alteration, Replacement, Maintenance and Operation" (bridge and abutment replacement) and F.A.C. 40D-4.051(13), "Minor Roadway Safety Projects" (roadway improvements on either side of the bridge). The District strongly recommends a pre-application meeting with the surface water regulatory staff in the Tampa Service Office happen very early in the design process (before beginning design, if possible).

The following comments are offered in the event that the FDOT elects to pursue an Environmental Resource Permit General Permit for Construction for the project.

The SWFWMD has assigned a Degree of Effect based on their opinion of the potential of this project to result in increased coordination or effort associated with the SWFWMD's regulatory and proprietary interests and obligations.

The degree of effect may be reduced by: (1) restricting the filling of floodplain areas to only those areas necessary, (2) constructing stormwater treatment ponds outside floodplain areas, and (3) providing compensation for lost floodplain and historic basin storage.

Final versions of surface water management plans may be considered "best available information" for floodplain location and depth. Credible historical evidence of past flooding or the physical capacity of the downstream conveyance or receiving waters may be important to processing and issuing the environmental resource permit for this project. Please contact the Southwest Florida Water Management District for availability of watershed management data.

Also, final watershed management model data may be available. Please contact the Southwest Florida Water Management District for availability of such data on specific watersheds and on other projects (listed in the Water Quantity and Quality section) that may have helpful information.
Coordinator Feedback: None

The following organization(s) were expected to but did not submit a review of the Floodplains issue for this alternative: FL Department of Environmental Protection, Federal Highway Administration

ETAT Reviews: Infrastructure Issue: 1 found

0 *None* assigned 12/20/2010 by C. Lynn Miller, Southwest Florida Water Management District

Coordination Document: No Involvement
Dispute Information:N/A
Identified Resources and Level of Importance: None found.
Comments on Effects to Resources: None found.
Coordinator Feedback: None

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

ETAT Reviews: Navigation Issue: 2 found

3 *Moderate* assigned 12/20/2010 by Randy Overton, US Coast Guard

Coordination Document: Permit Required
Dispute Information:N/A
Identified Resources and Level of Importance: Navigation, moderate
Comments on Effects to Resources: A Coast Guard Bridge Permit will be required for the replacement of Beckett Bridge over Whitcome Bayou. To obtain further guidance and a copy of the Coast Guard Bridge Permit Application Guide please contact Randall Overton at randall.d.overton@uscg.mil or 305-415-6749.
Coordinator Feedback: None

N/A *N/A / No Involvement* assigned 12/16/2010 by John Fellows, US Army Corps of Engineers

Coordination Document: To Be Determined: Further Coordination Required
Dispute Information:N/A
Identified Resources and Level of Importance: None found.
Comments on Effects to Resources: None found.
Additional Comments (optional): Although Whitcomb Bayou is navigable, the Corps of Engineers does not handle bridge projects over navigable waters.
Coordinator Feedback: None

The following organization(s) were expected to but did not submit a review of the Navigation issue for this alternative: Federal Highway Administration

ETAT Reviews: Special Designations Issue: 2 found

4 *Substantial* assigned 12/23/2010 by Madolyn Dominy, US Environmental Protection Agency

Coordination Document: No Selection
Dispute Information:N/A
Identified Resources and Level of Importance: Resources: DFIRM 100-Year Flood Plain/Special Flood Hazard Areas, Aquatic Preserves, Outstanding Florida Waters

Level of Importance: The resources listed above (identified as special designations) are of a high level of importance in the State of Florida. EPA is assigning a substantial degree of effect to this issue for the proposed project.
Comments on Effects to Resources: A review of GIS analysis data at the programming screen phase of the project indicates that the following features identified as Special Designations are located within proximity of the project:

DFIRM 100-Year Flood Plain/Special Flood Hazard Areas - See Comments under Floodplains issue regarding potential floodplain impacts.

Aquatic Preserves - Pinellas County Aquatic Preserve
The Pinellas County Aquatic Preserve was established on March 21, 1972 and was designated as an Outstanding Florida Water on March 1, 1979. The Pinellas County Aquatic Preserve and the Boca Ciega Bay Aquatic Preserve are located on the Gulf coast of west central Florida, and include the state-owned submerged land in Pinellas County waters. The preserves encompass 136,082 hectares (336,265 acres) of stateowned submerged land. The surrounding area is one of the most urbanized areas in Florida, and as such has special management needs. The preserves include nearshore habitats along sandy beaches and mangrove dominated shorelines. Submerged habitats include oyster bars, seagrass beds, coral communities, and springfed caves. Abundant islands, including those formed from dredge spoil material, are also part of the preserve. Approximately 1/3 of Florida's coral species can be found in the Pinellas County Aquatic Preserve.

Outstanding Florida Waters - Pinellas County Aquatic Preserve
The Pinellas County Aquatic Preserve is listed as an Outstanding Florida Waters (OFWs). OFWs are provided the highest level of protection under the Florida Administrative Code (F.A.C.). Degradation of water quality in an OFW is prohibited except under certain circumstances. Pollutant discharges must not lower existing ambient water quality. Any activity within an OFW requiring a Florida Department of Environmental Protection (FDEP) Environmental Resource Permit (ERP) must be deemed to be clearly in the public interest. Additional stormwater retention and treatment requirements may be required. FDOT will need to coordinate and consult with FDEP regarding specific permitting requirements relating to this OFW.

Opportunities to avoid and or minimize impacts and fragmentation to these types of resources should be evaluated and considered to the greatest extent practicable.
Coordinator Feedback: None

4 *Substantial* assigned 12/20/2010 by C. Lynn Miller, Southwest Florida Water Management District

Coordination Document: Permit Required
Dispute Information:N/A
Identified Resources and Level of Importance: The project occupies watersheds that are included in the Pinellas County Aquatic Preserve. Whitcomb Bayou and Minetta Bayou are embayments of the lower Anclote River which discharges to St Joseph Sound at the Pasco-Pinellas County line. Whitcomb Bayou, Minetta Bayou, the Anclote River and St Joseph's Sound are designated as Outstanding Florida Waters. One of the islands included in Pinellas County's Anclote Islands Management Area is located 953 feet north of the project; two other islands are located within 1,500 feet of the project to the north. Some watersheds in which the project is located are included on the FDEP Verified List of Impaired Waters.
Comments on Effects to Resources: Unless project design allows for the collection and treatment of runoff from the additional new impervious areas, the project has a potential to result in water quality impacts to Outstanding Florida Waters and to delay the recovery of Impaired Waters as a result of undertreated or untreated stormwater runoff during and after construction. In view of the existing and projected traffic volumes on the project, the water quality impact may be significant.
Additional Comments (optional): Depending on the FDOT's approach to design, and the final construction means and methods, this project may qualify under F.A.C. 40D-400.443, "General Permit to the Florida Department of Transportation, Counties and Municipalities for Minor Bridge Alteration, Replacement, Maintenance and Operation" (bridge and abutment replacement) and F.A.C. 40D-4.051(13), "Minor Roadway Safety Projects" (roadway improvements on either side of the bridge). The District strongly recommends a pre-application meeting with the surface water regulatory staff in the Tampa Service Office happen very early in the design process (before beginning design, if possible).

The following comments are offered in the event that the FDOT elects to pursue an Environmental Resource Permit General Permit for Construction for the project.

The SWFWMD has assigned a Degree of Effect based on their opinion of the potential of this project to result in increased coordination or effort associated with the SWFWMD's regulatory interests and obligations.

This project will discharge to the Anclote River Bayou Complex (WBID 1479) which is impaired for dissolved oxygen and nutrients, and the SWFWMD will require a demonstration of net improvement regarding nutrients in discharges to the Bayous.
Coordinator Feedback: None

The following organization(s) were expected to but did not submit a review of the Special Designations issue for this alternative: FL Department of Agriculture and Consumer Services, Federal Highway Administration

ETAT Reviews: Water Quality and Quantity Issue: 2 found

3 *Moderate* assigned 12/23/2010 by Lauren P. Milligan, FL Department of Environmental Protection

Coordination Document: Permit Required
Dispute Information:N/A
Identified Resources and Level of Importance: The proposed project will cross and may impact the Anclote River Bayou - part of the Pinellas County Aquatic Preserve and Outstanding Florida Waters (OFW) - which fall under section 62-302.700(9), Florida Administrative Code (F.A.C.), and are afforded a high level of protection under sections 62-4.242(2) and 62-302.700, F.A.C. The watershed conditions within the project area are presently considered good.
Comments on Effects to Resources: We recommend that the PD&E study include an evaluation of existing stormwater treatment adequacy and

details on the future stormwater treatment facilities. The permit applicant may be required to demonstrate that the proposed stormwater system associated with the bridge meets the design and performance criteria established for the treatment and attenuation of discharges to OFWs, pursuant to rule 40D-4, F.A.C., and the SWFWMD Basis of Review for ERP Applications. Under section 373.414(1), F.S., direct impacts to these waterbodies and associated wetlands must be demonstrated to be "clearly in the public interest" as part of the ERP permitting process.
Coordinator Feedback: None

4 *Substantial* assigned 12/20/2010 by C. Lynn Miller, Southwest Florida Water Management District

Coordination Document: Permit Required
Dispute Information:N/A
Identified Resources and Level of Importance: The entire project is located in the Anclote River Bayou Complex (WBID 1440A) watershed which is a major embayment (bayou) of the tidal segment of the Anclote River (WBID 1440). The River, which heads 1.3 miles west of US 41 in Pasco County, discharges to the Gulf of Mexico (WBID 8045C) at the Pasco-Pinellas County Line just north of St Joseph's Sound (WBID 8045D). Beckett Bridge carries Riverside Dr over Minetta and Whitcomb Bayous. Scuppers in both the travel lanes and the pedestrian corridor/bike path drain runoff directly to the waters below the bridge. The open grid moveable bridge section also drains directly to the bayou waters below. There are stormwater inlets on the north and south sides of Riverside Dr approximately 27 feet east of the Riverside Dr/Pampas Ave intersection; the discharge point of runoff entering these inlets is uncertain but may be the waters of Whitcomb Bayou on the south side of Riverside Dr.

Minetta and Whitcomb Bayous are included in the Pinellas County Aquatic Preserve and their waters are designated Outstanding Florida Waters.

Water quality data are available for the Bayous from FDEP.

The May 19, 2009 Verified List of Impaired Waters includes the following TMDL information relevant to the District's permitting interests for this project:
1. Nutrients - the Anclote River Bayou Complex (WBID 1440A) is impaired for nutrients.
2. Dissolved oxygen - the Anclote River Bayou Complex (WBID 1440A) is impaired for dissolved oxygen.
3. Mercury in fish - the Anclote River Tidal watershed (WBID 1440) is impaired for mercury in fish.

The stormwater inlets on the north and south sides of Riverside Dr approximately 27 feet east of the Riverside Dr/Forest Ave intersection may require relocation or mitigation due to encroachment from this project.

Information from DRASTIC analyses indicates that the surficial aquifer and the Floridan Aquifer within the 100-foot to 500-foot buffers have high potentials for contamination. The surficial aquifer is used for landscape irrigation and it contributes flows to canals, ditches and streams in the area.

The Stamas Yacht facility, located within 420 feet of the east terminus of the project, may have produced contaminated soils or groundwater plumes within 100-200 feet of the project. An assessment of the areas to be excavated for the project should be done to ensure that no pollution from contaminated soils or waters results from project activities.
Comments on Effects to Resources: The project has the potential to generate increased stormwater runoff and sedimentation that may contribute to a delay in recovery of Impaired Waters, degrade water quality in Outstanding Florida Waters and promote ground water pollution. If re-location or alteration of the stormwater inlets on Riverside Dr east of the bridge is necessary, a modification of the ERP relating to those facilities may be required.
Additional Comments (optional): Depending on the FDOT's approach to design, and the final construction means and methods, this project may qualify under F.A.C. 40D-400.443, "General Permit to the Florida Department of Transportation, Counties and Municipalities for Minor Bridge Alteration, Replacement, Maintenance and Operation" (bridge and abutment replacement) and F.A.C. 40D-4.051(13), "Minor Roadway Safety Projects" (roadway improvements on either side of the bridge). The District strongly recommends a pre-application meeting with the surface water regulatory staff in the Tampa Service Office happen very early in the design process (before beginning design, if possible).

The following comments are offered in the event that the FDOT elects to pursue an Environmental Resource Permit General Permit for Construction for the project.

The District considers the degree of effect as "Substantial" due to anticipated permitting issues, including the project's potential to degrade water quality of surface water bodies included on the May 19, 2010 Verified List of Impaired Waters.

Due to the increased impervious area and wetlands involvement, portions of this project may not qualify as Minor Roadway Safety Projects under F.A.C. 40D-4.051(13). The SWFWMD strongly recommends a pre-application meeting with the Tampa Regulation office.

Several District projects have generated data that may be useful in the PD&E or design phases of the project. Below are listed the District project number, project title, and District Point of Contact (at the time of writing):
1. B159 - Tampa Bay/Anclote River Comprehensive Watershed Management Plan, Jason Mickel;
2. B178 - Anclote River Minimum Flows, Mike Heyl; report can be accessed at http://www.swfwmd.state.fl.us/projects/mfl/mfl_reports.php
3. B182 - USGS Minimum Flows & Levels Data Collection: Anclote River & Brooker Creek, Marty Kelly; and
4. L803 - Pinellas County Water Quality Management Plan, Mary Szafraniec.

Other reports are available from FDEP and Pinellas County Department of Environmental Management.

Project impacts may be reduced by providing treatment of impervious areas that are untreated under the current bridge/approach configuration, particularly:
(1) the bridge deck and pedestrian corridor/bike path and
(2) the west approach to the Bridge where there appears to be no runoff collection/treatment facilities.

If the stormwater inlets on the east side of Beckett Bridge drain directly to Whitcomb Bayou, it may contribute to the ERP net improvement requirement to collect and treat runoff now entering those inlets.

Other impact reduction strategies include:
(1) Minimizing new impervious area where feasible;
(2) Using low-impact development strategies,

(3) Converting Directly Connected Impervious Area (DCIA) to non-DICA, and
(4) Utilizing the best available information on the hydraulic and hydrologic characteristics of watersheds recently studied by the District.

To prevent further degradation of impaired waters and to be consistent with federal and state laws and rules, the District will require stormwater management systems that discharge directly or indirectly into impaired waters (Anclote River Bayou Complex) to provide net improvement for the pollutants that contribute to the water body's impairment. To do this, a higher level of treatment is necessary to assure that the permit creates a net improvement in the pollutants that have caused or are contributing to the water body impairment.

Recent rule-making activities at the state and Federal level may influence the design and permitting of surface water management facilities associated with this project. The District recommends that the FDOT obtain the latest, effective copy of the Environmental Resource Permit Basis of Review document and consider the possible effect of the changes to the rule on the traditional design processes. In many cases, a technical study common to the FDOT's planning or design activities associated with projects of this type may satisfy the requirements in the ERP Basis of Review. Please discuss the content of the FDOT's common technical reports with the staff of the SWFWMD in a pre-application meeting to avoid duplication of effort in the ERP permitting process.

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

For ERP permitting purposes, the project area is located in the Upper Coastal Drainage Basin. The SWFWMD has assigned a pre-application file (PA #397785) for the purpose of tracking its participation in the ETDM review of this project. The pre-application file is maintained at the SWFWMD's Tampa Service Office. Please refer to the pre-application file when contacting SWFWMD regulatory staff regarding this project.
Coordinator Feedback: None

The following organization(s) were expected to but did not submit a review of the Water Quality and Quantity issue for this alternative: Federal Highway Administration, US Environmental Protection Agency

ETAT Reviews: Wetlands Issue: 6 found

3 *Moderate* assigned 12/23/2010 by Lauren P. Milligan, FL Department of Environmental Protection

Coordination Document: Permit Required
Dispute Information:N/A
Identified Resources and Level of Importance: The National Wetlands Inventory GIS report indicates that there are 10 acres of estuarine wetlands and 0.6 acres of discontinuous seagrass beds within the 500-ft. project buffer zone. The proposed project will cross and may impact the Anclote River Bayou. Navigable waterbodies with Pinellas County are part of the Pinellas County Aquatic Preserve - Outstanding Florida Waters.
Comments on Effects to Resources: If new construction is proposed, the project will require an environmental resource permit (ERP) from the Southwest Florida Water Management District. The ERP applicant will be required to eliminate or reduce the proposed wetland resource impacts of bridge construction to the greatest extent practicable:
- Minimization should emphasize avoidance-oriented corridor alignments, wetland fill reductions via pile bridging and steep/vertically retained side slopes, and median width reductions within safety limits.
- Wetlands should not be displaced by the installation of stormwater conveyance and treatment swales; compensatory treatment in adjacent uplands is the preferred alternative.
- After avoidance and minimization have been exhausted, mitigation must be proposed to offset the adverse impacts of the project to existing wetland functions and values. Significant attention is given to forested wetland systems and seagrass beds, which are difficult to mitigate.
- The cumulative impacts of concurrent and future transportation improvement projects in the vicinity of the subject project should also be addressed.
Coordinator Feedback: None

3 *Moderate* assigned 12/23/2010 by Madolyn Dominy, US Environmental Protection Agency

Coordination Document: No Selection
Dispute Information:N/A
Identified Resources and Level of Importance: Resources: Wetlands, wetlands habitat, water quality

Level of Importance: These resources are of a high level of importance in the State of Florida and within the project corridor. EPA is assigning a moderate degree of effect for the wetlands issue for ETDM Project #13040.
Comments on Effects to Resources: A review of GIS analysis data in the EST for wetlands at the programming screen phase of the project indicates that there are estuarine wetlands within the project area. EPA's moderate degree of effect is based upon the location of the project, the type of wetlands, and the fact that there are mangroves located within proximity of the proposed project. Mangroves serve several important ecosystem functions. They provide nursery habitat for fishes, crustaceans, and shellfish and they provide food for several types of marine species. Both recreational and commercial fisheries in Florida are dependent upon healthy mangrove forests. Mangroves also provide shelter and nesting areas for coastal birds. Protecting mangrove acreage is critical, especially since most of the loss of acreage is due to human impact such as development and construction. As a result of dramatic changes in this part of Florida, a significant amount of coastal wetlands acreage has been lost, including mangroves and salt marshes. Therefore, protection of the coastal wetlands is critical to fish habitat and other marine resources. Regulations to protect mangrove forests have been developed by both state and local agencies. These regulations must be met and consultation with other agencies such as the National Marine Fisheries Service may be required. Avoidance measures should be strongly considered for this project. Also, mitigation to provide enhanced or increased function should be strongly evaluated within the same general area.

Overall, the degree of direct wetlands impacts associated with the project will be dependent upon the amount of additional right-of-way needed for the bridge project, the approaches, and any upgrade or modifications to adjacent roadways. Also of consideration are stormwater runoff and the collection and treatment of stormwater from the bridge. Stormwater runoff has the potential to introduce or increase pollutants into surface waters and wetlands.

EPA recommends that any studies for this project should focus on identifying the wetland areas and other natural resources (mangroves) to be potentially impacted and what type of additional analyses, if any, will be needed.

The PD&E phase of the project should focus on identifying wetlands areas to be potentially impacted by the entire project. Additional analyses may be needed such as delineation of wetlands; functional analysis of wetlands to determine their value and function; an evaluation of stormwater pond sites (if applicable) to determine their impact on wetlands; avoidance and minimization strategies for wetlands; and mitigation plans to compensate for adverse impacts.
Coordinator Feedback: None

4 *Substantial* assigned 12/20/2010 by C. Lynn Miller, Southwest Florida Water Management District

Coordination Document: Permit Required
Dispute Information:N/A
Identified Resources and Level of Importance: While the EST does not report the presence of wetlands except within the 1.0 mile buffer, there are wetlands consisting of red mangrove and black mangrove at the following locations: at the bridge crossing; both upstream and downstream of the bridge crossing on the west shore of the Bayou; and on the south side of Riverside Dr within the east approach cross section across from Pampas Ave. In addition, seagrass beds are present in the Bayous both upstream and downstream of the bridge crossing except in the deepest parts of the Bayous.

Listed Species (FFWCC) observed (during the site visit on 16 November 2010) in the wetland and aquatic habitats within 500 feet of the project include: brown pelican (SSC), little blue heron (SSC), and snowy egret (SSC). Other Listed Species that are reported to use these habitats are: American oystercatcher (SSC), least tern (T), limpkin (SSC), piping plover (T), reddish egret (SSC), snowy plover (T), tricolored heron (none/SSC), white ibis (SSC), roseate spoonbill (SSC) and wood stork (E). The entire project area is within the wood stork Core Foraging Area and, as mentioned, habitat for this species is available in the mangroves on the shoreline of the Bayous, particularly within the denser stands of mangroves located 400 feet north of the bridge crossing.

The project area is located within the USFWS Consultation Areas of the piping plover and West Indian manatee. The piping plover is listed by the USFWS as both endangered and threatened, depending upon the specific population involved and it is listed by FWC as Threatened. Foraging and roosting habitat for wintering piping plovers is available within 500 feet of the project. The West Indian manatee, listed by both USFWS and FWC as Endangered, are known to utilize Whitcomb Bayou and habitats north of the Bridge crossing.
Comments on Effects to Resources: The project's impact on wetlands is highly dependent on the specific bridge and roadway cross section lengths and the chosen construction means and methods. At this point, it is not known whether travel lanes on the bridge and roadway approaches will be 12 feet or 11 feet and whether the pedestrian and bike accommodations will be separate or combined facilities.

Within 200 feet of the project, the amount of seagrass acreage potentially directly affected by the project is reported as 0.56 acre, although the actual acreage may be greater than that due to the age of the wetland maps used in the EST (2008). As for the mangrove wetlands, assuming the complete elimination of wetlands within 200 feet of the project, the acreage of impact is estimated at 0.13 acres. Project impacts that extend beyond 200 feet of the project centerline would involve additional mangrove and seagrass acreage, ranging up to 63.6 acres of impact up to 1.0 mile from the project as a result of the increase in seagrass and mangrove densities downstream of the bridge crossing.

The mangrove wetlands outside of the construction footprint may be indirectly affected by the project as a result of stormwater runoff and sedimentation from the project site. Also, the fugitive discharge of sediment-containing runoff during construction could result in significant damage to the seagrass beds downstream of the project.

Impacts to wetlands may include the elimination or reduction of remaining wetland systems. As a result, there would be a corresponding loss of the functions and values now provided by the impacted wetlands, including flood surge projection, water quality maintenance and wildlife habitat. Losses would occur in the high quality wildlife habitat provided by mangroves that now provide habitat for Listed Species nesting, roosting and foraging.
Additional Comments (optional): Depending on the FDOT's approach to design, and the final construction means and methods, this project may qualify under F.A.C. 40D-400.443, "General Permit to the Florida Department of Transportation, Counties and Municipalities for Minor Bridge Alteration, Replacement, Maintenance and Operation" (bridge and abutment replacement) and F.A.C. 40D-4.051(13), "Minor Roadway Safety Projects" (roadway improvements on either side of the bridge). The District strongly recommends a pre-application meeting with the surface water regulatory staff in the Tampa Service Office happen very early in the design process (before beginning design, if possible).

The following comments are offered in the event that the FDOT elects to pursue an Environmental Resource Permit General Permit for Construction for the project.

The SWFWMD has assigned a Degree of Effect of "Substantial" based on their opinion of the quality of wetlands and the potential acreage of wetlands that may be impacted both directly and indirectly by the project, the level of potential coordination or effort associated with the SWFWMD's regulatory and proprietary interests and obligations and the lack of information concerning the final bridge and roadway cross sections.

Due to the increased impervious area and wetlands involvement, portions of this project may not qualify as Minor Roadway Safety Projects under F.A.C. 40D-4.051(13). The SWFWMD strongly recommends a pre-application meeting with the Tampa Regulation office.

Wetland impacts can be reduced by the following:
(1) Adjustment of the alignment to avoid direct impacts to the wetlands,
(2) Implementation of strict controls over sediment transport off site during construction,
(3) Restriction of the activity of vehicles and equipment to only those areas that must be utilized for construction and staging,
(4) Implementing effective mitigation measures to compensate for wetland impacts;
(5) Selection of treatment pond sites away from existing wetlands;
(6) Retrofitting existing stormwater treatment facilities to provide some habitat for wetland-dependent wildlife,
(7) Incorporating wildlife-friendly features into stormwater facilities, and
(8) Selecting construction means and methods to minimize fugitive materials and adverse impacts.

Because Whitcomb Bayou is a known manatee use area, it is recommended that the FDOT develop a project-specific manatee protection plan to eliminate that possibility of construction-related manatee injury or death in the project area.

Adequate and appropriate wetland mitigation activities may be required for unavoidable wetland and surface water impacts associated with the project. The project mitigation needs may be addressed in the FDOT Mitigation Program (Subsection 373.4137, F.S.) which requires the submittal of

anticipated wetland and surface water impact information to the SWFWMD. This information is utilized to evaluate mitigation options, followed by nomination and multi-agency approval of the preferred options. These mitigation options typically include enhancement of wetland and upland habitats within existing public lands, public land acquisition followed by habitat improvements, and the purchase of private mitigation bank credits. The SWFWMD may choose to exclude a project in whole or in part if the SWFWMD is unable to identify mitigation that would offset wetland and surface water impacts of the project. Under this scenario, the SWFWMD will coordinate with the FDOT on which impacts can be appropriately mitigated through the program as opposed to separate mitigation conducted independently. Depending on the quantity and quality of the proposed wetland impacts, the SWFWMD may propose purchasing credits from a mitigation bank and/or pursue and propose alternative locations for mitigation. For ERP purposes of mitigating any adverse wetland impacts within the same drainage basin, the project is located within the Upper Coastal Drainage Basin. The SWFWMD requests that the FDOT continue to collaborate on the potential wetland impacts as this project proceeds into future phases, and include the associated impacts on FDOT's annual inventory.

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

For ERP permitting purposes, the project area is located in the Upper Coastal Drainage Basin. The SWFWMD has assigned a pre-application file (PA #397785) for the purpose of tracking its participation in the ETDM review of this project. The pre-application file is maintained at the SWFWMD's Tampa Service Office. Please refer to the pre-application file when contacting SWFWMD regulatory staff regarding this project.
Coordinator Feedback: None

3 *Moderate* assigned 12/20/2010 by Jane Monaghan, US Fish and Wildlife Service

Coordination Document: To Be Determined: Further Coordination Required
Dispute Information:N/A
Identified Resources and Level of Importance: Wetlands provide valuable functions within the landscape such as protection from storm surges and erosion, water storage and water filtration. Wetlands also support fish and wildlife habitat.
Comments on Effects to Resources: This project involves the replacement of the Becket Bridge on Riverside drive in Pinellas County. Although the new bridge would still be two lanes, the proposal includes wider travel lanes, new bike lanes and new sidewalks. Therefore, the footprint of the new bridge would be larger and further improvements to the approaches on both sides of the bridge would also be needed.

Direct impacts to estuarine and marine ecosystems should be avoided. If avoidance is not feasible, minimization and mitigation to the maximum extent practicable will be required. Direct, indirect and cumulative impacts to submerged aquatic vegetation (SAV), mangroves and other shoreline vegetation will need to be examined and disclosed during the design phase of this project. If impacts are anticipated, further consultation with our agency will be required. Best management practices should be implemented during construction to avoid siltation and further degradation of the estuarine habitat.

Storm water from the new bridge should be contained and diverted to appropriate storm water treatment areas to prevent contamination of the marine environment.

Wetlands found within the action area are also utilized for foraging, roosting and nesting by migratory birds. Surveys should be conducted at the appropriate time of year for wading birds and shorebirds that may be nesting or roosting in the mangroves or other shoreline vegetation. The timing of the project may be adjusted to avoid any take of migratory birds. If blasting is proposed to remove the old bridge structure, further coordination with our office is required and will address minimization measure for migratory birds.
Coordinator Feedback: None

2 *Minimal* assigned 12/16/2010 by John Fellows, US Army Corps of Engineers

Coordination Document: To Be Determined: Further Coordination Required
Dispute Information:N/A
Identified Resources and Level of Importance: Whitcomb Bayou would be considered a jurisdictional waterbody. Any surface waters (ditches) draining to the bayou, and any wetlands contiguous with or adjacent to the bayou, may also be considered jurisdictional for the Corps.
Comments on Effects to Resources: The Corps would probably not regulate any of the 'bridge work' over the bayou, as the regulatory authority for such work is the US Coast Guard's. The Corps would review and potentially regulate any other wetland or surface water impacts associated with the road improvements on either side of the bayou, however.

I selected 'minimal' as a probable degree of effect based on the lack of wetlands seen on the EST aerials (and in and Google Earth), and the developed nature of the surrounding area. The only obvious area of potential concern within the segment shown is the shoreline of the small embayment to the east of the bridge. If the vegetation along the shoreline is mangroves or similar resources, then FDOT should avoid and minimize impacts to this area to the greatest extent practicable.
Coordinator Feedback: None

3 *Moderate* assigned 11/22/2010 by David A. Rydene, National Marine Fisheries Service

Coordination Document: PD&E Support Document As Per PD&E Manual
Dispute Information:N/A
Identified Resources and Level of Importance: Whitcomb and Minetta Bayous, the mouth of the Anclote River, and the Gulf of Mexico, which contain estuarine and marine habitats such as seagrass, mangrove, and salt marsh used by federally-managed fish species and their prey.
Comments on Effects to Resources: NOAA's National Marine Fisheries Service (NMFS) has reviewed the information contained in the Environmental Screening Tool for ETDM Project # 13040. The Florida Department of Transportation District 7 proposes rehabilitating or replacing the existing Beckett Bridge (Riverside Drive) spanning Whitcomb Bayou in Pinellas County, Florida. The project would also include roadway improvements on Riverside Drive from Chesapeake Drive to Forest Avenue. The bridge replacement alternative would retain the bridge as a two-lane facility.

NMFS staff conducted a site inspection of the project area on November 19, 2010, to assess potential concerns related to living marine resources within Whitcomb and Minetta Bayous, the mouth of the Anclote River, and the Gulf of Mexico. The lands adjacent to the proposed project are principally residential properties, a yacht club, and estuarine habitats. It appears that the project could directly impact NMFS trust resources (i.e. mangroves). Mangroves occur immediately adjacent to the bridge on the northwest, southwest, and southeast shorelines. Certain estuarine habitats within the

project area are designated as essential fish habitat (EFH) as identified in the 2005 generic amendment of the Fishery Management Plans for the Gulf of Mexico. The generic amendment was prepared by the Gulf of Mexico Fishery Management Council as required by the 1996 amendment to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). Mangroves have been identified as EFH for postlarval/juvenile, subadult and adult red drum and gray snapper, and juvenile goliath grouper by the Gulf of Mexico Fishery Management Council under provisions of the Magnuson-Stevens Act.

Federal agencies which permit, fund, or undertake activities which may adversely impact EFH are required to consult with NMFS and, as a part of the consultation process, an EFH Assessment must be prepared to accompany the consultation request. Regulations require that EFH Assessments include:

1. a description of the proposed action;

2. an analysis of the effects (including cumulative effects) of the proposed action on EFH, the managed fish species, and major prey species;

3. the Federal agency's views regarding the effects of the action on EFH; and

4. proposed mitigation, if applicable.

Provisions of the EFH regulations [50 CFR 600.920(c)] allow consultation responsibility to be formally delegated from federal to state agencies, including FDOT. Whether EFH consultation is undertaken by the federal agency (e.g. Federal Highway Administration) or FDOT, it should be initiated as soon as specific project design and construction impact information are available. EFH consultation can be initiated independent of other project review tasks or can be incorporated in environmental planning documents. Upon review of the EFH Assessment, NMFS will determine if it is necessary to provide EFH Conservation Recommendations for the project.

NMFS also recommends that stormwater treatment systems be upgraded to prevent degraded water from entering estuarine habitats within the system. In addition, best management practices should be employed during road construction to prevent siltation of estuarine habitats.
Coordinator Feedback: None

The following organization(s) were expected to but did not submit a review of the Wetlands issue for this alternative: Federal Highway Administration

ETAT Reviews: Wildlife and Habitat Issue: 3 found

2 *Minimal* assigned 12/20/2010 by C. Lynn Miller, Southwest Florida Water Management District

Coordination Document: Permit Required
Dispute Information:N/A
Identified Resources and Level of Importance: Based on direction from FDOT, comments in this section pertain only to wildlife and habitats associated with uplands. Virtually no upland habitat is available for wildlife within 500 feet of the project with the exception of five small parcels of poor-quality, vacant land located within medium-to-high density residential lands. These parcels are located as follows: in the northwest quadrant of the Chesapeake Dr/Riverside Dr intersection; on the north side of Riverside Dr 280 feet west of the bridge's west terminus; in the southeast quadrant of the Venetian Ct/Riverside Dr intersection; in the northwest quadrant of the Pampas Ave/Riverside Dr intersection; and the northeast quadrant of the Forest Ave/Riverside Dr intersection. Listed Species that may utilize this upland habitat within 500 feet of the project include Florida scrub jay (T), gopher tortoise (SSC) and Sherman's fox squirrel (SSC). Of the three species, the gopher tortoise is the most likely species to be present in the project area.

The project is located in the Scrub Jay Consultation Area and Service Area, although nesting habitat is absent within 500 feet of the project.
Comments on Effects to Resources: The project's possible impact on wildlife and habitat may include the further elimination of remaining wildlife habitat, resulting in a further decline in urban wildlife populations, including three Listed Species.
Additional Comments (optional): Depending on the FDOT's approach to design, and the final construction means and methods, this project may qualify under F.A.C. 40D-400.443, "General Permit to the Florida Department of Transportation, Counties and Municipalities for Minor Bridge Alteration, Replacement, Maintenance and Operation" (bridge and abutment replacement) and F.A.C. 40D-4.051(13), "Minor Roadway Safety Projects" (roadway improvements on either side of the bridge). The District strongly recommends a pre-application meeting with the surface water regulatory staff in the Tampa Service Office happen very early in the design process (before beginning design, if possible).

The following comments are offered in the event that the FDOT elects to pursue an Environmental Resource Permit General Permit for Construction for the project.

The SWFWMD has assigned a Degree of Effect of "Minimal" based on their opinion of the potential of this project to result in an increased coordination or effort associated with the SWFWMD's regulatory interests and obligations.

Habitat damage and direct impacts to wildlife can be reduced by: minimizing project cross section in areas where there are remnant patches of upland habitat; strictly limiting construction equipment to the actual construction zones and to pre-approved staging areas; and by implementing appropriate upland habitat restoration measures following construction.
Coordinator Feedback: None

3 *Moderate* assigned 12/20/2010 by Jane Monaghan, US Fish and Wildlife Service

Coordination Document: To Be Determined: Further Coordination Required
Dispute Information:N/A
Identified Resources and Level of Importance: Federally listed species and the ecosystems upon which they depend. Migratory birds and other fish and wildlife resources.
Comments on Effects to Resources: This project involves the replacement of the Becket Bridge on Riverside drive in Pinellas County. Although the new bridge would still be two lanes, the proposal includes wider travel lanes, new bike lanes and new sidewalks. Therefore, the footprint of the new bridge would be larger and further improvements to the approaches on both sides of the bridge would also be needed.

Florida Manatee

Special construction conditions for manatees should be implemented during the construction phase of this project. The removal of the old bridge structure has not been discussed. If blasting is proposed, formal consultation with USFWS is required. Once the details of the construction methods and design are known, additional special conditions may apply to protect manatees from harm or harassment. The standard conditions for in-water work can be found on our website (www.northflorida.fws.gov). Surveys for submerged aquatic vegetation (SAV) should be done. The design of the new bridge should consider the negative impacts of shading on SAV and should attempt to maximize the amount of sunlight available to submerged plants. Contaminants from road runoff are a major concern and should be diverted away from the marine and estuarine environment. Direct, indirect and cumulative impacts to the marine environment should be examined and avoided. Any impacts that cannot be avoided should be minimized and mitigated to the maximum extent practicable. Once the extent of impact to SAV are estimated and quantified, mitigation will need to be proposed that replaces the seagrass within the action area (bayou). Standards for successful mitigation will be required.

Wood Stork
No active wood stork colonies are known to be located near the project footprint or in Pinellas County. Numerous active colonies are located in Pasco, Hillsborough and Manatee counties and the 15 mile core foraging areas for these colonies may overlap with the project footprint. Any wetland impacts that cannot be avoided may need to be mitigated. Wetlands set aside for mitigation for wood storks need to provide suitable foraging habitat. Colony maps and a 'determination of effect' key for wood storks can be found on our office website.

Wading Birds and Shorebirds
Impacts to wetlands and mangroves may affect wading bird and shorebird foraging, roosting and/or nesting in this area. Surveys for wading birds and shorebirds should be done. Any direct effects to mangroves, or foraging resources, should be disclosed. If nesting occurs within the action area, the timing of the project may be critical. Indirect and cumulative effects to the water quality as a result of contaminated road runoff should be avoided.
Coordinator Feedback: None

2 *Minimal* assigned 12/17/2010 by Scott Sanders, FL Fish and Wildlife Conservation Commission

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Coordination Document: To Be Determined: Further Coordination Required
Dispute Information:N/A
Identified Resources and Level of Importance: The Habitat Conservation Scientific Services Section of the Florida Fish and Wildlife Conservation Commission (FWC) has coordinated an agency review of ETDM #13040, Pinellas County, and provides the following comments related to potential effects to fish and wildlife resources on this Programming Phase project.

The Project Description Summary states that this project involves the replacement of the Beckett Bridge on Riverside Drive in Tarpon Springs. This bridge crosses a narrow waterway connecting Whitcomb Bayou with Minetta Bayou, which are connected to the Anclote River. In addition to construction of an enlarged bridge, the bridge approaches would be improved from Chesapeake Drive on the west to Forest Avenue east of the bridge, a distance of 0.31 miles.

The project area was evaluated for potential fish, wildlife, and habitat resources within 500 feet of the proposed alignment. Our assessment reveals that the project area is a residential neighborhood, with a marina immediately northeast of the Beckett Bridge. The most important fish and wildlife habitat is within Minetta and Whitcomb Bayous, which have highly developed shorelines, but contain islands with salt marsh and mangrove vegetation, and shoals with scattered seagrass. The Anclote River estuary is utilized by Florida manatees and a wide variety of aquatic-oriented bird species.

Based on range and preferred habitat type, the following species listed by the Federal Endangered Species Act as Federally Endangered (FE) or Federally Threatened (FT), and the State of Florida as State-Threatened (ST) or State Species of Special Concern (SSC) may occur along the project area: Florida manatee (FE), Sherman's fox squirrel (SSC), American oystercatcher (SSC), black skimmer (SSC), brown pelican (SSC), least tern (ST), little blue heron (SSC), roseate spoonbill (SSC), snowy egret (SSC), reddish egret (SSC), tricolored heron (SSC), white ibis (SSC), wood stork (FE), gopher tortoise (ST), Eastern indigo snake (FT), American alligator (FT), and gopher frog (SSC).

Primary wildlife issues associated with this project include: potential water quality degradation as a result of additional stormwater runoff from the expanded bridge and roadway surface draining into the Anclote River estuary; and potential adverse effects to a moderate number of species listed by the Federal Endangered Species Act as Endangered or Threatened, or the State of Florida as Threatened or Species of Special Concern, and specifically to the Florida manatee during bridge construction.
Comments on Effects to Resources: Based on the project information provided, we believe that the direct and indirect effects of this project could be minimal, provided construction conditions are included to minimize effects on the Florida manatee.
Additional Comments (optional): We recommend that the Project Development and Environment (PD&E) Study address natural resources by including the following measures for conserving fish and wildlife and habitat resources that may occur within and adjacent to the project area. Plant community mapping and wildlife surveys for the occurrence of wildlife species listed by the Federal Endangered Species Act as Endangered or Threatened or the State of Florida as Threatened or Species of Special Concern should be performed, both along the Right-of-way and within sites proposed for Drainage Retention Areas. Based on the survey results, a plan should be developed to address direct, indirect, and cumulative effects of the project on wildlife and habitat resources, including listed species. Avoidance, minimization, and mitigation measures should also be formulated and implemented. If gopher tortoises are present within any permanent or temporary construction area, a permit should be obtained from the FWC. Drainage Retention Areas and equipment staging areas should be located in previously disturbed sites to avoid habitat destruction or degradation. A compensatory mitigation plan should include the replacement of any wetland, upland, or aquatic habitat lost as a result of the project. Replacement habitat for mitigation should be type for type, as productive, and equal to or of higher functional value. Please notify us immediately if the design, extent, or footprint of the current project is modified, as we may choose to provide additional comments and/or recommendations.

It will be important to avoid and minimize effects on the Florida manatee during any in-water work. Since no information was provided in terms of seasonality of bridge or culvert construction, the duration of project work, methods for constructing the bridge, and any dredging or other in-water work that may be required, it would be premature for us to recommend specific avoidance and minimization measures for the manatee at this time. However, possible manatee protection measures that may be required by our agency include Standard Manatee Conditions for In-Water Work, restrictions on blasting, monitoring of turbidity barriers, manatee entrapment avoidance measures, exclusionary grating on culverts, presence of manatee observers during in-water work, a defined or limited construction window, and no nighttime work. If blasting is considered as a method used in construction because no other alternative exists, a blast plan and marine species watch plan will need to be developed, in coordination with and approved by FWC, U.S. Fish and Wildlife Service, and National Marine Fisheries Service, as early in the process as possible and incorporated as a condition of permits authorizing the proposed work. Further coordination with our agency is important, and will be necessary to develop customized or site-specific measures for this project. For technical assistance and coordination on manatees, please contact Ms. Mary Duncan of our Imperiled Species

Management Section in Tallahassee at (850) 922-4330 very early in the planning process for the PD&E Study.

We appreciate the opportunity to provide input on highway design and the conservation of fish and wildlife resources. Please contact Brian Barnett at (850) 528-6316 or email brian_barnett@urscorp.com to initiate the process for further overall coordination on this project.
Coordinator Feedback: None

The following organization(s) were expected to but did not submit a review of the Wildlife and Habitat issue for this alternative: Federal Highway Administration

ETAT Reviews: Cultural Issues

ETAT Reviews: Historic and Archaeological Sites Issue: 4 found

3 *Moderate* assigned 03/16/2011 by Linda Anderson, Federal Highway Administration

Confidential: Review will not be displayed on Public Access website
Coordination Document: PD&E Support Document As Per PD&E Manual
Dispute Information:N/A
Identified Resources and Level of Importance: Beckett Bridge
Comments on Effects to Resources: It is not clear whether this bridge is NRHP-eligible.

If the bridge is NRHP-eligible and requires demolition, preparation of an EIS will be required.

Comment added March 16, 2011: The previous comment regarding preparation of an EIS if the bridge is determined to be NRHP-eligible and requires demolition was based on the 1985 MOU between FHWA and the USCG, which requires that the environmental document be an EIS under these circumstances. That Memorandum has been terminated, so an EIS is not automatically required. However, to be clear, the termination of the MOU does not mean that the demolition of an NRHP-eligible bridge will never require an EIS. FHWA will make the COA determination for each project, based on its characteristics.
Additional Comments (optional): A CRAS is required.
Coordinator Feedback: None

3 *Moderate* assigned 01/28/2011 by Alyssa McManus, FL Department of State

Confidential: Review will not be displayed on Public Access website
Coordination Document: No Selection
Dispute Information:N/A
Identified Resources and Level of Importance: There are no identified historical resources identified at the 100 ft. buffer. However, research into the FDOT Bridge database states that the Beckett Bridge was constructed in 1924, and is therefore considered historic, but we do not have enough information to evaluate its significance at this time. Further documentation is needed (see comments section).

Within the 200 ft. boundary of this project's corridor, there are three historic standing structures. These are PI1464 (321 High Street), PI1465 (331 High Street), and PI1540 (210 Pampas Ave). These structures are all considered historically significant at the local level. At the time they were recorded, there was insufficient information provided to this office to make a determination of eligibility.

Within the 500 ft buffer of this project's corridor, lie the National Register-listed Tarpon Springs Historic District and the E.R. Meres Sponge Packing House. An additional four standing structures (possibly part of the district). These include PI1391, PI1463, PI1626 and PI1735.

There are no archaeological sites recorded within the 500 ft. buffer of this project. However, that could be because most of the surveys conducted near the project area focused on historic standing structures and not archaeological investigation. However, the project's area of potential effect suggests low probability for significant sites to be discovered within.

GIS analysis was not conducted for historical resources outside of the 500 ft buffer, due to the constraints of the project.
Comments on Effects to Resources: Based on the fact that this alternative is "no-build", these resources are unlikely to be adversely affected. However, if any of the bridge material is to be removed or altered, further consultation with this office is needed. The area has been subjected to surveys within 100 ft of this project's corridor. None were specific to this project and to the affects this project may have on significant historical resources.

Research into our records indicates that this bridge was reviewed in 1990 by this office (ref: 1990-1502). At that time, it was the recommendation of this office that the "METAL LIFT PORTION OF BRIDGE 154000 MAY BE POTENTIALLY SIGNIFICANT/IF IT CANNOT BE PRESERVED IN PLACE, THAT PORTION OF STRUCTURE SHOULD BE DOCUMENTED BY B/W PHOTOS AND STRUCTURAL DRAWINGS/IF APPROACH ROADWAYS TO BE ALTERED, PROJECT MUST BE RESUBMITTED". At this time, there has been no submittal of information regarding this bridge to this office. Therefore, it was not identified as historic in the GIS database.

At this time, this office has insufficient information about the bridge to make a determination of eligibility or finding of effects. Since there is a bridge present that will be altered as a result of the proposed project that is more than 50 years of age; the bridge must be documented using historic bridge forms, and evaluated by a professional. Florida Master Site File forms are available online at http://www.flheritage.com/preservation/sitefile.
Additional Comments (optional): When initially this review was done, it was specified as a 'no build'. However, Wendy Lasher informed this office that this was a mistake. This being the case, this office requests that a cultural resources survey be conducted to identify any culutral resources within a reasonable APE of this project corridor to determine their eligibility and the degree of affect this project will have on those resources.
Coordinator Feedback: None

N/A *N/A / No Involvement* assigned 12/20/2010 by C. Lynn Miller, Southwest Florida Water Management District

Confidential: Review will not be displayed on Public Access website
Coordination Document: No Involvement
Dispute Information:N/A

Identified Resources and Level of Importance: None found.
Comments on Effects to Resources: None found.
Coordinator Feedback: None

2 *Minimal* assigned 12/08/2010 by Steve Terry, Miccosukee Tribe of Indians of Florida

Coordination Document: No Selection
Dispute Information:N/A
Identified Resources and Level of Importance: There are no recorded archaeological sites reported near this project. However, a Cultural Resources Survey will need to be done to ascertain if there are any archaeological sites within the project boundaries.
Comments on Effects to Resources: Once a Cultural Resources Survey has been done, then effects, if any, to archaeological sites can be ascertained.
Additional Comments (optional): If the Cultural Resources Survey shows there are no archaeological sites that will be impacted by this project, then no further consultation is necessary. However, if the Cultural Resources Survey does show that archaeological sites will be impacted by this project, then further consultation with the Miccosukee Tribe should be done.
Coordinator Feedback: None

The following organization(s) were expected to but did not submit a review of the Historic and Archaeological Sites issue for this alternative: Seminole Tribe of Florida

ETAT Reviews: Recreation Areas Issue: 3 found

0 *None* assigned 12/23/2010 by Lauren P. Milligan, FL Department of Environmental Protection

Coordination Document: No Selection
Dispute Information:N/A
Identified Resources and Level of Importance: None found.
Comments on Effects to Resources: None found.
Coordinator Feedback: None

0 *None* assigned 12/21/2010 by Madolyn Dominy, US Environmental Protection Agency

Coordination Document: No Selection
Dispute Information:N/A
Identified Resources and Level of Importance: None found.
Comments on Effects to Resources: None found.
Coordinator Feedback: None

0 *None* assigned 12/20/2010 by C. Lynn Miller, Southwest Florida Water Management District

Coordination Document: No Involvement
Dispute Information:N/A
Identified Resources and Level of Importance: None found.
Comments on Effects to Resources: None found.
Coordinator Feedback: None

The following organization(s) were expected to but did not submit a review of the Recreation Areas issue for this alternative: Federal Highway Administration

ETAT Reviews: Section 4(f) Potential Issue: 1 found

3 *Moderate* assigned 12/23/2010 by Linda Anderson, Federal Highway Administration

Coordination Document: PD&E Support Document As Per PD&E Manual
Dispute Information:N/A
Identified Resources and Level of Importance: Within 100' buffer:

1. Beckett Bridge.
2. 24.43 acres of Multi-Use Trails High and Low Priorities.
3. 8.14 acres of paddling Trails Low Priorities.
4. 1.8 acres of Greenway Low Priority Linkages.
5. 8.1 acres of Greenways Critical Linkages and Prioritization Results.
6. Pinellas County Aquatic Preserve (Outstanding Florida Water).

Comments on Effects to Resources: If Beckett Bridge is NRHP-eligible, repairing or demolishing it may constitute a Section 4(f) effect.

With regard to the Multi-Use Trail Priorities,the Paddling Trail Priorities, The Greenway Priority Linkages, and the Greenways Critical Linkages, publicly owned properties planned for park, recreation area, wildlife refuge, or waterfowl refuge purposes may be Section 4(f) properties when the public agency that owns the property has formally designated and determined it to be significant for park, recreation area, wildlife and waterfowl refuge purposes. Evidence of formal designation would be the inclusion of the publicly owned land, and its function as a 4(f) resource, into a city or county Master Plan.

The website for Florida's Aquatic Preserves states that these Preserves were established to protect the living waters of Florida to ensure that they will always be home for bird rookeries and fish nurseries, and it notes the recreational opportunities available. The Pinellas County Aquatic Preserve appears to be publicly owned and open to the public. In addition, if its management plan states that its significant purposes include a waterfowl and wildlife refuge function and/or a recreation function, the Preserve may be considered a Section 4(f) property and impacts to it may be Section 4(f)impacts.

A Section 4(f) Determination of Applicability will be required.

Coordinator Feedback: None

ETAT Reviews: Community Issues

ETAT Reviews: Aesthetics Issue: None found

The following organization(s) were expected to but did not submit a review of the Aesthetics issue for this alternative: Federal Highway Administration

ETAT Reviews: Economic Issue: None found

The following organization(s) were expected to but did not submit a review of the Economic issue for this alternative: Federal Highway Administration

ETAT Reviews: Land Use Issue: 1 found

2 *Minimal* assigned 04/21/2011 by Amie Longstreet, FL Department of Community Affairs

Coordination Document: No Involvement
Dispute Information:N/A
Identified Resources and Level of Importance: Local government planning document consistency, resource protection, coastal high hazard location and hurricane evacuation
Comments on Effects to Resources: The proposed project is located within an aquatic preserve and includes a bridge that may be eligible for the NRHP. A determination as to conflicts with resource protection or coastal management policies of either of the affected local governments cannot be finalized, as the impacts associated with the selected alternative have not been evaluated or finalized.

The proposed project is within the coastal high hazard area; however, the project does not include new construction and will be within the existing right-of-way (and foot print) of the existing bridge. Therefore, the project is consistent with policies in the local comprehensive plan to limit public expenditures that subsidize development in the coastal high-hazard area [Rule 9J-5.012(3)(b)5, FAC] and to direct development away from coastal high -hazard areas [Rule 9J-5.012(3)(b)6, FAC]

The route provides regional evacuation capabilities, but beyond the replacement of functionally obsolete, deteriorating structures, the ETDM project maintains evacuation capacity and hurricane evacuation times.
Additional Comments (optional): Recommendations:
The proposed bridge rehabilitation/replacement and rural collector improvement project is not included in the Transportation Element of the City of Tarpon Springs or Pinellas County comprehensive planning documents. While Rules 9J-5.019(2)(a)11, and (5)(b)5., F.A.C., respectively require that the route itself be identified on the existing and future transportation maps as critical to evacuation, the proposed improvements themselves (i.e., the bridge replacements) are not required to be identified in the City of Tarpon Springs or the Pinellas County Future Transportation Plans [Rule 9J-5.019(5)(a)1., F.A.C.].

Further, Rule 9-5.016(4)(a)1., F.A.C. requires local governments' schedules of capital improvements to "reflect the need to reduce existing deficiencies, remain abreast of replacements...". Consequently, the two local comprehensive plans should be amended to include the project when the project is entered into the FDOT Work Program.

Following completion of applicable environmental assessments and studies, and prior to inclusion in the FDOT Work Program, the impacts associated with the selected alternative should be evaluated to determine potential conflicts with any of the resource protection or coastal management policies of either of the affected local governments.

While Rules 9J-5.019(2)(a)11, and (5)(b)5., F.A.C., do not specifically require the inclusion of bridge rehabilitation/replacement projects in the comprehensive planning documents via the Future Transportation Map, in maps critical to evacuation, or the Capital Improvements Element, the City of Tarpon Springs and the Pinellas County comprehensive plans should be amended to include the selected alternative in the schedules of capital improvements, pursuant to Rule 9J-5.016 (4)(a)1., F.A.C. prior to inclusion in the FDOT Work Program.
Coordinator Feedback: None

The following organization(s) were expected to but did not submit a review of the Land Use issue for this alternative: Federal Highway Administration

ETAT Reviews: Mobility Issue: 1 found

1 *Enhanced* assigned 04/21/2011 by Amie Longstreet, FL Department of Community Affairs

Coordination Document: No Involvement
Dispute Information:N/A
Identified Resources and Level of Importance: Hurrican evacuation and maintenance of evacuation times.
Comments on Effects to Resources: The route provides regional evacuation capabilities, but beyond the replacement of functionally obsolete, deteriorating structures, the ETDM project maintains evacuation capacity and hurricane evacuation times.

Additional Comments (optional): Recommendations:
The proposed bridge rehabilitation/replacement and rural collector improvement project is not included in the Transportation Element of the City of Tarpon Springs or Pinellas County Comprehensive Planning documents. While Rules 9J-5.019(2)(a)11, and (5)(b)5., F.A.C., respectively require that the route itself be identified on the existing and future transportation maps as critical to evacuation, the proposed improvements themselves (i.e., the bridge replacements) are not required to be identified in the City of Tarpon Springs or the Pinellas County Future Transportation Plans [Rule 9J-5.019(5)(a)1., F.A.C.].

Further, Rule 9-5.016(4)(a)1., F.A.C. requires local governments' schedules of capital improvements to "reflect the need to reduce existing deficiencies, remain abreast of replacements...". Consequently, the two local comprehensive plans should be amended to include the project when the project is entered into the FDOT Work Program.

While Rules 9J-5.019(2)(a)11, and (5)(b)5., F.A.C., do not specifically require the inclusion of bridge rehabilitation/replacement projects in the

comprehensive planning documents via the Future Transportation Map, in maps critical to evacuation, or the Capital Improvements Element, the City of Tarpon Springs and the Pinellas County comprehensive plans should be amended to include the selected alternative in the schedules of capital improvements, pursuant to Rule 9J-5.016 (4)(a)1., F.A.C. prior to inclusion in the FDOT Work Program.

CLC Commitments and Recommendations: Coordinator Feedback: None

The following organization(s) were expected to but did not submit a review of the Mobility issue for this alternative: Federal Highway Administration

ETAT Reviews: Relocation Issue: 1 found

2 *Minimal* assigned 12/23/2010 by Linda Anderson, Federal Highway Administration

Coordination Document: PD&E Support Document As Per PD&E Manual
Dispute Information:N/A
Identified Resources and Level of Importance: Within 100' buffer:

1. 1.2 acres of residential high density housing
2. 4.3 acres of residential medium density housing

Comments on Effects to Resources: The Project Description does not state whether the project can be accomplished within FDOT's ROW.

It does not appear that relocations will be necessary. However, it is not clear whether some ROW acquisition will be required from the Tarpon Springs Yacht Club and home owners along the APE. The neighborhood appears to encroach on the ROW, especially on the eastern approach to the bridge, with brick garages and concrete walls appearing to be right at the edge of or directly on the ROW. This may be an issue.
Coordinator Feedback: None

ETAT Reviews: Social Issue: 2 found

2 *Minimal* assigned 04/21/2011 by Amie Longstreet, FL Department of Community Affairs

Coordination Document: No Involvement
Dispute Information:N/A
Identified Resources and Level of Importance: Local government plan consistency and resource protection, and hurricane evacuation time maintenance
Comments on Effects to Resources: The proposed project is located within an aquatic preserve and includes a bridge that may be eligible for the NRHP. A determination as to conflicts with resource protection or coastal management policies of either of the affected local governments cannot be finalized, as the impacts associated with the selected alternative have not been evaluated or finalized.

The route provides regional evacuation capabilities, but beyond the replacement of functionally obsolete, deteriorating structures, the ETDM project maintains evacuation capacity and hurricane evacuation times.

Additional Comments (optional): Following completion of applicable environmental assessments and studies, and prior to inclusion in the FDOT Work Program, the impacts associated with the selected alternative should be evaluated to determine potential conflicts with any of the resource protection or coastal management policies of either of the affected local governments.

While Rules 9J-5.019(2)(a)11, and (5)(b)5., F.A.C., do not specifically require the inclusion of bridge rehabilitation/replacement projects in the comprehensive planning documents via the Future Transportation Map, in maps critical to evacuation, or the Capital Improvements Element, the City of Tarpon Springs and the Pinellas County comprehensive plans should be amended to include the selected alternative in the schedules of capital improvements, pursuant to Rule 9J-5.016 (4)(a)1., F.A.C. prior to inclusion in the FDOT Work Program.

CLC Commitments and Recommendations: Coordinator Feedback: None

2 *Minimal* assigned 12/23/2010 by Linda Anderson, Federal Highway Administration

Coordination Document: No Selection
Dispute Information:N/A
Identified Resources and Level of Importance: 1. Two census block groups within area with median incomes of $34,375 and $35,104 respectively, and minority populations of 0,66%/1.56% African American, .044%/0.0% Asian, and 0.47% and 5.85% Hispanic.

2. Tarpon Springs Yacht Club (private).

3. 1.2 acres of residential high density housing and 4.3 acres residential medium density housing within 100' buffer.
Comments on Effects to Resources: It is unclear whether project will be constructed within FDOT ROW or will require minor ROW acquisition from the Yacht Club and residences along the APE. On eastern approach, concrete walls and brick garages appear to be built at border of ROW or in ROW. This may be an issue.

Provision of bike lanes and sidewalks along approaches and across bridge will enhance neighborhood.

Population living along APE appears to be above poverty level with very small representation of minorities, so no environmental justice impacts anticipated.
Additional Comments (optional): A Noise Study will be required as replacement of bridge will enable school buses, trucks, and more traffic, in general, at higher speeds, to use bridge.
Coordinator Feedback: None

The following organization(s) were expected to but did not submit a review of the Social issue for this alternative: US Environmental Protection Agency

ETAT Reviews: Secondary and Cumulative Issues

ETAT Reviews: Secondary and Cumulative Effects Issue: 1 found

4 *Substantial* assigned 12/20/2010 by C. Lynn Miller, Southwest Florida Water Management District

Coordination Document: Permit Required
Dispute Information:N/A
At-Risk Resource: Wildlife and Habitat
Comments on Effects: The project has the potential to result in further reduction of the limited urban wildlife populations in the project vicinity.
Recommended Avoidance, Minimization, and Mitigation Measures: Potential upland impacts can be reduced by designing the project to avoid and, to the maximum extent practicable, preserve existing patches of upland habitat.
Recommended Actions to Improve At-Risk Resources: Select stormwater treatment measures that provide both upland and wetland wildlife habitat in addition to serving the primary treatment function.

At-Risk Resource: Water Quality and Quantity
Comments on Effects: The project has the potential to generate additional stormwater runoff and increased sedimentation that may contribute to a delay in recovery of Impaired Waters downstream of the project and to degrade water quality in waters classified as OFW.
Recommended Avoidance, Minimization, and Mitigation Measures: Utilize BMP trains (i.e. BMPs in series) during construction to minimize the conveyance of sediment to OFWs and off-site sensitive habitats such as the mangrove swamps in the Bayou north of the bridge. Impacts can be reduced by providing treatment for currently under-treated or untreated runoff to OFW.
Recommended Actions to Improve At-Risk Resources: Consider the treatment of pre-existing, impervious areas that are now under-treated or untreated.

At-Risk Resource: Wetlands
Comments on Effects: Reduction or elimination of the remaining wildlife function of wetlands within 500 feet of the project is a possibility due to the increased noise associated with the additional traffic volume expected to result from the project and as a consequence of the additional, untreated stormwater entering Whitcomb Bayou from the project. As a result of the potential to reduce or eliminate the wildlife function of mangrove swamps and seagrass beds, the project has a potential to result in secondary impacts to the recreational fishery in Whitcomb Bayou and the tidal reach of the Anclote River.
Recommended Avoidance, Minimization, and Mitigation Measures: Potential secondary wetland impacts can be reduced by incorporating noise control technology into the design of the facility. Potential fishery impacts can be reduced by protecting and preserving existing wetlands and seagrass beds in the project area.
Recommended Actions to Improve At-Risk Resources: Select stormwater treatment measures that provide wildlife habitat in addition to serving the primary treatment function. It is recommended that the placement of stormwater ponds and treatment facilities be done to avoid potential impacts to existing storm water facilities.
Coordinator Feedback: None

APPENDIX B

Land Use Type

Path: I:\Misc_Jobs\Tia Norman\Beckett Bridge\Beckett Bridge_Land_Use.mxd

Legend

- Project Study Area
- Land Use/ Vegetative Cover

Land Use/ Vegetative Cover Map
Beckett Bridge PD & E
Tarpon Springs, Pinellas County

N

0 125 250 Feet

APPENDIX C

Summary Table of Listed Species in Pinellas County

Federally and State-Listed Species Documented in Pinellas County

Species	Designated Status			Habitat Preference	Habitat Present within the PSA?	Documented within One Mile of PSA?
	FWS[1]	FDA[2]	FWC[3]			
PLANTS						
Golden leather fern *Acrostichum aureum*	NL	T		brackish and freshwater marshes	Yes	No
Nuttall's rayless goldenrod *Bigelowia nuttallii*	NL	E		sand pine scrub	No	No
Sand-dune spurge *Chamaesyce cumulicola*	NL	E		coastal scrub and stabilized dunes	No	No
Florida golden aster *Chrysopsis floridana*	E	E		sunny, bare patches of sand in sand pine scrub; low sand ridges of excessively well drained, fine sands; railroad and highway rights-of-way	No	No
Sanibel lovegrass *Eragrostis pectinacea var. tracyi*	NL	E		shell mounds, coastal grasslands, and disturbed sites	No	No
Tampa vervain *Glandularia tampensis*	NL	E		mesic flatwoods, live oak-cabbage palm hammock, edges and clearings	No	No
Wild cotton *Gossypium hirsutum*	NL	E		coastal berm, coastal rock barren, disturbed land, rockland hammock, shell mounds	No	No
Nodding pinweed *Lechea cernua*	NL	T		deep sands, usually ancient dunes, on which the most common forest is a mixture of evergreen scrub oaks	No	No
Pine pineweed *Lechea divaricata*	NL	E		scrub and scrubby flatwoods	No	No
Giant orchid *Pteroglossaspis ecristata*	NL	T		sandhill, scrub, pine flatwoods, pine rocklands	No	No
MAMMALS						

Species	Designated Status			Habitat Preference	Habitat Present within the PSA?	Documented within One Mile of PSA?
	FWS[1]	FDA[2]	FWC[3]			
Florida mouse *Podomys floridanus*	NL		SSC	xeric upland communities with sandy soils, including scrub, sandhill, and ruderal sites where they inhabit burrows of the gopher tortoise	No	No
Sherman's fox squirrel *Sciurus niger shermani*	NL		SSC	sandhills (high pine), pine flatwoods, and pastures and other open, ruderal habitats with scattered pines and oaks	No	No
West Indian (Florida) manatee *Trichechus manatus*	E		E	coastal waters, bays, rivers	Yes	Yes
AVIAN						
Limpkin *Aramus guarana*	NL		SSC	mudflats, coastal beaches, mangrove swamps, hardwood & cypress swamps, freshwater marshes	Yes	No
Florida scrub jay *Aphelocoma coeruluscens*	T		T	inhabits fire-dominated, low-growing, oak scrub habitat found on well-drained sandy soils	No	No
Florida burrowing owl *Athene cunicularia floridana*	NL		SSC	high, sparsely vegetated, sandy ground; natural habitats include dry prairie and sandhill	No	No
Snowy plover *Charadrius alexandrinus*	NL		T	dry, sandy beaches, where they nest in shallow depressions, usually near some vegetation or debris; also forage in tidal flats along inlets and creeks	Yes	No
Piping plover *Charadrius melodus*	T		T	open, sandy beaches, tidal mudflats and sandflats	Yes	No
Little blue heron *Egretta caerulea*	NL		SSC	mudflats, coastal beaches, mangrove swamps, hardwood & cypress swamps, freshwater marshes	Yes	No
Reddish egret *Egretta rufescens*	NL		SSC	shallow water and broad marine tidal flats with little vegetation; almost exclusively coastal	Yes	No

Species	Designated Status			Habitat Preference	Habitat Present within the PSA?	Documented within One Mile of PSA?
	FWS[1]	FDA[2]	FWC[3]			
Snowy egret *Egretta thula*	NL		SSC	mudflats, coastal beaches, mangrove swamps, hardwood & cypress swamps, freshwater marshes	Yes	No
Tricolored heron *Egretta tricolor*	NL		SSC	mudflats, coastal beaches, mangrove swamps, hardwood & cypress swamps, freshwater marshes	Yes	No
White ibis *Eudocimus albus*	NL		SSC	mudflats, coastal beaches, mangrove swamps, hardwood & cypress swamps, freshwater marshes	Yes	No
Southeastern American kestrel *Falco sparverius paulus*	NL		T	open habitats such as pine savannas, longleaf pine-turkey oak sandhills, pine flatwoods, and farmlands, residential areas	Yes	No
Florida sandhill crane *Grus canadensis pratensis*	NL		T	prairies, freshwater marshes, and pasture lands, open residential lots	Yes	No
American oystercatcher *Haematopus palliatus*	NL		SSC	shallow coastal habitats such as mud flats, tidal creeks, seagrass beds, mangrove swamps	Yes	No
Bald eagle *Haliaeetus leucocephalus*	NL[4]		NL[4]	areas close to coastal areas, bays, rivers, lakes, or other bodies of water	Yes	No
Wood stork *Mycteria americana*	E		E	forested wetlands, freshwater marshes, swamps, lagoons, ponds, tidal creeks, flooded pastures, and ditches	Yes	No
Brown pelican *Pelecanus occidentalis*	NL		SSC	mainly coastal; feeding in shallow estuarine waters and roosting in small trees and mangroves	Yes	Yes
Red-cockaded woodpecker *Picoides borealis*	E		E	open, mature pine woodlands	No	No
Roseate spoonbill *Platalea ajaja*	NL		SSC	mudflats, coastal beaches, mangrove swamps, hardwood & cypress swamps, freshwater marshes	Yes	No
Black skimmer *Rynchops niger*	NL		SSC	coastal open water habitats	Yes	No

Species	Designated Status			Habitat Preference	Habitat Present within the PSA?	Documented within One Mile of PSA?
	FWS[1]	FDA[2]	FWC[3]			
Least tern *Sterna antillarum*	NL		T	coastal shallow habitats and shorelines	Yes	No
REPTILES						
American alligator *Alligator mississippiensis*	T (S/A)		SSC	wetland habitats including streams, ponds, lakes, freshwater marshes and ditches	Yes	No
Loggerhead *Caretta caretta*	T		T	marine coastal and oceanic waters; nests on coastal sand beaches above high tide line; juveniles frequent coastal bays, inlets, lagoons	Yes	No
Green turtle *Chelonia mydas*	E		E	marine coastal and oceanic waters; nests on coastal sand beaches; feed on seagrasses and algae; hatchlings use offshore floating sargassum mats; juveniles frequent coastal bays, inlets, lagoons	Yes	No
Leatherback *Dermochelys coriacea*	E		E	oceanic waters; nests on coastal sand beaches above high tide line	Yes	No
Eastern indigo snake *Drymarchon corais couperi*	T		T	mangrove swamp, wet prairies, xeric pinelands, scrub	Yes	No
Hawksbill *Eretmochelys imbricata*	E		E	coastal marine waters, coral reefs, lagoons or oceanic islands, and narrow creeks and passes	Yes	No
Gopher tortoise *Gopherus polyphemus*	NL		T	dry upland habitats, including sandhills, scrub, and dry pine flatwoods; also commonly uses disturbed habitats such as pastures and road shoulders	No	No
Short-tailed snake *Lampropeltis extenuata*	NL		T	dry sandy uplands, especially longleaf pine-turkey oak (sandhill) and sometimes adjacent xeric oak hammocks and rosemary-sand pine scrub	No	No
Kemp's ridley *Lepidochelys kempii*	E		E	marine coastal waters, usually with sand or mud bottoms; nests (rarely in Florida) on sandy beaches	Yes	No

Species	Designated Status			Habitat Preference	Habitat Present within the PSA?	Documented within One Mile of PSA?
	FWS[1]	FDA[2]	FWC[3]			
AMPHIBIANS						
Gopher frog *Rana capito*	NL		SSC	dry, sandy uplands, chiefly sandhill and scrub, that include isolated wetlands or large ponds within about 1 mi. (1.7 km)	No	No
FISH						
Gulf sturgeon *Acipenser oxyrinchus desotoi*	T		T	near shore marine, estuarine and riverine habitat; Gulf of Mexico and associated estuaries; spawns in most major coastal rivers in areas with limestone outcrops	Yes	No

[1] As listed by the U.S. Fish and Wildlife Service in 50 CFR 17.
[2] Plant species listed by the Florida Department of Agriculture and Consumer Services pursuant to Chapter 5B-40, F.A.C.
[3] Animal species listed by the Florida Fish and Wildlife Conservation Commission pursuant to Rule 68A-27 F.A.C.
[4] The bald eagle is neither state nor federally listed; however, this species is federally protected by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. The bald eagle is also managed in Florida by the FWC's bald eagle rule (FAC. 68A-16.002).
NL – Not Listed
T – Threatened
E – Endangered
SSC – Species of Special Concern
S/A –Similarity of Appearance to Other Protected Species

APPENDIX D

Standard Manatee Construction Conditions for In-Water Work

STANDARD MANATEE CONDITIONS FOR IN-WATER WORK

2011

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

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

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

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

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

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

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

CAUTION: MANATEE HABITAT

All project vessels

IDLE SPEED / NO WAKE

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

SHUT DOWN

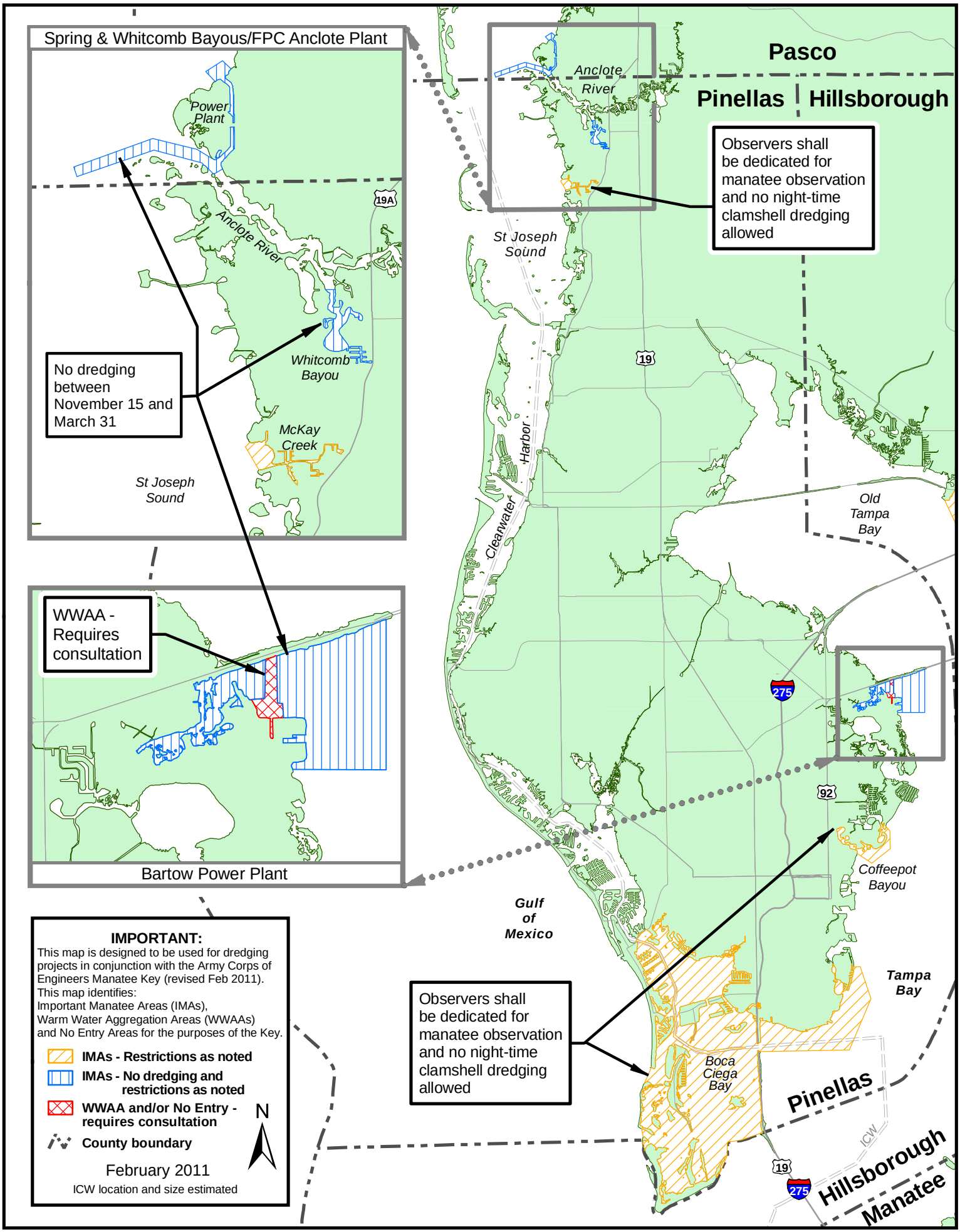
Report any collision with or injury to a manatee:

Wildlife Alert:

1-888-404-FWCC(3922)

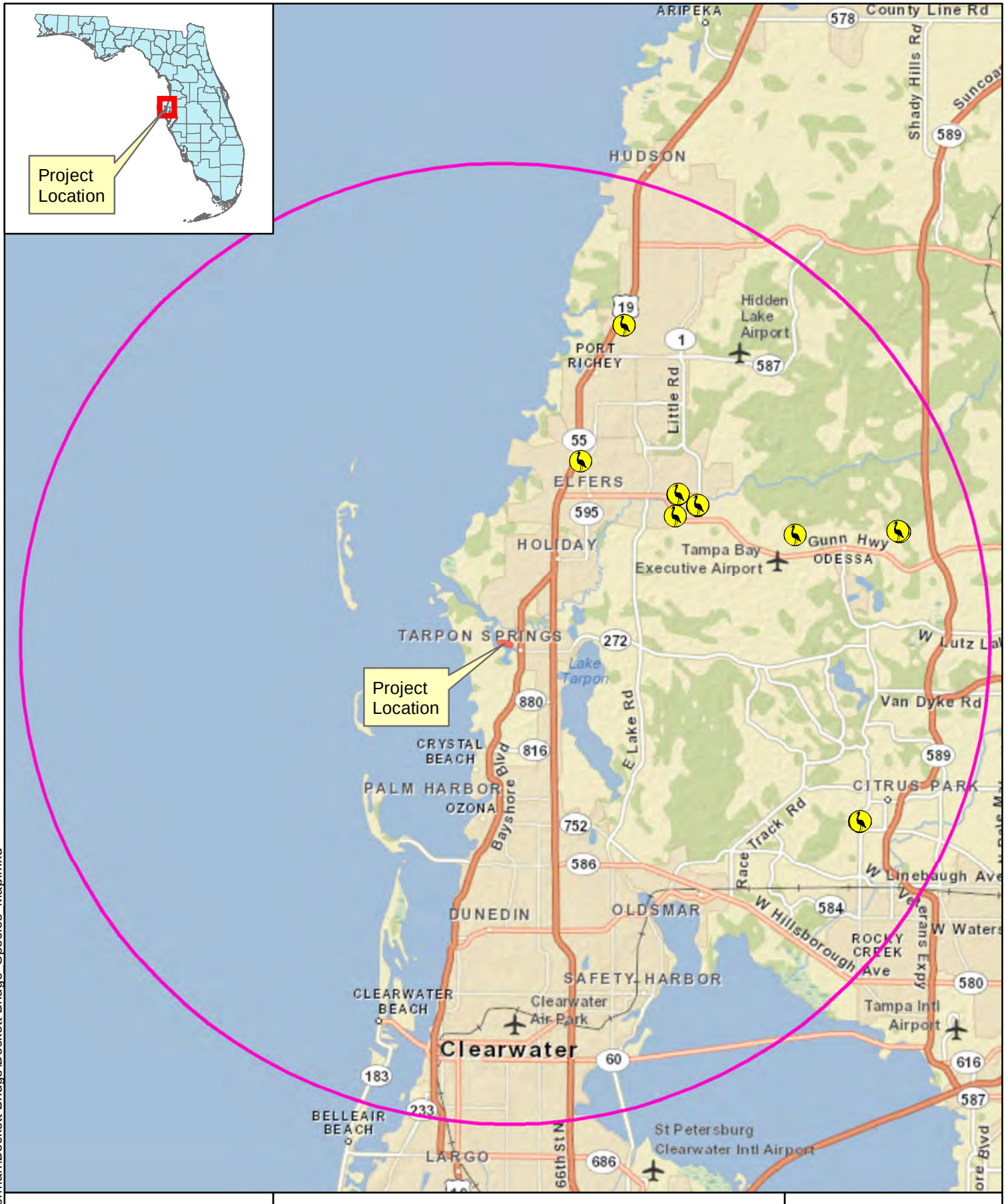
cell *FWC or #FWC

Pinellas and Pasco Counties



APPENDIX E

Wood Stork Rookeries Location Map



Legend

- Woodstork Rookery
- Project Limits
- 15 Mile Buffer of Project Limits

Woodstork Rookery Location Map

Beckett Bridge PD & E

Tarpon Springs, Pinellas County

N

0 2 4 Miles

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APPENDIX F

Sea Turtle and Smalltooth Sawfish Construction Conditions

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, FL 33701

SEA TURTLE AND SMALLTOOTH SAWFISH CONSTRUCTION CONDITIONS

The permittee shall comply with the following protected species construction conditions:

a. The permittee shall instruct all personnel associated with the project of the potential presence of these species and the need to avoid collisions with sea turtles and smalltooth sawfish. All construction personnel are responsible for observing water-related activities for the presence of these species.

b. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing sea turtles or smalltooth sawfish, which are protected under the Endangered Species Act of 1973.

c. Siltation barriers shall be made of material in which a sea turtle or smalltooth sawfish cannot become entangled, be properly secured, and be regularly monitored to avoid protected species entrapment. Barriers may not block sea turtle or smalltooth sawfish entry to or exit from designated critical habitat without prior agreement from the National Marine Fisheries Service's Protected Resources Division, St. Petersburg, Florida.

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

e. If a sea turtle or smalltooth sawfish is seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving equipment closer than 50 feet of a sea turtle or smalltooth sawfish. Operation of any mechanical construction equipment shall cease immediately if a sea turtle or smalltooth sawfish is seen within a 50-ft radius of the equipment. Activities may not resume until the protected species has departed the project area of its own volition.

f. Any collision with and/or injury to a sea turtle or smalltooth sawfish shall be reported immediately to the National Marine Fisheries Service's Protected Resources Division (727-824-5312) and the local authorized sea turtle stranding/rescue organization.

g. Any special construction conditions, required of your specific project, outside these general conditions, if applicable, will be addressed in the primary consultation.

Revised: March 23, 2006
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APPENDIX G

Standard Protection Measures for the Eastern Indigo Snake

STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE

1. An eastern indigo snake protection/education plan shall be developed by the applicant or requestor for all construction personnel to follow. The plan shall be provided to the Service for review and approval at least 30 days prior to any clearing activities. The educational materials for the plan may consist of a combination of posters, videos, pamphlets, and lectures (*e.g.*, an observer trained to identify eastern indigo snakes could use the protection/education plan to instruct construction personnel before any clearing activities occur). Informational signs should be posted throughout the construction site and along any proposed access road to contain the following information:

    a. a description of the eastern indigo snake, its habits, and protection under Federal Law;
    b. instructions not to injure, harm, harass or kill this species;
    c. directions to cease clearing activities and allow the eastern indigo snake sufficient time to move away from the site on its own before resuming clearing; and,
    d. telephone numbers of pertinent agencies to be contacted if a dead eastern indigo snake is encountered. The dead specimen should be thoroughly soaked in water and then frozen.

2. If not currently authorized through an Incidental Take Statement in association with a Biological Opinion, only individuals who have been either authorized by a section 10(a)(1)(A) permit issued by the Service, or by the State of Florida through the Florida Fish Wildlife Conservation Commission (FWC) for such activities, are permitted to come in contact with an eastern indigo snake.

3. An eastern indigo snake monitoring report must be submitted to the appropriate Florida Field Office within 60 days of the conclusion of clearing phases. The report should be submitted whether or not eastern indigo snakes are observed. The report should contain the following information:

    a. any sightings of eastern indigo snakes and
    b. other obligations required by the Florida Fish and Wildlife Conservation Commission, as stipulated in the permit.

Revised February 12, 2004

APPENDIX H

Osprey Nest Location and Photos


Project Location
Tarpon Bayou
Kreamer Bayou
Minetta Bayou
Spring Bayou
Anclote River
The Canal
Craig Park
Hill St
Island Dr
Cross St
Athens St
Hope St
Hermosa Ave
Pampas Ave
Roosevelt Blvd
Imperial Dr
N Lake Blvd
Chesapeake Dr
Doric Ct
Bayou Blvd
Lake Blvd
High St
Forest Ave
Riverside Dr
Begin Project
Osprey Nests
Spring Blvd
Canal St
Read St
Central Ct
End Project
Craig Dr
Inness Dr
Kreamer Ave
N Park Ave
Library Ct
Library Ln
S Bay St
W Lemon St
Gulf Rd
Legend
Osprey Nests
Osprey Nests Location Map
Beckett Bridge PD & E
Tarpon Springs, Pinellas County
N
0
230
460 Feet
Path: I:\Misc Jobs\Tia Norman\Beckett Bridge\Beckett Bridge Species Map.mxd

Photo 1: Osprey nests from the bridge facing east.

Photo 2: Close up of osprey nests.

Photo 3: Looking up at the osprey nests from directly below.

Photo 4: Empty oyster shells and fish remains on the ground directly below the nest.

Photo 5: Foraging osprey with a fish perched next to the nests.